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INDUSTRIAL HYGIENE SURVEY REPORT
PARAMOUNT UNIFIED SCHOOL DISTRICT
ABRAHAM LINCON AND WESLEY GAINES ELEMENTARY SCHOOLS
PARAMOUNT, CALIFORNIA

Prepared for:

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CERTIFICATION NUMBER 5305 CP
EXPIRES 6-1-2023
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March 29, 2019

EE Project # 16-A0007-0237.1.5

ASCIP Project # LC6627

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AND
WESLEY GAINES ELEMENTRY SCHOOLS[B] – CLASSROOM 1 and 23

EE Project #: 16-A0007-0237.1.5

ASCIP SRF #: LC6627

Client: Ruben Frutos
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Survey Dates: September 26 and 27, 2018

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Report

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I. PURPOSE

The purpose of this report is two-fold. First, to measure Hexavalent Chromium (also known as Chromium VI, Chromium 6, Cr6+, hereafter, (Cr(VI)), and selected heavy metals (hereafter, metals) in the ambient air in permanent classrooms, portable classrooms and outdoors; and as settled dust on various indoor locations in selected classrooms. Two classrooms and an outdoor location were selected (near the fresh air intake for the permanent rooms selected) for sampling at Abraham Lincoln Elementary School (hereafter, Lincoln); and Wesley Gaines Elementary School (hereafter, Gaines) in the Paramount Unified School District (hereafter, the District). Second, to determine if the Cr(VI) and metals, as a source of air pollution from local businesses, is being drawn into classrooms under typical classroom conditions in excess of the California Office of Environmental Health Hazard Assessment's (OEHHA's) No Significant Risk Level (NSRL) of 0.001 microgram per day (μg/day)[G].

This survey was a joint collaboration between the Los Angeles County Department of Public Health (Hereafter, LACDPH) and the District. The District paid for the field collection of data and report; LACDPH observed the process and paid for the laboratory analysis. This survey was also partially funded as a benefit of membership in the Alliance of Schools for Cooperative Insurance Programs (ASCIP). This report contains a presentation of data, summary of findings, methods, and recommendations related to findings.

II. SUMMARY OF FINDINGS

The purpose of this study was to measure Cr(VI) and metals in ambient air and settled indoor dust at two elementary school sites within the District: Lincoln (Permanent Room 3/Computer Room/Library, Portable Room 31, and Exterior on the Roof of Room 3/Computer Room/Library); and Gaines (Permanent Room 1, Portable Room 23, and Exterior on the Roof of Room 1). The results of the study indicate the following:

- All indoor Cr(VI) air levels measured at both school sites ranging from ***were well below*** the South Coast Air Quality Management District (SCAQMD) long-term health risk level of 0.0002 micrograms per cubic meter (μg/m^3)[H,I]
- Indoor Cr(VI) air levels measured at Gaines ranged from Not Detected[J] to 0.0000336 micrograms per cubic meter (μg/m^3) ***were well below*** the City of Paramount stationary monitor result for the

[F] Alliance of Schools for Cooperative Insurance Programs, 16550 Bloomfield Avenue, Cerritos, CA 90703, (562) 404-8029
[G] https://oehha.ca.gov/chemicals/chromium-hexavalent
[H] http://yourstory.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1480/pr1480_wg3_112818.pdf?sfvrsn=24
[I] Throughoutt this document units are converted to match the units that the sampling results are reported in, for example in this case they are converted from nanograms per cubic meters (ng/m^3) to micrograms per cubic meter (μg/m^3).
[J] Concentration of Hexavalent Chromium was not detected above the Laboratory's Limit of Quantification of 0.00039 μg, which based on the sample volume calculates out to a Limit of Detection (LOD) of less than 0.000026 μg/m^3.

period of September 26 to 29, 2018, which ranged from 0.00015 to 0.00016 $\mu g/m^3$ for the 2, 24-hour samples collected and analyzed[K].

- The outdoor Cr(VI) air levels measured at Gaines was 0.000103 $\mu g/m^3$ and ***was below*** the City of Paramount stationary monitor result for the period of September 26 to 29, 2018, which ranged from 0.00015 to 0.00016 $\mu g/m^3$ for the 2, 24-hour samples collected and analyzed.
- Indoor Cr(VI) air levels measured at Lincoln ranged from Not Detected to 0.0000559 $\mu g/m^3$ ***were below*** the SCAQMD stationary monitor result for the period of September 23 to 29, 2018, which ranged from 0.00006 to 0.00022 $\mu g/m^3$ for the 2, 24-hour samples collected and analyzed[L].
- The outdoor Cr(VI) air levels measured at Lincoln was 0.0000457 $\mu g/m^3$ and ***was below*** the SCAQMD stationary monitor result for the period of September 23 to 29, 2018, which ranged from 0.00006 to 0.00022 $\mu g/m^3$ for the 2, 24-hour samples collected and analyzed.
- ***No airborne Cr(VI) was detected above the OEHHA NSRL inside any of the classrooms during the 24 hours of sampling. One exterior sample collected on the Roof of Gaines Room 1, exceeded the OEHHA NSRL.*** 0.00148 micrograms (μg) Cr(VI) as compared to the OEHHA NSRL of 0.001 μg was detected in the ambient outdoor air from air pollution from local manufacturing during the same sampling period that Classroom 1 was monitored. This is suggestive of an exterior ambient air issue in the vicinity of Gaines. The outdoor levels measured at Lincoln were 0.000638 μg, below the OEHHA NSRL.
- All Cr(VI) air levels are ***well below*** occupational exposure levels established by California Division of Occupational Safety and Health (DOSH -- better known as Cal/OSHA) ***and other*** consensus levels such as American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value and National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Level.
- All Cr(VI) air levels (level measured and Limit of Detection[M]) ***were a magnitude of 4 to 15 times*** the California Department of Toxic Substances Control (DTSC) Office of Human and Ecological Risk (HERO) Screening Levels[N], [O] (hereafter, DTSC-SLs). It is noted ***that all of the outdoor*** samples collected at school sites from December 21, 2016 through March 26, 2019, measured by both the City of Paramount and the SCAQMD were in excess of the DTSC-SL[P]. These levels in excess of the DTSC-SL are suggestive of a need for on-going further investigation and a quantitative baseline risk assessment[Q]. It is also noted that the Limit of Detection (LOD) for the method used is greater than the DTSC-SL which introduces limitations to the assessment and suggests the need to determine if a method with a LOD below the DTSC-SL can be developed.

[K] https://www.aqmd.gov/docs/default-source/compliance/Paramount/paramount-school-sites.pdf?sfvrsn=959, Page 3

[L] https://www.aqmd.gov/docs/default-source/compliance/Paramount/paramount-school-sites.pdf?sfvrsn=959, Page 3

[M] The Limit of Detect ion (LOD) is usually defined as the lowest quantity or concentration of a component that can be reliably detected with a given analytical

[N] "Screening Level" is a generic risk-based concentration derived from standardized risk assessment equations combining exposure information assumptions with applicable toxicity criteria. Screening Levels are contaminant concentrations considered to be protective for humans (including sensitive groups) over a lifetime. Screening Levels calculated using the toxicity criteria under this Chapter do not address non-human health endpoints such as ecological impacts (https://www.dtsc.ca.gov/LawsRegsPolicies/Regs/upload/Final-Toxicity-Criteria-Rule-Rule-Text-Appdx-2018-09-04-clean.pdf)

[O] DTSC has developed modified screening levels based on the U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for use in the human health risk assessment process at hazardous waste sites and permitted facilities. Although this is a School site and not a hazardous waste site, there are no screening levels specifically for schools. Consequently, when dealing with a sensitive site such as school, the most conservative screening level are used. In this case the DTSC-SL.

[P] http://www.aqmd.gov/docs/default-source/compliance/Paramount/paramount-school-sites.pdf?sfvrsn=965

[Q] If the cumulative risk and hazard index estimates are acceptable under the most conservative screening assumptions, then site-specific conditions can be expected to result in acceptable risk and hazard index levels. Consequently, the results of a screening risk assessment indicate whether or not a quantitative baseline risk assessment or further site investigation is warranted. (https://www.dtsc.ca.gov/AssessingRisk/upload/NOTE-4-HHRA-Number-4-October-2016-revision-2016-10-26-FINAL-2.pdf)

- With the exception of the samples collected at Lincoln, Inside Portable Room 31, and Gaines, Exterior on the Roof of Room 1; all Cr(VI) air levels ***were below SCAQMD actual measured annual average[R] concentrations (background levels)[S] in TSP.*** Lincoln, inside Portable Room 31, slightly exceeded the background level, and Gaines, Exterior on the Roof of Room 1, was approximately twice the background. It is noted ***that almost all of the outdoor*** samples collected at school sites from December 21, 2016 through March 26, 2019, measured by both the City of Paramount and the SCAQMD, were in excess of the SCAQMD background levels in TSP.

- All Cr(VI) air levels measured were ***below the SCAQMD average concentrations measured in Compton, California (SCAQMD's closest monitoring station to Paramount)***[T]. This is suggestive that the air filters used in the Heating, Ventilation and Air Conditioning (HVAC) System are ***effective in preventing potential exposure to Students, Faculty and Staff.***

- The current Heating, Ventilation and Air Conditioning (HVAC) Unit filters MERV[U] 10 may be effective in controlling ***and*** reducing potential exposures, in that the ***measurable Cr(VI) indoors in the rooms at Gaines and Lincoln were less than the levels measured outdoors or roughly equivalent to the outdoor levels.*** The District may want to undertake a pilot program to determine the feasibility and practicality of using a filter with a higher MERV rating providing any additional protection to the Students, Faculty and Staff.

- All metal and Cr(VI) surface dust levels were ***well below the*** **World Trade Center Screening Levels**[V] **and the LACDPH modified screening levels**[W] for Settled Dust. This is suggestive that the cleaning methods employed by the District are ***effective in preventing a secondary accumulation of material and subsequent potential exposure to Students, Faculty and Staff.***

- Additionally, all metal air levels, and all metal and Cr(VI) surface dust levels were ***well below*** occupational exposure levels established by California Division of Occupational Safety and Health (DOSH -- better known as Cal/OSHA) and other consensus levels as referenced in Table I.

- The current Heating, Ventilation and Air Conditioning (HVAC) Unit filters MERV 10 are effective in that all metal air levels, ***measured indoors in the rooms at Gaines and Lincoln were less than the levels measured outdoors.*** This suggests the need for additional monitoring of these analytes is not necessary provided the District's cleaning methods are not changed in the future and that there are no new producers or increased production at the surrounding business facilities.

- The current Heating, Ventilation and Air Conditioning (HVAC) Unit filters MERV 10 are effective in that Cr(VI) surface dust level ***measured indoors in the rooms at Gaines and Lincoln were either less than the LOD for the method used or well below regulated standards, consensus standards and screening levels.*** This suggests the need for additional monitoring of these analytes is not necessary provided the District's cleaning methods are not changed in the

[R] The monitored data for the 10 stations are combined to provide an estimate of average Basin-wide conditions for the 2012-2013 sampling period. {Final Report Multiple Air Toxics Exposure Study in the South Coast Air Basin, Page 4-6.)

[S] As measured during 2012-2013 SCAQMD MATES IV study, (Final Report Multiple Air Toxics Exposure Study in the South Coast Air Basin, Table 4-2, Page 4-7.)

[T] As measured during 2012-2013 SCAQMD MATES IV study, (Final Report Multiple Air Toxics Exposure Study in the South Coast Air Basin, Figure 2-12, Page 2-17.)

[U] MERV – Minimum efficiency reporting value, commonly known as MERV rating, is a measurement scale designed in 1987 by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) to rate the effectiveness of air filters

[V] World Trade Center Indoor Environment Assessment: Selecting Contaminants of Potential Concern and Setting Health-Based Benchmarks (May 2003) Appendix A, Table A-3, Page A-9 (https://epa-prgs.ornl.gov/radionuclides/copc_benchmark.pdf)

[W] Prepared by Katherine "Katie" Butler based on the World Trade Center Report and updated with current toxicity values.

future and that there are no new producers or increased production at the surrounding business facilities.

- Based on the data collected to date, observations and measurements, in terms of potential exposure to Cr(VI), ***the classrooms are safe to occupy and for continuous use with the airhandler in operation during all periods of occupancy.***

The laboratory report is found in Appendix A. Site map and sample locations are on the Drawings in Appendix B. The Step-by-Step Sampling Procedure is in Appendix C. A photograph Log is in Appendix D. Leighton Consulting's Joint Classroom Monitoring Oversight Report Paramount Unified School District & Los Angeles County Department of Public Health, Abraham Lincoln and Wesley Gaines Elementary Schools Paramount, California is in Appendix E.

III. BACKGROUND AND GENERAL OBSERVATIONS

Executive Environmental (EE) was first contacted by the District in December 2016. SCAQMD has conducted an ongoing investigation to identify and address sources of Cr(VI) air pollution in the City of Paramount. In conjunction with the California Air Resources Board (CARB), the investigation was conducted at various schools and various sites in Paramount in order to assess whether elevated levels of Cr(VI) (found in some industrial areas) may also be found at local Paramount schools.[X] SCAQMD clarified on March 30, 2017:

> "It should be noted that the Orders for Abatement for Aerocraft and Anaplex specify a 1.0 ng/m^3 threshold as an enforcement level, based on the average across samples from 3 separate days. This 1.0 ng/m^3 threshold is specifically for the purpose of enforcing these Orders; in other words, this is a trigger level for these facilities to stop their Cr6 [Cr(VI)] -producing (industrial) activities. However, the 1.0 ng/m^3 level should not be interpreted as a trigger level for residents or students to modify their personal activities. Importantly, the main concern with Cr6 is with long-term exposure (for example, years to decades). Therefore, reducing your exposures to Cr6 on a single day or even a handful of days would not have much impact on your long-term cancer risk [underlining added for emphasis]."[Y]

This is the third study to date. The District met with the LACDPH in May, 2017 to discuss the on-going issues from surrounding businesses and to discuss a plan to collaborate in a joint sampling with the District.

After completion of the first sample set in August 2017, the District, at the request of LACDPH, scheduled a joint sampling with LACDPH on November 21, 2017. The joint sampling was to be completed in accordance with the Leighton Consulting memoranda[Z] to the LACDPH dated November 17, 2017. This memoranda contained the sampling protocol based on the residential sampling completed in June 2017 by LACDPH. This sampling protocol was developed by Leighton Consulting (hereafter, Leighton) at the request of LACDPH. Ultimately, LACDPH did not participate in this initial joint sampling following Leighton's protocol because the District and LACDPH had not reached an agreement on their Memo of Understanding (MOU). Consequently, the sampling was delayed at the LACDPH's request to December 18, 2017, to allow LACDPH additional time to finalize the MOU. Although, the terms of the MOU were still not agreed on, the District, recognizing

[X] Taken from the SCAQMD Assessment of Hexavalent Chromium Data at Paramount Schools Updated May 3, 2017 available at http://www.aqmd.gov/docs/default-source/compliance/Paramount/hexchrom-schools-May3-2017.pdf?sfvrsn=6
[Y] https://paramountenvironment.org/aqmd-issues-clarification-on-school-actions-for-hexavalent-chromium/
[Z] Los Angeles County Department of Public Health (LACDPH) "Technical Memorandum - Field Sampling Protocol for the Collection of Dust and Air Samples from Schools Located in the City of Paramount, California" dated November 17, 2017

the importance of a second sampling set, chose to move ahead with the sampling on December 18, 2017.

On December 18, 2017, EE collected a variety of samples: 24-hour air samples collected from 12 AM December 18, 2017, to 12 AM December 19, 2017 for Hexavalent Chromium and Title 22 metals excluding silver and mercury; and dust wipe samples for Hexavalent Chromium and Title 22 metals excluding silver and mercury. Samples were collected at the following locations that were selected in joint collaboration with LACDPH's subcontractor, Leighton Consulting:

- Gaines Elementary School, Indoors, Room #1
- Gaines Elementary School, Indoors, Room #23
- Gaines Elementary School, Outdoors on Roof of Room #1 (misidentified on the chain of custody (COC) as Room #3)
- Lincoln Elementary School, Indoors, Room #3, Computer Room/Library
- Lincoln Elementary School, Indoors, Room #3, Computer Room/Library, Replicate
- Lincoln Elementary School, Indoors, Room #31
- Lincoln Elementary School, Outdoors on Roof of Room #3, Computer Room/Library

Executive Environmental used the LACDPH's "Technical Memorandum - Field Sampling Protocol for the Collection of Dust and Air Samples from Schools Located in the City of Paramount, California" dated November 17, 2017, as prepared for them by Leighton. All samples were analyzed in accordance with methods outlined in the aforementioned protocols. Dustream® dust samples were not collected because LACDPH was to collect the samples during the joint sampling with EE observing. Since LACDPH chose not to participate in the sampling, there was insufficient time to obtain the necessary media and equipment to collect the samples.

Sample results indicate the following:

- Hexavalent Chromium Air samples indicate that the levels ranged from less than the Limit of Detection (*u*g/m^3]) to 0.000720 *u*g/m^3. These findings are ***not significantly*** different from the results found earlier in August 2017 using a different method.
- Air samples tested for various Title 22 Metals were ***well below*** all California Division of Occupational Safety and Health (DOSH -- better known as Cal/OSHA) regulated levels. In addition, all levels were ***well below*** the American Conference of Governmental Industrial Hygienist Threshold Limit Value (TLV). Furthermore, all levels were also ***below*** the non-regulatory California Office of Environmental Health Hazard Assessment (OEHHA) Levels. Moreover, the vast majority of results were below the limit of detection for the specific metal analyzed and the analytical method used.
- Dust wipe samples tested for various Title 22 Metals were ***well below*** the Total Threshold Limit Concentration (TTLC), the Soluble Threshold Limit Concentration (STLC), and the Toxicity Characteristic Leaching Procedure (TCLP). Moreover, the vast majority of results were below the limit of detection for the specific metal analyzed and the analytical method used.

All data collected through December 2017, indicate that the children, faculty, staff and site visitors were ***not*** at an elevated exposure for the tested targets while inside the classrooms.

On June 13, 2018, the District met with LACDPH at Supervisor Hahn's Office to resume discussions with LACDPH to conduct joint sampling within the District.

On August 1, 2018, the District submitted the "Standard Operating Procedure for Joint Paramount Unified School District/Los Angeles County Department of Public Health Monitoring in Four Classrooms at Gaines and Lincoln Elementary Schools" developed by EE (See Appendix C) for review. No comments were received back from the LACDPH. Around the same time the District

submitted the dates of September 26 and 27 for the Joint Sampling. During the month of August, EE prepared for the sampling and ordered equipment and media.

On September 12, 2018, the District confirmed that the LACDPH was going to participate as an observer and would pay for the laboratory sample analysis collected by EE. A pre-project site meeting was held on September 21, 2018 with Leighton, the LACDPH, EE and the District. On September 25, 2018, the District executed the MOU and received a verbal conformation from the LACDPH. Consequently, samples were collected for approximately 24 hours from 3:00 PM PDT, September 26, 2018 to 3:00 PM PDT September 27, 2018. The MOU was counter-executed by the LACDPH on September 28, 2018.

THE SURROUNDING AREA AND PARAMOUNT USD SCHOOLS

The Surrounding Area: The surrounding area of the various school sites includes Carlton Forge Works (7743 Adams St, Paramount, CA 90723), which manufactures forged high-temperature alloy rings for aerospace, gas turbine, industrial, commercial and nuclear industries, using principal alloy metals such as nickel, titanium, aluminum, cobalt, zirconium, niobium, and iron, as well as other high temperature metals with special properties. Carlton Forge Works has been subject to public complaints beginning in 2012-2013, which allege that it serves as the source of a burning metallic odor in the surrounding area. The complaints prompted ongoing investigations and odor surveillance activities in the area according to SCAQMD.[AA] The area also includes Aerocraft Heat Treating Company, Inc. (15701 Minnesota Avenue, Paramount, CA 90723) and Anaplex Corporation (15547 Garfield Avenue, Paramount, CA 90723), both metal-finishing facilities, which were determined to be the sources of high levels of hexavalent chromium emissions through air testing at the facilities as well as in the surrounding area of Paramount.[BB]

The Schools: The schools included in this survey are Abraham Lincoln Elementary School and Wesley Gaines Elementary School.

FIELD OBSERVATIONS

September 26-27, 2018: Mr. Daniel H. Ginsborg, MSIH, CIH, CSP, EE Chief Executive Officer/Principal Industrial Hygienist; Ms. Kay Mills, MSIH, CSP, Senior Industrial Hygienist; Ms. Vicki Uchida, MBA, CIH, CSP, Senior Industrial Hygienist; Mr. David Hernandez, CLP, Senior Industrial Hygienist Technician; and Mr. Anthony Perez, CLP, Industrial Hygienist Technician; all with EE, met with the District, LACDPH and Leighton Consulting. During the site visit, the following observations were made in rooms selected for ambient air settled dust testing:

- All rooms were unoccupied, clean, and had recently been deep-cleaned prior to start of the Academic School year. All rooms appeared in a well-maintained condition.
- Academic instruction had been underway for approximately 6 weeks.
- There was no odor in any of the rooms.
- There was no observed water damage or mold growth.
- The dust wipe sample locations were jointly selected by EE and Leighton on September 26, 2018. Three dust wipe sample locations were selected from each classroom and the surfaces included a student desk, a commonly utilized surface (such as a counter top or shelf), and a location where surficial dust was observed. The classrooms are routinely cleaned and a build-up of dust was not observed on student desks and other commonly utilized surfaces. However,

[AA] http://www.aqmd.gov/home/regulations/compliance/air-monitoring-activities/carlton-forge-works
[BB] http://www.aqmd.gov/docs/default-source/news-archive/2017/aerocraft-march-3-2017.pdf

superficial dust was observed at some locations that are not typically accessed such as the top of cabinets and bookcases and a sample was collected from one dusty area of each classroom. Windows were not open in classrooms and the window sills are very narrow; therefore, a wipe sample was not collected from sills.[CC] Samples were collected by EE on September 26, 2018.

- All rooms had the furniture in place and were configured for classroom instruction.
- Although the Sampling Protocol in the Appendix indicates that the sampling was to be collected from 12:00 PM PDT, September 26, 2018 to 12:00 PM PDT September 27, 2018. It was shifted to 3:00 PM PDT, September 26, 2018 to 3:00 PM PDT September 27, 2018 to accommodate the academic needs of the school and create the least interruption to the Students, Faculty and Staff.
- Sampling was conducted during academic instruction while Students, Staff and Faculty were present on portions of the 24 hours that samples were collected. The sampling days were reportedly uneventful, typical school day, sampling excluded. The weather was typical for the time of the year, warm and sunny with some scattered clouds.
- All air handling systems were operational and programmed to replicate a typical school day with full occupancy during the period from 7:30 AM to 3:30 PM during the 24 hours of sampling.

IV. SURVEY PROCEDURES

Samples were collected in accordance with the "Standard Operating Procedure for Joint Paramount Unified School District/Los Angeles County Department of Public Health Monitoring in Four Classrooms at Gaines and Lincoln Elementary Schools" developed by EE (See Appendix C) and approved by LACDPH as indicated by Leighton Consulting on September 21, 2018. The following were changes made in the field and agreed by LACDPH through Leighton Consulting:

1. All Cr(VI) media was kept frozen in EE's freezer prior to use.
2. All Cr(VI) media was frozen after and packed with Blue and Dry Ice in transit to the site.
3. All Cr(VI) media was packed with Blue and Dry Ice after use.
4. All Cr(VI) media was kept frozen in EE's freezer until picked up by the lab.
5. The Microvac (Dustream®) samples were not collected because there was insufficient dust loading on horizontal surfaces to provide a meaningful result.
6. Sample collection was shifted 12:00, September 26, 2018 to 12:00 PM PDT September 27, 2018. It was shifted to 3:00 PM PDT, September 26, 2018 to 3:00 PM PDT September 27, 2018 to accommodate academic instruction.

Samples were collected in the following locations from 3:00 PM PDT, September 26, 2018 to 3:00 PM PDT September 27, 2018:

- Gaines Elementary School, Indoors, Room #1
- Gaines Elementary School, Indoors, Room #23
- Gaines Elementary School, Indoors, Room #23, Replicate
- Gaines Elementary School, Outdoors on Roof of Room #1
- Lincoln Elementary School, Indoors, Room #3, Computer Room/Library
- Lincoln Elementary School, Indoors, Room #3, Computer Room/Library, Replicate
- Lincoln Elementary School, Indoors, Room #31
- Lincoln Elementary School, Outdoors on Roof of Room #3, Computer Room/Library

The metal's replicate air sample collected in Gaines Elementary School, Indoors, Room #23, was submitted to the SGS Galson and held at the laboratory because the pump failed after

[CC] Leighton's "Joint Classroom Monitoring Oversight Report"

approximately 2 hours. It was mutually decided by the District and LACDPH not to analyze the sample, 180926-0237.1.5-DHG-N01, because there was an insufficient sample volume collected.

V. RESULTS

Sampling Results: The sampling results indicate that exposures to all measured parameters, in all areas, were **below** the Cal/OSHA PELs, OEHHA RELs, OEHHA, NSRL, ACGIH TLVs, NIOSH RELs.

Results of this study are compared to:

- 2012-2013 SCAQMD MATES IV study, (Final Report Multiple Air Toxics Exposure Study in the South Coast Air Basin)[DD]
- American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs) (2018 Edition)
- California Department of Toxic Substances Control (DTSC) Office of Human and Ecological Risk (HERO) Screening Levels[EE]
- California Occupational Safety and Health Administration (Cal/OSHA) Permissible Exposure Limits (PELs), California Code of Regulations, Title 8, Section 5155 (abbreviated as 8 CCR 5155)
- California Office of Environmental Health Hazard Assessment Acute (1-hour) Reference Exposure Level (REL), Chronic REL [FF], and No Significant Risk Level (NSRL) [GG].
- Los Angeles County Department of Public Health (LACDPH) Prepared Screening Levels for Dust Based on Current Toxicity Values[HH]
- National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Levels (RELs)[II]
- Title 17 California Code of Regulations (CCR) Section 35035. Lead Contaminated Dust (Abbreviated as 17 CCR 35035)
- United States Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Chemical Contaminants at Superfund sites, Nov. 2018.[JJ]
- World Trade Center Screening Levels for Settled Dust (May 2003)[KK]

The California Occupational Safety and Health Administration uses Cal/OSHA PELs as a governmental regulation. The PELs are intended for ***industry applications*** and may not be directly comparable to an indoor environment at a school. The 2012-2013 SCAQMD MATES IV study, ACGIH TLVs, DTSC-SLs, NIOSH RELs, and World Trade Center Screening Levels for Settled Dust are not government regulations but represent the most current health hazard opinion and can be cited under the Cal/OSHA general duty clause. Further, the TLVs are reviewed annually. The 2012-2013 SCAQMD MATES IV study, 17 CCR 35035, OSHA PELs, ACGIH TLVs, DTSC-

[DD] http://www.aqmd.gov/docs/default-source/air-quality/air-toxic-studies/mates-iv/mates-iv-final-draft-report-4-1-15.pdf
[EE] https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-June-2018.pdf
[FF] http://oehha.ca.gov/air/allrels.html
[GG] https://oehha.ca.gov/chemicals/chromium-hexavalent
[HH] Prepared by Katherine "Katie" Butler based on the World Trade Center Report and updated with current toxicity values.
[II] https://www.cdc.gov/niosh/npg/pgintrod.html
[JJ] https://semspub.epa.gov/work/HQ/197426.pdf
[KK] World Trade Center Indoor Environment Assessment: Selecting Contaminants of Potential Concern and Setting Health-Based Benchmarks (May 2003) Appendix A, Table A-3, Page A-9 (https://epa-prgs.ornl.gov/radionuclides/copc_benchmark.pdf)

Screening Levels, NIOSH RELs, OSHA PELs, and World Trade Center SLs for Settled Dust were considered in forming conclusions.

DTSC has developed modified screening levels based on the U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for use in the human health risk assessment process at hazardous waste sites and permitted facilities[LL]. Although this is a School site and not a hazardous waste site, there are no screening levels specifically for schools. Consequently, when dealing with a sensitive site such as school, the most conservative screening levels are used, in this case the DTSC-SL.

The DTSC HERO Screening Levels (DTSC-SLs) are included in the tables at the request of LACDPH. The DTSC-SLs are not directly applicable to a school site because their intention is for the use in the human health risk assessment process at hazardous waste sites and permitted facilities. From DTSC-HERO web site they indicate that they "…provide site characterization, fate and transport modeling, as well as, site-specific exposure and health risk assessments for school, residential, industrial, recreational and open space sites in California. HERO's objective is to ensure that contaminants are accurately characterized, health risks are accurately estimated, and any residual contamination does not pose a risk to human and ecological health.

HERO provides site-specific exposure and health risk assessments at proposed and existing schools in California to ensure protection of some of the state's most sensitive populations. HERO toxicologists provide assistance to DTSC School Evaluation Units on the development of guidance and scientific procedures for assessing the health risks of contaminants at school properties. HERO toxicologists communicate their findings on the health risks of contaminants at school sites and at school site cleanups to DTSC School Evaluation Units, as well as directly to the public, both in written materials and at community meetings."[MM] DTSC does not provide screening levels at schools for the purpose of enforcement. Nevertheless, the DTSC-SL is probably the most conservative level in terms of potential risk assessment and for this reason is appropriate as a general concept in determining the potential risk at a school site.

In addition, OEHHA REL are included in the tables. "The mission of the Office of Environmental Health Hazard Assessment (OEHHA) is to protect and enhance public health and the environment by scientific evaluation of risks posed by hazardous substances [underlining added for emphasis]."[NN] OEHHA provides detailed hazard information about low level exposures to carcinogens and toxic chemicals to the public. These are generally industrial chemicals that are emitted into the atmosphere and are monitored by state regulators. The state uses this information in assessing non-occupational exposure risk assessment. OEHHA also evaluates health effects of chemicals commonly found in indoor air, including developing Reference Exposure Levels for use with indoor air exposure scenarios. OEHHA participates in a number of inter-Agency activities designed to evaluate indoor air quality health issues and to move California toward safer indoor air quality.[OO]

The faculty and staff work at the site approximately 8 hours a day, Monday through Friday. They typically do not work weekends; consequently, Cal/OSHA Regulations would apply to the potential occupational exposures, if any. Students typically attend academic instruction from approximately 8:30 AM to 2:30 PM (approximately 6.5 hours).

[LL] https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-January-2018.pdf
[MM] https://www.dtsc.ca.gov/assessingrisk/index.cfm
[NN] https://oehha.ca.gov/
[OO] http://www.oehha.ca.gov/air.html; website accessed September 22, 2011.

Monitoring results are listed in Table I starting on the following page.
The remainder of the page is blank.

Table I – Hexavalent Chromium (Cr(VI)) Ambient Air Results[PP]
Paramount Unified School District, Lincoln & Gaines Elementary Schools -- September 26-27, 2017

Sample Number[QQ]	Location	Hexavalent Chromium Concentration In µg/m³[RR]	Hexavalent Chromium Concentration In µg[SS]
1809026-0237.1.5-DHG-C01	Lincoln ES, Exterior on the Roof of Room 3/Computer Room/Library	0.0000457	0.000638
1809026-0237.1.5-DHG-C02	Lincoln ES, Inside Permanent Room 3/Computer Room/Library	Not Detected[TT]	<0.00039
1809026-0237.1.5-DHG-C03	Lincoln ES, Inside Portable Room 31	0.0000559	0.000812
1809026-0237.1.5-DHG-C04	Gaines ES, Exterior on the Roof of Room 1	0.000103	*0.00148*
1809026-0237.1.5-DHG-C05	Gaines ES, Inside Permanent Room 1	Not Detected	<0.00039
1809026-0237.1.5-DHG-C06	Gaines ES, Inside Portable Room 23	Not Detected	<0.00039
1809026-0237.1.5-DHG-C07	Lincoln ES, Inside Permanent Room 3/Computer Room/Library, Replicate	Not Detected	<0.00039
1809026-0237.1.5-DHG-C08	Gaines ES, Inside Portable Room 23, Replicate	0.0000366	0.000531
1809026-0237.1.5-DHG-C09	Field Blank	Not Detected	<0.00039
1809026-0237.1.5-DHG-C10	Field Blank	Not Detected	<0.00039
1809026-0237.1.5-DHG-C11	Lab Blank	Not Detected	<0.00039
California Office of Environmental Health Hazard Assessment (OEHHA)[UU]			
Acute (1 hour) Reference Exposure Level (REL)		Not listed	Not listed
Acute (8-hour) REL		Not listed	Not listed
Chronic REL		0.2	Not listed
No Significant Risk Level (NSRL)		Not listed	0.001 (per day)
California Department of Toxic Substances Control (DTSC) Office of Human and Ecological Risk (HERO)[VV]		0.0000068	Not listed
South Coast Air Quality Management District (SCAQMD) actual measured annual average[WW] concentrations (background levels)[XX]		0.00005	Not listed
National Institutes of Occupational Safety and Health (NIOSH) Recommended Exposure Limit (REL)		0.2	Not listed
Proposition 65 Safe Harbor No Significant Risk Level (NSRL)		Not listed	0.001 (per day)

Summary of American Environmental Testing Laboratory (AETL) Reports #94226, dated November 6, 2018.

[PP] Although not provided in the Table, All Cr(VI) air levels are ***well below*** occupational exposure levels established by California Division of Occupational Safety and Health (DOSH -- better known as Cal/OSHA) ***and other*** consensus levels such as American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value and National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Level,

[QQ] Samples were collected from 3:00 PM PDT, September 26, 2018 to 3:00 PM PDT, September 27, 2018. Both days were sunny with some scattered clouds. The day was typical for the time of the year.

[RR] µg/m³ = micrograms per cubic meter

[SS] µg = micrograms

[TT] Concentration of Hexavalent Chromium was not detected above the Laboratory's Limit of Quantification of 0.00039 µg.

[UU] OEHHA further states, "Since margins of safety are incorporated to address data gaps and uncertainties, exceeding the REL does not automatically indicate an adverse health impact [underlining added for emphasis]." From : https://oehha.ca.gov/media/downloads/crnr/acuterel.pdf

[VV] DTSC has developed modified screening levels based on the U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for use in the human health risk assessment process at hazardous waste sites and permitted facilities. Although this is a School site and not a hazardous waste site, there are no screening levels specifically for schools. Consequently, when dealing with a sensitive site such as school, the most conservative screening level are used. In this case the DTSC-SL

[WW] The monitored data for the 10 stations are combined to provide an estimate of average Basin-wide conditions for the 2012-2013 sampling period. {Final Report Multiple Air Toxics Exposure Study in the South Coast Air Basin, Page 4-6.)

[XX] As measured during 2012-2013 SCAQMD MATES IV study, (Final Report Multiple Air Toxics Exposure Study in the South Coast Air Basin, Table 4-2, Page 4-7.)

Table II – Metals Ambient Air Results[YY]
Paramount Unified School District, Lincoln & Gaines Elementary Schools -- September 26-27, 2017

Sample Number[ZZ]	Location[AAA]	Antimony (CAS #7440–36–0)	Arsenic (CAS #7440–38–2)	Barium (CAS #7440–39–3)	Beryllium (CAS #7440–41–7)	Cadmium (CAS #7440–43–9)	Chromium (Chrome) (CAS #7440–47–3)	Cobalt (metal) (CAS #7440–48–4)	Copper (CAS #7440–50–8)	Lead (CAS #7439–92–1)	Molybdenum CAS #7439–98–7)	Nickel (CAS #7440–02–0)	Selenium (CAS #7782–49–2)	Thallium (CAS #7440–28–0)	Vanadium (CAS #7440–62–2)	Zinc (CAS #7440–66–6)
180926-0237.1.5-DHG-N01	Lincoln ES, Outdoors on Roof of Room #3, Computer Room/Library	<0.000064[BBB]	<0.000021	0.000044	<0.0000011	<0.000011	<0.00054	<0.000032	0.000025	<0.000027	<0.000011	<0.000021	<0.00016	<0.00011	<0.000032	<0.00016
180926-0237.1.5-DHG-N02	Lincoln ES, Room #3, Computer Room/Library	<0.000063	<0.000021	<0.000010	<0.0000010	<0.000010	<0.00052	<0.000031	<0.000021	<0.000026	<0.000010	<0.000021	<0.00016	<0.00010	<0.000031	<0.00016
180926-0237.1.5-DHG-N03	Lincoln ES, Room #31	<0.000063	<0.000021	<0.000011	<0.0000011	<0.000011	<0.00053	<0.000032	<0.000021	<0.000026	<0.000011	<0.000021	<0.00016	<0.00011	<0.000032	<0.00016
180926-0237.1.5-DHG-N04	Gaines ES, Outdoors on Roof of Room 1	<0.000062	<0.000021	0.000043	<0.0000010	<0.000010	<0.00052	<0.000031	0.000022	<0.000026	<0.000010	<0.000021	<0.00015	<0.00010	<0.000031	<0.00015
180926-0237.1.5-DHG-N05	Gaines ES, Room #23	<0.000065	<0.000022	0.000013	<0.0000011	<0.000011	<0.00054	<0.000032	<0.000022	<0.000027	<0.000011	<0.000022	<0.00016	<0.00011	<0.000032	<0.00016
180926-0237.1.5-DHG-N06	Gaines ES, Room #1	<0.000062	<0.000021	0.000011	<0.0000010	<0.000010	<0.00052	<0.000031	<0.000021	<0.000026	<0.000010	<0.000021	<0.00016	<0.00010	<0.000031	<0.00016
180926-0237.1.5-DHG-N07	Lincoln ES, Room #3, Computer Room/Library, Replicate	<0.000062	<0.000021	<0.000010	<0.0000010	<0.000010	<0.00052	<0.000031	<0.000021	<0.000026	<0.000010	<0.000021	<0.00015	<0.00010	<0.000031	<0.00015
180926-0237.1.5-DHG-N09	Field Blank[CCC]	<0.90[C]	<0.30	<0.15	<0.015	<0.15	<7.5	<0.45	<0.30	<0.38	<0.15	<0.30	<2.3	<1.5	<0.45	<2.3
180926-0237.1.5-DHG-N10	Field Blank	<0.90	<0.30	<0.15	<0.015	<0.15	<7.5	<0.45	<0.30	<0.38	<0.15	<0.30	<2.3	<1.5	<0.45	<2.3
180926-0237.1.5-DHG-N11	Lab Blank	<0.90	<0.30	<0.15	<0.015	<0.15	<7.5	<0.45	<0.30	<0.38	<0.15	<0.30	<2.3	<1.5	<0.45	<2.3
California Office of Environmental Health Hazard Assessment (OEHHA), Acute Reference Exposure Level (REL)		NSL[DDD]	0.0002	NSL	NSL	NSL	NSL	NSL	0.10	NSL	NSL	0.0002	NSL	NSL	0.03	NSL
8-Hour Inhalation Reference Exposure Level (REL)		NSL	0.000015	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	0.00006	NSL	NSL	NSL	NSL
and Chronic Inhalation Reference Exposure Level (REL)		NSL	0.000015	NSL	0.000007	0.00002	NSL	NSL	NSL	NSL	NSL	0.000014	0.02	NSL	NSL	NSL
Department of Toxic Substances Control (DTSC) Screening Levels (SLs) Human and Ecological Risk (HERO) Human Risk Assessment (HHRA), June 2018.[EEE,FFF]		NSL	NSL	NSL	0.0000012	0.00000067	NSL	NSL	NSL	NSL	NSL	0.000011	NSL	NSL	NSL	NSL
South Coast Air Quality Management District (SCAQMD) Background Level, measured annual average background level during 2012-2013, MATES IV Study		NSL	0.00000056	NSL	NSL	0.00000016	NSL	NSL	NSL	0.00000623	NSL	0.00000376	0.00000082	NSL	0.0000031	NSL
United States Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Chemical Contaminants at Superfund sites, Nov. 2018.		NSL	0.00000065	0.00052	0.0000012	0.0000016	NSL	0.00000031	NSL	0.00015	NSL	0.000011	0.021	NSL	0.0001	NSL

Summary of SGS Galson Reports # L458004, dated October 12, 2018.

[YY] Although not provided in the Table, All air levels are ***well below*** occupational exposure levels established by California Division of Occupational Safety and Health (DOSH -- better known as Cal/OSHA) ***and other*** consensus levels such as American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value and National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Level,

[ZZ] Samples were collected from 3:00 PM PDT, September 26, 2018 to 3:00 PM PDT, September 27, 2018. Both days were sunny with some scattered clouds. The day was typical for the time of the year.

[AAA] Refer to the site drawings in Appendix B for specific sample locations.

[BBB] Units for air samples are in milligrams per cubic meters, mg/m^3, units reported by the Lab.

[CCC] Laboratory results for field and lab blanks are reported in total micrograms (µg), which is the Limit of Quantification.

[DDD] NSL means "No Standard Listed" for this chemical

[EEE] Health-based Screening Levels were originally reported $\mu g/m^3$, which were converted to mg/m^3 to match laboratory results

[FFF] DTSC has developed modified screening levels based on the U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for use in the human health risk assessment process at hazardous waste sites and permitted facilities. Although this is a School site and not a hazardous waste site, there are no screening levels specifically for schools. Consequently, when dealing with a sensitive site such as school, the most conservative screening level are used. In this case the DTSC-SL.

Table III – Metals and Hexavalent Chromium (Cr(VI)) Surface Dust Wipe Results
Paramount Unified School District, Lincoln & Gaines Elementary Schools -- September 26-27, 2017

Sample Number[GGG]	Location[HHH]	Antimony (CAS #7440–36–0)	Arsenic (CAS #7440–38–2)	Barium (CAS #7440–39–3)	Beryllium (CAS #7440–41–7)	Cadmium (CAS #7440–43–9)	Chromium (Chrome) (CAS #7440–47–3)	Cobalt (metal) (CAS #7440–48–4)	Hexavalent Chrome (CAS # 18540-29-9)	Copper (CAS #7440–50–8)	Lead[III] (CAS #7439–92–1)	Molybdenum CAS #7439–98–7)	Nickel (CAS #7440–02–0)	Selenium (CAS #7782–49–2)	Thallium (CAS #7440–28–0)	Zinc (CAS #7440–66–6)
180926-0237.1.5-DHG-M01	Lincoln ES, Room #3, Computer Room/Library, North, center computer desk	ND[JJJ]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
180926-0237.1.5-DHG-M02	Lincoln ES, Room #3, Computer Room/Library, South, bookcase, bottom shelf	ND	ND	106[KKK]	ND	ND	1.73	0.479	ND	3.19	6.6	ND	2.05	ND	ND	62.1
180926-0237.1.5-DHG-M03	Lincoln ES, Room #3, Computer Room/Library, Southwest, low table	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
180926-0237.1.5-DHG-M04	Lincoln ES, Room #31, Southeast, black wood bookcase	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
180926-0237.1.5-DHG-M05	Lincoln ES, Room #31, East, top of child's desk	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0..242	ND	ND	ND	ND
180926-0237.1.5-DHG-M06	Lincoln ES, Room #31, Northwest, white metal bookcase	ND	ND	ND	ND	ND	ND	0.393	ND	ND	ND	ND	0.342	ND	ND	ND
180926-0237.1.5-DHG-M07	Gaines ES, Room #23, North, child's table	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
180926-0237.1.5-DHG-M08	Gaines ES, Room #23, South, computer table	ND	ND	0.807	ND	ND	ND	ND	ND	ND	ND	.242	ND	ND	ND	ND
180926-0237.1.5-DHG-M09	Gaines ES, Room #23, South, top of black metal file cabinet	ND	ND	1.23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
180926-0237.1.5-DHG-M10	Gaines ES, Room #1, South, center of room, child's desk	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
180926-0237.1.5-DHG-M11	Gaines ES, Room #1, Northeast, computer desk	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
180926-0237.1.5-DHG-M12	Gaines ES, Room #1, Southwest, top of beige metal file cabinet	ND	ND	2.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
180926-0237.1.5-DHG-M13	Lab Blank[LLL]	<1.00	<1.00	<0.60	<0.20	<0.20	<0.20	<0.20	<0.05	<0.20	<1.00	<0.20	<0.20	<1.00	<1.00	<0.20
180926-0237.1.5-DHG-M14	Field Blank	<1.00	<1.00	<0.60	<0.20	<0.20	<0.20	<0.20	<0.05	<0.20	<1.00	<0.20	<0.20	<1.00	<1.00	<0.20
180926-0237.1.5-DHG-M15	Field Blank	<1.00	<1.00	<0.60	<0.20	<0.20	<0.20	<0.20	<0.05	<0.20	<1.00	<0.20	<0.20	<1.00	<1.00	<0.20
California Department of Public Health (CDPH)[MMM]		**NSL[NNN]**	**NSL**	**NSL**	**NSL**	**NSL**	**NSL**	**NSL**	**NSL**	**NSL**	26.91	**NSL**	**NSL**	**NSL**	**NSL**	**NSL**
Los Angele County Department of Public Health (LACDPH) Prepared Screening Levels Based on Current Toxicity Values[OOO]		**NSL**	0.0061	**NSL**	**NSL**	**NSL**	**NSL**	4.70	**NSL**	**NSL**	**NSL**	**NSL**	172.47	**NSL**	0.16	470.37
World Trade Center Screening Levels for Settled Dust (May 2003)[PPP]		6.27	3.87	1097.52	31.36	15.57	47.04	313.58	**NSL**	627.16	**NSL**	**NSL**	313.58	78.39	1.10	473.66

Summary of American Environmental Testing Laboratory (AETL) Reports #94226 and #94227, dated October 8, and October 3, 2018, respectively.

[GGG] Samples were collected from 3:00 PM PDT, September 26, 2018 to 3:00 PM PDT, September 27, 2018. Both days were sunny with some scattered clouds. The day was typical for the time of the year.
[HHH] Refer to the site drawings for specific sample locations
[III] "Lead-contaminated dust" means dust that contains an amount of lead equal to, or in excess of: (a) forty micrograms per square foot (40 $\mu g/ft^2$) [4.3 $\mu g/100\ cm^2$] for interior floor surfaces; or (b) two hundred and fifty micrograms per square foot (250 $\mu g/ft^2$) [26.9 $\mu g/100\ cm^2$] for interior horizontal surfaces; or (c) four hundred micrograms per square foot (400 $\mu g/ft^2$) [43.1 $\mu g/100\ cm^2$]for exterior floor and exterior horizontal surfaces. Title 17 California Code of Regulations (CCR) Section 35035. Lead Contaminated Dust
[JJJ] ND means "Not Detected", below the Limit of detection, 0.05 $\mu g/100\ cm^2$
[KKK] Units for wipe samples = micrograms per 100 square centimeters, $\mu g/100cm^2$, units reported by the Lab
[LLL] Laboratory results for field and lab blanks were reported in micrograms per sample (μgm/sample), which is the Limit of Quantification.
[MMM] Title 17 California Code of Regulations (CCR) Section 35035. Lead Contaminated Dust
[NNN] NSL means "No Standard Listed" for this chemical.
[OOO] Prepared by Katherine "Katie" Butler based on the World Trade Center Report and updated with current toxicity values.
[PPP] Health-based Screening Levels from the World Trade Center Screening Levels were originally reported as mg/m^2, which were converted to $\mu g/100\ cm^2$. The World Trade Screening Levels for settled dust were updated with current Cal/EPA and USEPA toxicity criteria as specified in DTSC 2018 Guidance, with the exception of beryllium and chromium.

VI. CONCLUSION

In summary, the air sampling results for hexavalent chromium were below both the OEHHA No Significant Risk Level (NSRL) for inhalation and the OEHHA Proposition 65 Safe Harbor NSRL for inhalation as well as below the Cal/OSHA PELs, ACGIH TLVs and NIOSH RELs. Furthermore, the current Heating, Ventilation and Air Conditioning (HVAC) Unit filters MERV 10 are effective in that Cr(VI) levels measured inside the classroom were less than the levels measured outdoors or roughly equivalent to the outdoor levels. They also appear to be effective in that there is no build-up of settled dust containing heavy metals or hexavalent chromium at concentrations that exceed referenced screening levels. Despite these favorable findings, the District may want to launch a pilot program to determine if the indoor levels could be further reduced through the incorporation of HEPA (high efficiency particulate air) filters into the Heating, Ventilation and Air Conditioning (HVAC) System. In this pilot program, the District should start with a MERV 13 and may need to sequentially progress to a higher MERV rated filter.

Although all of the Cr(VI) air levels (level measured and LOD) ***were a magnitude of 4 to 15 times*** the DTSC-SL[QQQ], the DTSC uses "Screening Level" as a generic risk-based concentration derived from standardized risk assessment equations combining exposure information assumptions with applicable toxicity criteria. Screening Levels are contaminant concentrations considered to be protective for humans (including sensitive groups) over a lifetime. Screening Levels calculated using the toxicity criteria do not address non-human health endpoints such as ecological impacts[RRR]. Because this a school site, DTSC-SLs are derived at a target risk level of 10-6 and a target hazard quotient value of 1. A 10-6 risk level for a human carcinogen is defined as potential human carcinogenic risks associated with chemical exposure expressed in terms of an increased probability of developing cancer during a person's lifetime. For example, a 10-6 increased cancer risk represents an increased lifetime risk of 1 excess cancer per 1,000,000 people exposed. For carcinogenicity, the probability of an individual developing cancer over a lifetime has historically been estimated by multiplying the cancer slope factor (mg/kg/day) for the substance by the chronic (70-year average) daily intake (mg/kg/day). ***Exposure over shorter periods of time would be associated with much lower cancer risks*** [bolding and italics added for emphasis][SSS].

If the cumulative risk and hazard index estimates are acceptable under the most conservative screening assumptions, then site-specific conditions can be expected to result in acceptable risk and hazard index levels. Consequently, the results of a screening risk assessment indicate whether or not a quantitative baseline risk assessment or further site investigation is warranted[TTT]. These levels in excess of the DTSC-SL suggest a need for on-going further investigation and a quantitative baseline risk assessment[UUU]. DTSC-SL suggest that the LOD for the method used may be too high, which introduces limitations to the assessment, and suggests the need to determine if a method with a LOD below the DTSC-SL can be developed.

With the exception of the samples collected at Lincoln, Inside Portable Room 31, and Gaines, Exterior on the Roof of Room 1; all Cr(VI) air levels, ***were below SCAQMD actual measured annual average concentrations (background levels) in TSP.*** Lincoln, inside Portable Room 31 slightly exceeded the background level, and Gaines, Exterior on the Roof of Room 1, was approximately twice the background. It is noted ***that almost all of the outdoor*** samples collected at school sites from December 21, 2016 through March 26, 2019, measured by both the City of Paramount and the

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[QQQ] DTSC has developed modified screening levels based on the U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for use in the human health risk assessment process at hazardous waste sites and permitted facilities. Although this is a School site and not a hazardous waste site, there are no screening levels specifically for schools. Consequently, when dealing with a sensitive site such as school, the most conservative screening level are used. In this case the DTSC-SL.

[RRR] (https://www.dtsc.ca.gov/LawsRegsPolicies/Regs/upload/Final-Toxicity-Criteria-Rule-Rule-Text-Appdx-2018-09-04-clean.pdf)

[SSS] (https://oehha.ca.gov/air/health-effects-hexavalent-chromium.

[TTT]https://www.dtsc.ca.gov/LawsRegsPolicies/Regs/upload/Final-Toxicity-Criteria-Rule-Rule-Text-Appdx-2018-09-04-clean.pdf

[UUU] https://www.dtsc.ca.gov/AssessingRisk/upload/NOTE-4-HHRA-Number-4-October-2016-revision-2016-10-26-FINAL-2.pdf

SCAQMD were in excess of the SCAQMD background levels in TSP. These findings support the need for on-going testing and monitoring. The District's goal should be that the levels inside the classroom should be below the SCAQMD actual measured annual average concentrations (background levels) in TSP for the Los Angeles Basin. A slight increase in the HVAC system filter MERV rating may be effective in reducing the concentration indoors to below the average concentration.

All Cr(VI) air levels measured, were ***below the SCAQMD average concentrations measured in Compton, California (SCAQMD's closest monitoring station to Paramount)***[vvv]. This is suggestive that the air filters used in the Heating, Ventilation and Air Conditioning (HVAC) System are ***effective in preventing potential exposure to Students, Faculty and Staff***. This is a relatively good finding for the District because the measurements collect indoors on the school sites were below the 2012-2013 SCAQMD Mates IV Compton monitoring station.

The District should seek assistance from the City, County, SCAQMD, and the State in regulating the Cr(VI) emissions from the surrounding businesses. Because all of the levels including the Limit of Detection exceeded the DTSC-SLs the District should ask the DTSC HERO and OEHHA to provide a quantitative baseline risk assessment for the students, staff and faculty. Once a quantitative risk assessment is completed, it may ***not*** be necessary for on-going monitoring or further upgrading the HVAC System's Filter MERV Rating.

It is important to keep in mind, that result levels exceeding the DTSC-SLs does not mean that an individual will develop cancer, it merely indicates that they are at a higher risk of developing cancer. This higher risk for any specific site, remains an unknown until a quantitative risk assessment is completed. It is possible that the risk may be greater or lesser than both the DTSC-SLs. "The derivation of DTSC-SL values ***does not consider external practical criteria such as analytical detection limits, naturally occurring concentrations, or physical limitations*** [bolding and italics added for emphasis]."[www] The results of this study points to the need for:

- On-going monitoring for Cr(VI) in the air in the school environment;
- A quantitative baseline risk assessment by an independent governmental agency and the subsequent development of a "School Based Screening Level"; and
- Developing analytical methods that are reproducible and capable of ascertaining the concentration of the levels found in the environment in comparison to the DTSC-SL.

Although these conclusions are very conservative and are based on DTSC-SL that may not be directly applicable to schools, they are the most protective for the students, staff and faculty. It may be possible to lessen the conservative nature of these conclusions once a quantitative baseline risk assessment is completed for the District.

The District implemented the following steps several years ago to further reduce the potential exposure to Cr(VI):

- ✓ The District currently uses vacuums that are equipped with High Efficiency Particulate Air (HEPA) filters as compared with residential units that typically do not contain HEPA filters;
- ✓ The District's on-going routine maintenance of the Heating, Ventilation and Air Conditioning (HVAC) System, as compared to the infrequent maintenance of residential HVAC Systems commonly seen or the absence of residential HVAC Systems,
- ✓ The District's current filters that are used are a MERV 10, as compared with the typical school use of a MERV 8, and as compared to residential units, which typically use MERV 4.

[vvv] As measured during 2012-2013 SCAQMD MATES IV study, (Final Report Multiple Air Toxics Exposure Study in the South Coast Air Basin, Figure 2-12, Page 2-17.)

[www] https://www.dtsc.ca.gov/AssessingRisk/upload/HERO-Quarterly-Updates-July-2016.pdf

The District is not only doing all that they can to prevent a potential exposure to students, faculty and staff, but have gone above and beyond with their maintenance of the HVAC System, deployment of HEPA equipped vacuums, increase in the filters' MERV rating from an 8 to 10, and proactively collecting air samples in the representative rooms.

VII. RECOMMENDATIONS

19-03-A. Continue to review exterior hexavalent chromium air pollution and potential methodology to determine if there is an on-going need to collect additional samples.

19-03-B. Continue to monitor every six months for Cr(VI), until levels indoors are below the Health Screening levels.

1. Determine if there exists a laboratory that can develop an analytical protocol that will have a LOD below the DTSC-Screening Level.
2. Continue to allow LACDPH to observe and provide technical assistance.

19-03-C. Continue with the communication strategy implemented by the District to the students, staff, faculty and the public of posting to the World Wide Web.

19-03-D. Discontinue dust wipe sampling and air sampling for other metals for as long as production at the current emitters remain at less than the current levels in 2018.

1. Collect additional samples when and if there is increased production or new companies producing emissions.

19-03-E. Formally request DTSC HERO and OEHHA to calculate the potential risk for cancer (quantitative baseline risk assessment):

1. For students for the 6.5 hours they spend on District campuses.
2. For students for the time spent indoor activities.
3. For students at 10-6 Health Screening Level for the time spent outdoors in athletic activities. The levels outdoor are higher than indoors, so there may be an increased risk associated with outdoor activities.
4. For Faculty and Staff for the time spent indoors and outdoors on District campuses.

19-03-F. Provide leadership in developing "School Based Screening Levels for Hexavalent Chromium" in conjunction with the agency/organization that develops the quantitative baseline risk assessment.

19-03-G. Formally request the Federal National Institute of Occupational Health and Safety to determine the potential risk for cancer for Faculty and Staff.

19-03-H. Formally request the City of Paramount, County of Los Angeles, South Coast Air Quality Management District (SCAQMD) and the State of California to continue their efforts reducing the migration of Cr(VI) air pollution from surrounding businesses onto school property.

19-03-I. Heating, Ventilation and Air Conditioning (HVAC)

1. Continue with the existing maintenance schedule.
2. Develop a pilot program and test its efficacy for increasing the Heating, Ventilation and Air Conditioning (HVAC) filter MERV rating from a 10 to a 13 rating (the first HEPA (high efficiency particulate air) series air filter).
   A. This will require re-engineering the HVAC system such that it can handle the increase resistance of MERV 13 filters without significantly increasing the wear and tear on the HVAC.

B. Continue with the existing filters that are MERV 10. Evaluate other MERV filters, if existing equipment will not be damaged by their use.

3. Ensure that the economizer/fresh air dampers are open and that they supply sufficient fresh outside air in accordance with ASHRAE Standards and guidelines. As a rule-of-thumb, this should be 15 to 20% fresh outside air, regardless of the need for heating or cooling.
4. Verify and ensure that the air handling system in all rooms operate in accordance with ASHRAE Standards and Guidelines; that is, the fan comes on (lead-time) one hour before occupancy (two hours before occupancy following a closure of two or more days such as a weekend) and continues (lag-time) for one hour after the conclusion of occupancy.

19-03-J. Provide employees represented by this study with access to this report, per 8 CCR 3204(e)[xxx].

VIII. DISCLAIMER

All reports and recommendations are based on conditions and practices observed and information made available to Executive Environmental (EE) by the client and the designated sites/facilities on the days sampling was conducted. This report does not purport to set forth all hazards nor to indicate that other hazards do not exist. No responsibility is assumed by EE for the control or correction of conditions or practices existing at the facilities, or at any other premises, surveyed by EE for and on the behalf of the client. Services provided by EE shall be governed by the standard of practice for professional services measured at the time those services are rendered.

Consulting services and/or other products or recommendations provided as a part of this engagement, which may be provided all or in part by an ASCIP contractor (Executive Environmental) as a benefit of JPA membership, do not and are not intended to assume, take the place of, or relieve any other insurance program or responsible party of any duty, obligation, or responsibility to respond to or provide benefits on behalf of its client. Where a client has insurance coverage other than ASCIP, or where a responsible party is identified at the time such services, products, or recommendations are desired, the client should first contact that insurer or responsible party to request such assistance and to provide them with an opportunity to respond in an appropriate manner.

As with most studies, there are specific limitations that arise; this study is no different. The specific limitations include a small sample set, frequency of sampling, and potential exposures limited to the time spent on the affected school sites.

This Report continues on the next Page with Appendix A.
Remainder of the Page is Blank.

[xxx] See the Access to Employee Exposure and Medical Records standard at www.dir.ca.gov/title8/3204.html.

Appendix A

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

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Number of Pages	**5**
Date Received	**09/28/2018**
Date Reported	**11/06/2018**

Telephone: (949)681-4208
Attention: Meredith Church

Job Number	Order Date	Client
94228	09/28/2018	LGHTN

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008
Site: Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Enclosed please find results of analyses of 11 ambient air cassette 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

EXECUTIVE ENVIRONMENTAL
HEALTH & SAFETY SIMPLIFIED

Industrial Hygiene Laboratory Submittal

Originating Office (Check-marked)

☑ 310 E. Foothill Blvd., Suite 200, Arcadia, CA 91006, Phone: 626.441.7050, Fax: 626.441.0016

☐ 1440 Broadway, Suite 616, Oakland, CA 94612, Phone: 510.272.9346, Fax: 510.272.9385

☑ Routine (10 Working Days)	☐ RUSH (surcharges may apply) Circle One: 4 hours / 24 hours / 48 hours / 72 hours / 5 days	Project #: EE#16-A0007-0237.1.5 Leighton #11561.008	Submitted by: Meredith Church, Leighton Consulting	Date: 9/28/18	94228 Page 1 of 1

Submitted to: (one Lab/Form)
☐ EM Lab 650.829.5800 ☐ Galson 888.577.5227 ☐ Hygeia 626.355.4711 ☐ Forensic 888.813.9417 ☐ Sierra Anal. 949. 348.9389 ☐ SanAir 804.897.1177 ☑ Other & Phone: AETL (American Environmental Testing Lab) – 888.288.2385

The receiving Laboratory is required to complete the following:

1. All invoices are to be sent to: Leighton Consulting, 17781 Cowan, Irvine, CA 92614 **with** a copy of the lab report.
2. Report to the attention of: Meredith Church on Behalf of LA County Public Health, Phone: (949) 681-4208
3. All lab reports and invoices are to contain both Project Number from above.
4. Unsigned and reports marked draft is unacceptable.

Optional Items to be completed by the laboratory (if check marked): ☐ Fax report to: ☐ 626.441.0016 ☐ 510.272.9385 ☐ Other: _____

☑ Email Report to: ☑ Info@execenv.com ☑ Other: dginsborg@execenv.com; kmills@execenv.com; mchurch@leightongroup.com, and kbutler@ph.lacounty.gov

☑ US Mail Report to: ☑ Originating office check marked above ☑ Other: 17781 Cowan, Irvine, CA 92614 with a copy of the lab report ☑ Alternate billing address: Leighton Consulting

Lab No.:	Sample No.:	Media	Air Volume	Location	Analyses Requested
94228.01	C01	See Note 1 Below	13,951 Liters	Lincoln ES, Outdoors on Roof of Room #3, Computer Room/Library	Hexavalent Chromium by CARB 039 Method
94228.02	C02	See Note 1 Below	13,914 Liters	Lincoln ES, Room #3, Computer Room/Library	Hexavalent Chromium by CARB 039 Method
94228.03	C03	See Note 1 Below	14,527 Liters	Lincoln ES, Room #31	Hexavalent Chromium by CARB 039 Method
94228.04	C04	See Note 1 Below	14,324 Liters	Gaines ES, Outdoors on Roof of Room 3	Hexavalent Chromium by CARB 039 Method
94228.05	C05	See Note 1 Below	14,380 Liters	Gaines ES, Room #23	Hexavalent Chromium by CARB 039 Method
94228.06	C06	See Note 1 Below	14,364 Liters	Gaines ES, Room #1	Hexavalent Chromium by CARB 039 Method
94228.07	C07	See Note 1 Below	14,483 Liters	Lincoln ES, Room #3, Computer Room/Library, Replicate	Hexavalent Chromium by CARB 039 Method
94228.08	C08	See Note 1 Below	14,521 Liters	Gaines ES, Room #23, Replicate	Hexavalent Chromium by CARB 039 Method
94228.09	C09	See Note 1 Below	N/A	Field Blank	Hexavalent Chromium by CARB 039 Method
94228.10	C10	See Note 1 Below	N/A	Field Blank	Hexavalent Chromium by CARB 039 Method
94228.11	C11	See Note 1 Below	N/A	Lab Blank	Hexavalent Chromium by CARB 039 Method

Prefix: 180926-0237.1.5-DHG-

Notes: 1) Sodium Bicarbonate Treated Filter supplied by AETL 2) Samples collected from 3:00 PM 9/26 to 3:00 PM 9/27/18. 3) Blank Correct.
4) Sample volume is incredibly large (approximately fourteen **thousand** Liters).

Sampling Location Zip Code: 90723

Released By, Date, & Time:	Received By, Date, & Time:	Released By, Date, & Time:
Daniel H. Ginsborg, 9/28/18 1219 PM	Meredith Church, Leighton Consulting 9/28/18 1249 PM	Meredith Church, Leighton Consulting 9/28/18 1310
Sargis P 9/28/18 1310 5P	Sargis P 9/28/18 1430	Christine Noushadagan 9/28/18 14:30

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 NORTH NAOMI ST. BURBANK, CALIFORNIA 91504 DHS # 1541 LACSD# 10181
TEL (888) 288-AETL (818) 845-8200 FAX (818) 845-8840 www.aetlab.com

COOLER RECEIPT FORM

Client Name:	Executive Env.
Project Name:	180926_0237.1.5-DHG Cr VI
AETL Job Number:	94228
Date Received: 9/28/18	Received by: Christi
Carrier: ☒ AETL Courier ☐ Client ☐ GSO ☐ FedEx ☐ UPS ☐Others:	
Samples were received in: ☒ Cooler (1) ☐ Other (Specify):	
Inside temperature of shipping container No 1: 3.1°c, No 2: _____, No 3: _____	
Type of sample containers: ☐ VOA, ☐ Glass bottles, ☐ ☐Wide mouth jars, ☐ ☐HDPE bottles, ☐ Metal sleeves, ☐ Others (Specify): Cassette	
How are samples preserved: ☒ None, ☐ Ice , ☐ Blue Ice, ☐ Dry Ice	
☐ None, ☐ HNO_3, ☐ NaOH, ☐ ZnOAc, ☐ HCl, ☐ $Na_2S_2O_3$, _MeOH	
☐ Other (Specify):	

	Yes	No, explain below	Name, if client was notified.
1. Are the COCs Correct?	✓		
2. Are the Sample labels legible?	✓		
3. Do samples match the COC?	✓		
4. Are the required analyses clear?	✓		
5. Is there enough samples for required analysis?	✓		
6. Are samples sealed with evidence tape?	✓		
7. Are sample containers in good condition?	✓		
8. Are samples preserved?	NA		
9. Are samples preserved properly for the intended analysis?	NA		
10. Are the VOAs free of headspace?	NA		
11. Are the jars free of headspace?	NA		

Explain all "No" answers for above questions:

CYRUS RAZMARA

From: Daniel Ginsborg [dginsborg@execenv.com]
Sent: Monday, October 1, 2018 3:15 PM
To: cyrus@aetlab.com
Cc: mchurch@leightongroup.com; KButler@ph.lacounty.gov; Dan Flores; Kay Mills; Vicki Uchida; Ruben Frutos
Subject: 16-0237.1.5, status question on media picked-up from my office on Friday
Attachments: 16-0237.1.5- COC -Hexavalent Chromium Air Samples.pdf; ATT00001.htm; 16-0237.1.5-COC -Hexavalent Chromium Wipe Sample.pdf; ATT00002.htm; 16-0237.1.5- COC -Metal Wipe Samples.pdf; ATT00003.htm

Dr Razmara,

To avoid any possible confusion, the samples on the attached COC picked-up from our office on Friday were submitted by Leighton Consulting on our COC. They are responsible for payment of this project. Executive Environmental will not pay any lab bill on this project. Please contact Leighton Consulting to establish an account if they do not already have one with your lab. Their contact information is on the COC, please send the report and any project communiqués to the five individuals listed on the COC. Has any communiqués been sent out on this project such as a confirmation that the samples were received and the date we can expect results? If it has, I have not received it and would like a copy resent to the individuals listed on the COC. Please contact me if there are any questions or if they have not made timely payments and I will do what I can.

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

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Telephone: (949)681-4208
Attention: Meredith Church

Project ID: EE#16-A0007-0237.1.5
Date Received 09/28/2018
Date Reported 11/06/2018

Job Number	Order Date	Client
94228	09/28/2018	LGHTN

CERTIFICATE OF ANALYSIS
CASE NARRATIVE

AETL received 11 samples with the following specification on 09/28/2018.

Lab ID	Sample ID	Sample Date	Matrix	Quantity Of Containers
94228.01	180926-0237.1.5-DH G-C01	09/26/2018	Gaseous	1
94228.02	180926-0237.1.5-DH G-C02	09/26/2018	Gaseous	1
94228.03	180926-0237.1.5-DH G-C03	09/26/2018	Gaseous	1
94228.04	180926-0237.1.5-DH G-C04	09/26/2018	Gaseous	1
94228.05	180926-0237.1.5-DH G-C05	09/26/2018	Gaseous	1
94228.06	180926-0237.1.5-DH G-C06	09/26/2018	Gaseous	1
94228.07	180926-0237.1.5-DH G-C07	09/26/2018	Gaseous	1
94228.08	180926-0237.1.5-DH G-C08	09/26/2018	Gaseous	1
94228.09	180926-0237.1.5-DH G-C09	09/26/2018	Gaseous	1
94228.10	180926-0237.1.5-DH G-C10	09/26/2018	Gaseous	1
94228.11	180926-0237.1.5-DH G-C11	09/26/2018	Gaseous	1

Method ^ Submethod	*Req Date*	*Priority*	*TAT*	*Units*
CARB-039 ^ UG/M3	10/05/2018	2	Normal	ug/m3

Continued

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Ordered By

Leighton Consulting **17781 Cowan** **Irvine, CA 92614**	**Project ID: EE#16-A0007-0237.1.5** **Date Received 09/28/2018** **Date Reported 11/06/2018**

Telephone: (949)681-4208
Attention: Meredith Church

Job Number	Order Date	Client
94228	09/28/2018	LGHTN

CERTIFICATE OF ANALYSIS
CASE NARRATIVE

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

All samples were kept frozen prior to analysis.

Checked By: _____ Approved By: C. Razmara

Cyrus Razmara, Ph.D.
Laboratory Director

American Environmental Testing Laboratory Inc.
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ANALYTICAL RESULTS

Ordered By

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Telephone: (949)681-4208
Attn: Meredith Church

Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Page: **2**

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94228	09/28/2018	LGHTN

Method: CARB-039, Determination of Hexavalent Chromium in Ambient Air by IC

QC Batch No: 10012018-1

Our Lab I.D.			Method Blank	94228.01	94228.02	94228.03	94228.04
Client Sample I.D.				180926-0237.1.5-DHG-C01	180926-0237.1.5-DHG-C02	180926-0237.1.5-DHG-C03	180926-0237.1.5-DHG-C04
Date Sampled				09/26/2018	09/26/2018	09/26/2018	09/26/2018
Date Prepared			10/01/2018	10/01/2018	10/01/2018	10/01/2018	10/01/2018
Preparation Method			CARB039	CARB039	CARB039	CARB039	CARB039
Date Analyzed			10/01/2018	10/01/2018	10/01/2018	10/01/2018	10/01/2018
Matrix			Gaseous	Gaseous	Gaseous	Gaseous	Gaseous
Units			ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Chromium (VI)	0.000026	0.000026	ND	0.0000457	ND	0.0000559	0.000103

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ANALYTICAL RESULTS

Ordered By

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Telephone: (949)681-4208
Attn: Meredith Church
Page: **3**

Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94228	09/28/2018	LGHTN

Method: CARB-039, Determination of Hexavalent Chromium in Ambient Air by IC

QC Batch No: 10012018-1

Our Lab I.D.			94228.05	94228.06	94228.07	94228.08	94228.09
Client Sample I.D.			180926-0237.1.5-DHG-C05	180926-0237.1.5-DHG-C06	180926-0237.1.5-DHG-C07	180926-0237.1.5-DHG-C08	180926-0237.1.5-DHG-C09
Date Sampled			09/26/2018	09/26/2018	09/26/2018	09/26/2018	09/26/2018
Date Prepared			10/01/2018	10/01/2018	10/01/2018	10/01/2018	10/01/2018
Preparation Method			CARB039	CARB039	CARB039	CARB039	CARB039
Date Analyzed			10/01/2018	10/01/2018	10/01/2018	10/01/2018	10/01/2018
Matrix			Gaseous	Gaseous	Gaseous	Gaseous	Gaseous
Units			ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Chromium (VI)	0.000026	0.000026	ND	ND	ND	0.0000366	ND

American Environmental Testing Laboratory Inc.
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ANALYTICAL RESULTS

Ordered By

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Telephone: (949)681-4208
Attn: Meredith Church
Page: **4**

Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94228	09/28/2018	LGHTN

Method: CARB-039, Determination of Hexavalent Chromium in Ambient Air by IC

QC Batch No: 10012018-1

Our Lab I.D.			94228.10	94228.11			
Client Sample I.D.			180926-0237.1.5-DHG-C10	180926-0237.1.5-DHG-C11			
Date Sampled			09/26/2018	09/26/2018			
Date Prepared			10/01/2018	10/01/2018			
Preparation Method			CARB039	CARB039			
Date Analyzed			10/01/2018	10/01/2018			
Matrix			Gaseous	Gaseous			
Units			ug/m3	ug/m3			
Dilution Factor			1	1			
Analytes	**MDL**	**PQL**	**Results**	**Results**			
Chromium (VI)	0.000026	0.000026	ND	ND			

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

QUALITY CONTROL RESULTS

Ordered By

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Telephone: (949)681-4208
Attn: Meredith Church

Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Page: **5**

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94228	09/28/2018	LGHTN

Method: CARB-039, Determination of Hexavalent Chromium in Ambient Air by IC

QC Batch No: 10012018-1; LCS: Blank; LCS Prepared: 10/01/2018; LCS Analyzed: 10/01/2018; Units: ug/m3

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	
Chromium (VI)	**0.200**	**0.194**	**97.0**	**0.200**	**0.194**	**97.0**	**<1**	**75-125**	**<20**	

American Environmental Testing Laboratory Inc.
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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

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Ordered By

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Number of Pages	**5**
Date Received	**09/28/2018**
Date Reported	**11/06/2018**

Telephone: (949)681-4208
Attention: Meredith Church

Job Number	Order Date	Client
94228	09/28/2018	LGHTN

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008
Site: Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Enclosed please find results of analyses of 11 ambient air 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

EXECUTIVE ENVIRONMENTAL
HEALTH & SAFETY SIMPLIFIED

Industrial Hygiene Laboratory Submittal

Originating Office (Check-marked)

☑ 310 E. Foothill Blvd., Suite 200
Arcadia, CA 91006
Phone: 626.441.7050
Fax: 626.441.0016

☐ 1440 Broadway, Suite 616
Oakland, CA 94612
Phone: 510.272.9346
Fax: 510.272.9385

☑ Routine (10 Working Days)	☐ RUSH (surcharges may apply) Circle One: 4 hours / 24 hours / 48 hours / 72 hours / 5 days	Project #: EE#16-A0007-0237.1.5 Leighton #11561.008	Submitted by: Meredith Church, Leighton Consulting	Date: 9/28/18	94228 Page 1 of 1

Submitted to: (one Lab/Form)
☐ EM Lab 650.829.5800 ☐ Galson 888.577.5227 ☐ Hygeia 626.355.4711 ☐ Forensic 888.813.9417 ☐ Sierra Anal. 949. 348.9389 ☐ SanAir 804.897.1177 ☑ Other & Phone: AETL (American Environmental Testing Lab) – 888.288.2385

The receiving Laboratory is required to complete the following:

1. All invoices are to be sent to: Leighton Consulting, 17781 Cowan, Irvine, CA 92614 **with** a copy of the lab report.
2. Report to the attention of: Meredith Church on Behalf of LA County Public Health, Phone: (949) 681-4208
3. All lab reports and invoices are to contain both Project Number from above.
4. Unsigned and reports marked draft is unacceptable.

Optional Items to be completed by the laboratory (if check marked): ☐ Fax report to: ☐ 626.441.0016 ☐ 510.272.9385 ☐ Other: _____

☑ Email Report to: ☑ Info@execenv.com ☑ Other: dginsborg@execenv.com; kmills@execenv.com; mchurch@leightongroup.com, and kbutler@ph.lacounty.gov

☑ US Mail Report to: ☑ Originating office check marked above ☑ Other: 17781 Cowan, Irvine, CA 92614 with a copy of the lab report ☑ Alternate billing address: Leighton Consulting

Prefix: 180926-0237.1.5-DHG-

Lab No.:	Sample No.:	Media	Air Volume	Location	Analyses Requested
94228.01	C01	See Note 1 Below	13,951 Liters	Lincoln ES, Outdoors on Roof of Room #3, Computer Room/Library	Hexavalent Chromium by CARB 039 Method
94228.02	C02	See Note 1 Below	13,914 Liters	Lincoln ES, Room #3, Computer Room/Library	Hexavalent Chromium by CARB 039 Method
94228.03	C03	See Note 1 Below	14,527 Liters	Lincoln ES, Room #31	Hexavalent Chromium by CARB 039 Method
94228.04	C04	See Note 1 Below	14,324 Liters	Gaines ES, Outdoors on Roof of Room 3	Hexavalent Chromium by CARB 039 Method
94228.05	C05	See Note 1 Below	14,380 Liters	Gaines ES, Room #23	Hexavalent Chromium by CARB 039 Method
94228.06	C06	See Note 1 Below	14,364 Liters	Gaines ES, Room #1	Hexavalent Chromium by CARB 039 Method
94228.07	C07	See Note 1 Below	14,483 Liters	Lincoln ES, Room #3, Computer Room/Library, Replicate	Hexavalent Chromium by CARB 039 Method
94228.08	C08	See Note 1 Below	14,521 Liters	Gaines ES, Room #23, Replicate	Hexavalent Chromium by CARB 039 Method
94228.09	C09	See Note 1 Below	N/A	Field Blank	Hexavalent Chromium by CARB 039 Method
94228.10	C10	See Note 1 Below	N/A	Field Blank	Hexavalent Chromium by CARB 039 Method
94228.11	C11	See Note 1 Below	N/A	Lab Blank	Hexavalent Chromium by CARB 039 Method

Notes: 1) Sodium Bicarbonate Treated Filter supplied by AETL 2) Samples collected from 3:00 PM 9/26 to 3:00 PM 9/27/18. 3) Blank Correct.
4) Sample volume is incredibly large (approximately fourteen **thousand** Liters).

Sampling Location Zip Code: 90723

Released By, Date, & Time:	Received By, Date, & Time:	Released By, Date, & Time:
Daniel H. Ginsborg, 9/28/18 1219 PM	Meredith Church, Leighton Consulting 9/28/18 1249 PM	Meredith Church, Leighton Consulting 9/28/18 1310
Sargis-P 9/24/18 1310 SP	Sargis-P 9/24/18 1430	Christine Noushadagan 9/28/18 14:30

Rev. 12/13 Form: IH-001

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 NORTH NAOMI ST. BURBANK, CALIFORNIA 91504 DHS # 1541 LACSD# 10181
TEL (888) 288-AETL (818) 845-8200 FAX (818) 845-8840 www.aetlab.com

COOLER RECEIPT FORM

Client Name:	Executive Env.
Project Name:	180926-0237.1.5-DHG Cr VI
AETL Job Number:	94228
Date Received: 9/28/18	Received by: Christi
Carrier: ☒ AETL Courier ☐ Client ☐ GSO ☐ FedEx ☐ UPS	
☐Others:	
Samples were received in: ☒ Cooler (1) ☐ Other (Specify):	
Inside temperature of shipping container No 1: 3.1°c, No 2: _____, No 3: _____	
Type of sample containers: ☐ VOA, ☐ Glass bottles, ☐ ☐Wide mouth jars, ☐ ☐HDPE bottles, ☐ Metal sleeves, ☐ Others (Specify): Cassette	
How are samples preserved: ☒ None, ☐ Ice , ☐ Blue Ice, ☐ Dry Ice	
☐ None, ☐ HNO_3, ☐ NaOH, ☐ ZnOAc, ☐ HCl, ☐ $Na_2S_2O_3$, MeOH	
☐ Other (Specify):	

	Yes	No, explain below	Name, if client was notified.
1. Are the COCs Correct?	✓		
2. Are the Sample labels legible?	✓		
3. Do samples match the COC?	✓		
4. Are the required analyses clear?	✓		
5. Is there enough samples for required analysis?	✓		
6. Are samples sealed with evidence tape?	✓		
7. Are sample containers in good condition?	✓		
8. Are samples preserved?	NA		
9. Are samples preserved properly for the intended analysis?	NA		
10. Are the VOAs free of headspace?	NA		
11. Are the jars free of headspace?	NA		

Explain all "No" answers for above questions:

CYRUS RAZMARA

From: Daniel Ginsborg [dginsborg@execenv.com]
Sent: Monday, October 1, 2018 3:15 PM
To: cyrus@aetlab.com
Cc: mchurch@leightongroup.com; KButler@ph.lacounty.gov; Dan Flores; Kay Mills; Vicki Uchida; Ruben Frutos
Subject: 16-0237.1.5, status question on media picked-up from my office on Friday
Attachments: 16-0237.1.5- COC -Hexavalent Chromium Air Samples.pdf; ATT00001.htm; 16-0237.1.5- COC -Hexavalent Chromium Wipe Sample.pdf; ATT00002.htm; 16-0237.1.5- COC -Metal Wipe Samples.pdf; ATT00003.htm

Dr Razmara,

To avoid any possible confusion, the samples on the attached COC picked-up from our office on Friday were submitted by Leighton Consulting on our COC. They are responsible for payment of this project. Executive Environmental will not pay any lab bill on this project. Please contact Leighton Consulting to establish an account if they do not already have one with your lab. Their contact information is on the COC, please send the report and any project communiqués to the five individuals listed on the COC. Has any communiqués been sent out on this project such as a confirmation that the samples were received and the date we can expect results? If it has, I have not received it and would like a copy resent to the individuals listed on the COC. Please contact me if there are any questions or if they have not made timely payments and I will do what I can.

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Ordered By

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Telephone: (949)681-4208
Attention: Meredith Church

Project ID: EE#16-A0007-0237.1.5
Date Received 09/28/2018
Date Reported 11/06/2018

Job Number	Order Date	Client
94228	09/28/2018	LGHTN

CERTIFICATE OF ANALYSIS
CASE NARRATIVE

AETL received 11 samples with the following specification on 09/28/2018.

Lab ID	Sample ID	Sample Date	Matrix	Quantity Of Containers
94228.01	180926-0237.1.5-DH G-C01	09/26/2018	Gaseous	1
94228.02	180926-0237.1.5-DH G-C02	09/26/2018	Gaseous	1
94228.03	180926-0237.1.5-DH G-C03	09/26/2018	Gaseous	1
94228.04	180926-0237.1.5-DH G-C04	09/26/2018	Gaseous	1
94228.05	180926-0237.1.5-DH G-C05	09/26/2018	Gaseous	1
94228.06	180926-0237.1.5-DH G-C06	09/26/2018	Gaseous	1
94228.07	180926-0237.1.5-DH G-C07	09/26/2018	Gaseous	1
94228.08	180926-0237.1.5-DH G-C08	09/26/2018	Gaseous	1
94228.09	180926-0237.1.5-DH G-C09	09/26/2018	Gaseous	1
94228.10	180926-0237.1.5-DH G-C10	09/26/2018	Gaseous	1
94228.11	180926-0237.1.5-DH G-C11	09/26/2018	Gaseous	1

Method ^ Submethod	*Req Date*	*Priority*	*TAT*	*Units*
CARB-039	10/05/2018	2	Normal	ug/Sample
CARB-039 ^ UG/M3	10/05/2018	2	Normal	ug/m3

Continued

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Ordered By

Leighton Consulting **17781 Cowan** **Irvine, CA 92614**	**Project ID: EE#16-A0007-0237.1.5** **Date Received 09/28/2018** **Date Reported 11/06/2018**

Telephone: (949)681-4208
Attention: Meredith Church

Job Number	Order Date	Client
94228	09/28/2018	LGHTN

CERTIFICATE OF ANALYSIS
CASE NARRATIVE

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

All samples were kept frozen prior to analysis.

Checked By: _____ Approved By: C. Razmara

Cyrus Razmara, Ph.D.
Laboratory Director

American Environmental Testing Laboratory Inc.
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ANALYTICAL RESULTS

Ordered By

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Telephone: (949)681-4208
Attn: Meredith Church

Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Page: **2**

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94228	09/28/2018	LGHTN

Method: CARB-039, Determination of Hexavalent Chromium in Ambient Air by IC

QC Batch No: 10012018-1

Our Lab I.D.			Method Blank	94228.01	94228.02	94228.03	94228.04
Client Sample I.D.				180926-0237.1.5-DHG-C01	180926-0237.1.5-DHG-C02	180926-0237.1.5-DHG-C03	180926-0237.1.5-DHG-C04
Date Sampled				09/26/2018	09/26/2018	09/26/2018	09/26/2018
Date Prepared			10/01/2018	10/01/2018	10/01/2018	10/01/2018	10/01/2018
Preparation Method			CARB039	CARB039	CARB039	CARB039	CARB039
Date Analyzed			10/01/2018	10/01/2018	10/01/2018	10/01/2018	10/01/2018
Matrix			Gaseous	Gaseous	Gaseous	Gaseous	Gaseous
Units			ug/Sample	ug/Sample	ug/Sample	ug/Sample	ug/Sample
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Chromium (VI)	0.00039	0.00039	ND	0.000638	ND	0.000812	0.00148

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ANALYTICAL RESULTS

Ordered By

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Telephone: (949)681-4208
Attn: Meredith Church

Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Page: **3**

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94228	09/28/2018	LGHTN

Method: CARB-039, Determination of Hexavalent Chromium in Ambient Air by IC

QC Batch No: 10012018-1

Our Lab I.D.			94228.05	94228.06	94228.07	94228.08	94228.09
Client Sample I.D.			180926-0237.1.5-DHG-C05	180926-0237.1.5-DHG-C06	180926-0237.1.5-DHG-C07	180926-0237.1.5-DHG-C08	180926-0237.1.5-DHG-C09
Date Sampled			09/26/2018	09/26/2018	09/26/2018	09/26/2018	09/26/2018
Date Prepared			10/01/2018	10/01/2018	10/01/2018	10/01/2018	10/01/2018
Preparation Method			CARB039	CARB039	CARB039	CARB039	CARB039
Date Analyzed			10/01/2018	10/01/2018	10/01/2018	10/01/2018	10/01/2018
Matrix			Gaseous	Gaseous	Gaseous	Gaseous	Gaseous
Units			ug/Sample	ug/Sample	ug/Sample	ug/Sample	ug/Sample
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Chromium (VI)	0.00039	0.00039	ND	ND	ND	0.00531	ND

American Environmental Testing Laboratory Inc.
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ANALYTICAL RESULTS

Ordered By

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Telephone: (949)681-4208
Attn: Meredith Church
Page: **4**

Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94228	09/28/2018	LGHTN

Method: CARB-039, Determination of Hexavalent Chromium in Ambient Air by IC

QC Batch No: 10012018-1

Our Lab I.D.			94228.10	94228.11			
Client Sample I.D.			180926-0237.1.5-DHG-C10	180926-0237.1.5-DHG-C11			
Date Sampled			09/26/2018	09/26/2018			
Date Prepared			10/01/2018	10/01/2018			
Preparation Method			CARB039	CARB039			
Date Analyzed			10/01/2018	10/01/2018			
Matrix			Gaseous	Gaseous			
Units			ug/Sample	ug/Sample			
Dilution Factor			1	1			
Analytes	**MDL**	**PQL**	**Results**	**Results**			
Chromium (VI)	0.00039	0.00039	ND	ND			

American Environmental Testing Laboratory Inc.
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QUALITY CONTROL RESULTS

Ordered By

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Telephone: (949)681-4208
Attn: Meredith Church

Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Page: **5**

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94228	09/28/2018	LGHTN

Method: CARB-039, Determination of Hexavalent Chromium in Ambient Air by IC

QC Batch No: 10012018-1; LCS: Blank; LCS Prepared: 10/01/2018; LCS Analyzed: 10/01/2018; Units: ug/Sample

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	
Chromium (VI)	**3.00**	**2.91**	**97.0**	**3.00**	**2.91**	**97.0**	**<1**	**75-125**	**<20**	

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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

SGS GALSON

Ms. Meredith Church
Leighton Consulting, Inc
17781 Cowan
Irvine, CA 92614

October 12, 2018

DOH ELAP #11626 Account# 30549 Login# L458004
AIHA-LAP #100324

Dear Ms. Church:

Enclosed are the analytical results for the samples received by our laboratory on September 29, 2018. All test results meet the quality control requirements of AIHA-LAP and NELAC unless otherwise stated in this report. All samples on the chain of custody were received in good condition unless otherwise noted.

Please note that sample 926-0237.1.5-DHG-NO8 was not analyzed per client request.

Results in this report are based on the sampling data provided by the client and refer only to the samples as they were received at the laboratory. When possible, non-IOM samples will be retained for 14 days following the date of this report (unless an extension is specifically requested). IOM samples are retained for 7 days.

Current Scopes of Accreditation can be viewed at www.sgsgalson.com in the accreditations section of the "About" page.

Please contact Nicole Tormey at (888) 432-5227, if you would like any additional information regarding this report. Thank you for using SGS Galson.

Sincerely,

SGS Galson

Lisa Swab
Laboratory Director

Enclosure(s)

SGS GALSON

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.sgsgalson.com

LABORATORY ANALYSIS REPORT

Client : Leighton Consulting, Inc
Site : NS
Project No. : EE#16-A0007-0237.1.5 Leighton #11561.008
Date Sampled : 26-SEP-18
Date Received : 29-SEP-18

Account No.: 30549
Login No. : L458004
Date Analyzed : 04-OCT-18
Report ID : 1094334

Client ID : 926-0237.1.5-DHG-N01 Lab ID : L458004-1 Air Volume : 14008 L
Date Sampled : 09/26/18 Date Analyzed : 10/04/18

Parameter	LOQ ug	Total ug	Conc	Units
Antimony	0.90	<0.90	<0.000064	mg/m3
Arsenic	0.30	<0.30	<0.000021	mg/m3
Barium	0.15	0.62	0.000044	mg/m3
Beryllium	0.015	<0.015	<0.0000011	mg/m3
Cadmium	0.15	<0.15	<0.000011	mg/m3
Chromium	7.5	<7.5	<0.00054	mg/m3
Cobalt	0.45	<0.45	<0.000032	mg/m3
Copper	0.30	0.35	0.000025	mg/m3
Lead	0.38	<0.38	<0.000027	mg/m3
Molybdenum	0.15	<0.15	<0.000011	mg/m3
Nickel	0.30	<0.30	<0.000021	mg/m3
Selenium	2.3	<2.3	<0.00016	mg/m3
Thallium	1.5	<1.5	<0.00011	mg/m3
Vanadium	0.45	<0.45	<0.000032	mg/m3
Zinc	2.3	<2.3	<0.00016	mg/m3

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: PVC PW 37mm
Date : 08-OCT-18

Submitted by: JMR
NYS DOH # : 11626

Approved by: JJL
Supervisor : KEG QC by: KSB

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms NA -Not Applicable ND -Not Detected
> -Greater Than ug -Micrograms l -Liters NS -Not Specified ppm -Parts per Million LOQ-Limit of Quantitation

SGS GALSON

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.sgsgalson.com

LABORATORY ANALYSIS REPORT

Client : Leighton Consulting, Inc
Site : NS
Project No. : EE#16-A0007-0237.1.5 Leighton #11561.008
Date Sampled : 26-SEP-18
Date Received : 29-SEP-18

Account No.: 30549
Login No. : L458004
Date Analyzed : 04-OCT-18
Report ID : 1094334

Client ID : 926-0237.1.5-DHG-N02 Lab ID : L458004-2 Air Volume : 14342 L
Date Sampled : 09/26/18 Date Analyzed : 10/04/18

Parameter	LOQ ug	Total ug	Conc	Units
Antimony	0.90	<0.90	<0.000063	mg/m3
Arsenic	0.30	<0.30	<0.000021	mg/m3
Barium	0.15	<0.15	<0.000010	mg/m3
Beryllium	0.015	<0.015	<0.0000010	mg/m3
Cadmium	0.15	<0.15	<0.000010	mg/m3
Chromium	7.5	<7.5	<0.00052	mg/m3
Cobalt	0.45	<0.45	<0.000031	mg/m3
Copper	0.30	<0.30	<0.000021	mg/m3
Lead	0.38	<0.38	<0.000026	mg/m3
Molybdenum	0.15	<0.15	<0.000010	mg/m3
Nickel	0.30	<0.30	<0.000021	mg/m3
Selenium	2.3	<2.3	<0.00016	mg/m3
Thallium	1.5	<1.5	<0.00010	mg/m3
Vanadium	0.45	<0.45	<0.000031	mg/m3
Zinc	2.3	<2.3	<0.00016	mg/m3

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: PVC PW 37mm
Date : 08-OCT-18

Submitted by: JMR
NYS DOH # : 11626

Approved by: JJL
Supervisor : KEG QC by: KSB

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms NA -Not Applicable ND -Not Detected
> -Greater Than ug -Micrograms l -Liters NS -Not Specified ppm -Parts per Million LOQ-Limit of Quantitation

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LABORATORY ANALYSIS REPORT

Client : Leighton Consulting, Inc
Site : NS
Project No. : EE#16-A0007-0237.1.5 Leighton #11561.008
Date Sampled : 26-SEP-18
Date Received : 29-SEP-18

Account No.: 30549
Login No. : L458004
Date Analyzed : 04-OCT-18
Report ID : 1094334

Client ID : 926-0237.1.5-DHG-N03 Lab ID : L458004-3 Air Volume : 14246 L
Date Sampled : 09/26/18 Date Analyzed : 10/04/18

Parameter	LOQ ug	Total ug	Conc	Units
Antimony	0.90	<0.90	<0.000063	mg/m3
Arsenic	0.30	<0.30	<0.000021	mg/m3
Barium	0.15	<0.15	<0.000011	mg/m3
Beryllium	0.015	<0.015	<0.0000011	mg/m3
Cadmium	0.15	<0.15	<0.000011	mg/m3
Chromium	7.5	<7.5	<0.00053	mg/m3
Cobalt	0.45	<0.45	<0.000032	mg/m3
Copper	0.30	<0.30	<0.000021	mg/m3
Lead	0.38	<0.38	<0.000026	mg/m3
Molybdenum	0.15	<0.15	<0.000011	mg/m3
Nickel	0.30	<0.30	<0.000021	mg/m3
Selenium	2.3	<2.3	<0.00016	mg/m3
Thallium	1.5	<1.5	<0.00011	mg/m3
Vanadium	0.45	<0.45	<0.000032	mg/m3
Zinc	2.3	<2.3	<0.00016	mg/m3

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: PVC PW 37mm
Date : 08-OCT-18

Submitted by: JMR
NYS DOH # : 11626

Approved by: JJL
Supervisor : KEG QC by: KSB

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms NA -Not Applicable ND -Not Detected
> -Greater Than ug -Micrograms l -Liters NS -Not Specified ppm -Parts per Million LOQ-Limit of Quantitation

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LABORATORY ANALYSIS REPORT

Client : Leighton Consulting, Inc
Site : NS
Project No. : EE#16-A0007-0237.1.5 Leighton #11561.008
Date Sampled : 26-SEP-18
Date Received : 29-SEP-18

Account No.: 30549
Login No. : L458004
Date Analyzed : 04-OCT-18
Report ID : 1094334

Client ID : 926-0237.1.5-DHG-N04 Lab ID : L458004-4 Air Volume : 14555 L
Date Sampled : 09/26/18 Date Analyzed : 10/04/18

Parameter	LOQ ug	Total ug	Conc	Units
Antimony	0.90	<0.90	<0.000062	mg/m3
Arsenic	0.30	<0.30	<0.000021	mg/m3
Barium	0.15	0.63	0.000043	mg/m3
Beryllium	0.015	<0.015	<0.0000010	mg/m3
Cadmium	0.15	<0.15	<0.000010	mg/m3
Chromium	7.5	<7.5	<0.00052	mg/m3
Cobalt	0.45	<0.45	<0.000031	mg/m3
Copper	0.30	0.32	0.000022	mg/m3
Lead	0.38	<0.38	<0.000026	mg/m3
Molybdenum	0.15	<0.15	<0.000010	mg/m3
Nickel	0.30	<0.30	<0.000021	mg/m3
Selenium	2.3	<2.3	<0.00015	mg/m3
Thallium	1.5	<1.5	<0.00010	mg/m3
Vanadium	0.45	<0.45	<0.000031	mg/m3
Zinc	2.3	<2.3	<0.00015	mg/m3

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: PVC PW 37mm
Date : 08-OCT-18

Submitted by: JMR
NYS DOH # : 11626

Approved by: JJL
Supervisor : KEG QC by: KSB

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms NA -Not Applicable ND -Not Detected
> -Greater Than ug -Micrograms l -Liters NS -Not Specified ppm -Parts per Million LOQ-Limit of Quantitation

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LABORATORY ANALYSIS REPORT

Client : Leighton Consulting, Inc
Site : NS
Project No. : EE#16-A0007-0237.1.5 Leighton #11561.008
Date Sampled : 26-SEP-18
Date Received : 29-SEP-18

Account No.: 30549
Login No. : L458004
Date Analyzed : 04-OCT-18
Report ID : 1094334

Client ID : 926-0237.1.5-DHG-N05 Lab ID : L458004-5 Air Volume : 13858 L
Date Sampled : 09/26/18 Date Analyzed : 10/04/18

Parameter	LOQ ug	Total ug	Conc	Units
Antimony	0.90	<0.90	<0.000065	mg/m3
Arsenic	0.30	<0.30	<0.000022	mg/m3
Barium	0.15	0.18	0.000013	mg/m3
Beryllium	0.015	<0.015	<0.0000011	mg/m3
Cadmium	0.15	<0.15	<0.000011	mg/m3
Chromium	7.5	<7.5	<0.00054	mg/m3
Cobalt	0.45	<0.45	<0.000032	mg/m3
Copper	0.30	<0.30	<0.000022	mg/m3
Lead	0.38	<0.38	<0.000027	mg/m3
Molybdenum	0.15	<0.15	<0.000011	mg/m3
Nickel	0.30	<0.30	<0.000022	mg/m3
Selenium	2.3	<2.3	<0.00016	mg/m3
Thallium	1.5	<1.5	<0.00011	mg/m3
Vanadium	0.45	<0.45	<0.000032	mg/m3
Zinc	2.3	<2.3	<0.00016	mg/m3

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: PVC PW 37mm
Date : 08-OCT-18

Submitted by: JMR
NYS DOH # : 11626

Approved by: JJL
Supervisor : KEG QC by: KSB

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms NA -Not Applicable ND -Not Detected
> -Greater Than ug -Micrograms l -Liters NS -Not Specified ppm -Parts per Million LOQ-Limit of Quantitation

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LABORATORY ANALYSIS REPORT

Client : Leighton Consulting, Inc
Site : NS
Project No. : EE#16-A0007-0237.1.5 Leighton #11561.008
Date Sampled : 26-SEP-18
Date Received : 29-SEP-18

Account No.: 30549
Login No. : L458004
Date Analyzed : 04-OCT-18
Report ID : 1094334

Client ID : 926-0237.1.5-DHG-N06 Lab ID : L458004-6 Air Volume : 14421 L
Date Sampled : 09/26/18 Date Analyzed : 10/04/18

Parameter	LOQ ug	Total ug	Conc	Units
Antimony	0.90	<0.90	<0.000062	mg/m3
Arsenic	0.30	<0.30	<0.000021	mg/m3
Barium	0.15	0.15	0.000011	mg/m3
Beryllium	0.015	<0.015	<0.0000010	mg/m3
Cadmium	0.15	<0.15	<0.000010	mg/m3
Chromium	7.5	<7.5	<0.00052	mg/m3
Cobalt	0.45	<0.45	<0.000031	mg/m3
Copper	0.30	<0.30	<0.000021	mg/m3
Lead	0.38	<0.38	<0.000026	mg/m3
Molybdenum	0.15	<0.15	<0.000010	mg/m3
Nickel	0.30	<0.30	<0.000021	mg/m3
Selenium	2.3	<2.3	<0.00016	mg/m3
Thallium	1.5	<1.5	<0.00010	mg/m3
Vanadium	0.45	<0.45	<0.000031	mg/m3
Zinc	2.3	<2.3	<0.00016	mg/m3

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: PVC PW 37mm
Date : 08-OCT-18

Submitted by: JMR
NYS DOH # : 11626

Approved by: JJL
Supervisor : KEG QC by: KSB

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms NA -Not Applicable ND -Not Detected
> -Greater Than ug -Micrograms l -Liters NS -Not Specified ppm -Parts per Million LOQ-Limit of Quantitation

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LABORATORY ANALYSIS REPORT

Client : Leighton Consulting, Inc
Site : NS
Project No. : EE#16-A0007-0237.1.5 Leighton #11561.008
Date Sampled : 26-SEP-18
Date Received : 29-SEP-18

Account No.: 30549
Login No. : L458004
Date Analyzed : 04-OCT-18
Report ID : 1094334

Client ID : 926-0237.1.5-DHG-N07 Lab ID : L458004-7 Air Volume : 14544 L
Date Sampled : 09/26/18 Date Analyzed : 10/04/18

Parameter	LOQ ug	Total ug	Conc	Units
Antimony	0.90	<0.90	<0.000062	mg/m3
Arsenic	0.30	<0.30	<0.000021	mg/m3
Barium	0.15	<0.15	<0.000010	mg/m3
Beryllium	0.015	<0.015	<0.0000010	mg/m3
Cadmium	0.15	<0.15	<0.000010	mg/m3
Chromium	7.5	<7.5	<0.00052	mg/m3
Cobalt	0.45	<0.45	<0.000031	mg/m3
Copper	0.30	<0.30	<0.000021	mg/m3
Lead	0.38	<0.38	<0.000026	mg/m3
Molybdenum	0.15	<0.15	<0.000010	mg/m3
Nickel	0.30	<0.30	<0.000021	mg/m3
Selenium	2.3	<2.3	<0.00015	mg/m3
Thallium	1.5	<1.5	<0.00010	mg/m3
Vanadium	0.45	<0.45	<0.000031	mg/m3
Zinc	2.3	<2.3	<0.00015	mg/m3

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: PVC PW 37mm
Date : 08-OCT-18

Submitted by: JMR
NYS DOH # : 11626

Approved by: JJL
Supervisor : KEG QC by: KSB

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms NA -Not Applicable ND -Not Detected
> -Greater Than ug -Micrograms l -Liters NS -Not Specified ppm -Parts per Million LOQ-Limit of Quantitation

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LABORATORY ANALYSIS REPORT

Client : Leighton Consulting, Inc
Site : NS
Project No. : EE#16-A0007-0237.1.5 Leighton #11561.008
Date Sampled : 26-SEP-18
Date Received : 29-SEP-18

Account No.: 30549
Login No. : L458004
Date Analyzed : 04-OCT-18
Report ID : 1094334

Client ID : 926-0237.1.5-DHG-N09 Lab ID : L458004-9 Air Volume : NA
Date Sampled : 09/26/18 Date Analyzed : 10/04/18

Parameter	LOQ ug	Total ug	Conc	Units
Antimony	0.90	<0.90	NA	mg/m3
Arsenic	0.30	<0.30	NA	mg/m3
Barium	0.15	<0.15	NA	mg/m3
Beryllium	0.015	<0.015	NA	mg/m3
Cadmium	0.15	<0.15	NA	mg/m3
Chromium	7.5	<7.5	NA	mg/m3
Cobalt	0.45	<0.45	NA	mg/m3
Copper	0.30	<0.30	NA	mg/m3
Lead	0.38	<0.38	NA	mg/m3
Molybdenum	0.15	<0.15	NA	mg/m3
Nickel	0.30	<0.30	NA	mg/m3
Selenium	2.3	<2.3	NA	mg/m3
Thallium	1.5	<1.5	NA	mg/m3
Vanadium	0.45	<0.45	NA	mg/m3
Zinc	2.3	<2.3	NA	mg/m3

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: PVC PW 37mm
Date : 08-OCT-18

Submitted by: JMR
NYS DOH # : 11626

Approved by: JJL
Supervisor : KEG QC by: KSB

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms NA -Not Applicable ND -Not Detected
> -Greater Than ug -Micrograms l -Liters NS -Not Specified ppm -Parts per Million LOQ-Limit of Quantitation

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LABORATORY ANALYSIS REPORT

Client : Leighton Consulting, Inc
Site : NS
Project No. : EE#16-A0007-0237.1.5 Leighton #11561.008
Date Sampled : 26-SEP-18
Date Received : 29-SEP-18

Account No.: 30549
Login No. : L458004
Date Analyzed : 04-OCT-18
Report ID : 1094334

Client ID : 926-0237.1.5-DHG-N10 Lab ID : L458004-10 Air Volume : NA
Date Sampled : 09/26/18 Date Analyzed : 10/04/18

Parameter	LOQ ug	Total ug	Conc	Units
Antimony	0.90	<0.90	NA	mg/m3
Arsenic	0.30	<0.30	NA	mg/m3
Barium	0.15	<0.15	NA	mg/m3
Beryllium	0.015	<0.015	NA	mg/m3
Cadmium	0.15	<0.15	NA	mg/m3
Chromium	7.5	<7.5	NA	mg/m3
Cobalt	0.45	<0.45	NA	mg/m3
Copper	0.30	<0.30	NA	mg/m3
Lead	0.38	<0.38	NA	mg/m3
Molybdenum	0.15	<0.15	NA	mg/m3
Nickel	0.30	<0.30	NA	mg/m3
Selenium	2.3	<2.3	NA	mg/m3
Thallium	1.5	<1.5	NA	mg/m3
Vanadium	0.45	<0.45	NA	mg/m3
Zinc	2.3	<2.3	NA	mg/m3

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: PVC PW 37mm
Date : 08-OCT-18

Submitted by: JMR
NYS DOH # : 11626

Approved by: JJL
Supervisor : KEG QC by: KSB

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms NA -Not Applicable ND -Not Detected
> -Greater Than ug -Micrograms l -Liters NS -Not Specified ppm -Parts per Million LOQ-Limit of Quantitation

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LABORATORY ANALYSIS REPORT

Client : Leighton Consulting, Inc
Site : NS
Project No. : EE#16-A0007-0237.1.5 Leighton #11561.008
Date Sampled : 26-SEP-18
Date Received : 29-SEP-18

Account No.: 30549
Login No. : L458004
Date Analyzed : 04-OCT-18
Report ID : 1094334

Client ID : 926-0237.1.5-DHG-N11 Lab ID : L458004-11 Air Volume : NA
Date Sampled : 09/26/18 Date Analyzed : 10/04/18

Parameter	LOQ ug	Total ug	Conc	Units
Antimony	0.90	<0.90	NA	mg/m3
Arsenic	0.30	<0.30	NA	mg/m3
Barium	0.15	<0.15	NA	mg/m3
Beryllium	0.015	<0.015	NA	mg/m3
Cadmium	0.15	<0.15	NA	mg/m3
Chromium	7.5	<7.5	NA	mg/m3
Cobalt	0.45	<0.45	NA	mg/m3
Copper	0.30	<0.30	NA	mg/m3
Lead	0.38	<0.38	NA	mg/m3
Molybdenum	0.15	<0.15	NA	mg/m3
Nickel	0.30	<0.30	NA	mg/m3
Selenium	2.3	<2.3	NA	mg/m3
Thallium	1.5	<1.5	NA	mg/m3
Vanadium	0.45	<0.45	NA	mg/m3
Zinc	2.3	<2.3	NA	mg/m3

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: PVC PW 37mm
Date : 08-OCT-18

Submitted by: JMR
NYS DOH # : 11626

Approved by: JJL
Supervisor : KEG QC by: KSB

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms NA -Not Applicable ND -Not Detected
> -Greater Than ug -Micrograms l -Liters NS -Not Specified ppm -Parts per Million LOQ-Limit of Quantitation

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LABORATORY ANALYSIS REPORT

Client : Leighton Consulting, Inc
Site : NS
Project No. : EE#16-A0007-0237.1.5 Leighton #11561.008
Date Sampled : 26-SEP-18
Date Received : 29-SEP-18

Account No.: 30549
Login No. : L458004
Date Analyzed : 04-OCT-18
Report ID : 1094106

Total Dust

Sample ID	Lab ID	Air Vol liter	Total mg	Conc mg/m3
926-0237.1.5-DHG-N01	L458004-1	14008	0.85	0.060
926-0237.1.5-DHG-N02	L458004-2	14342	0.25	0.018
926-0237.1.5-DHG-N03	L458004-3	14246	0.36	0.025
926-0237.1.5-DHG-N04	L458004-4	14555	0.90	0.061
926-0237.1.5-DHG-N05	L458004-5	13858	0.44	0.032
926-0237.1.5-DHG-N06	L458004-6	14421	0.42	0.029
926-0237.1.5-DHG-N07	L458004-7	14544	0.25	0.017
926-0237.1.5-DHG-N09	L458004-9	NA	<0.050	NA
926-0237.1.5-DHG-N10	L458004-10	NA	<0.050	NA
926-0237.1.5-DHG-N11	L458004-11	NA	<0.050	NA

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of quantitation: 0.050 mg
Analytical Method : mod. NIOSH 0500; Gravimetric
Collection Media : PVC PW 37mm

Submitted by: SJH
Date : 08-OCT-18
Supervisor : KRK

Approved by: NRH
NYS DOH # : 11626
QC by : KSB

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms NA -Not Applicable ND -Not Detected
> -Greater Than ug -Micrograms l -Liters NS -Not Specified ppm -Parts per Million

LABORATORY FOOTNOTE REPORT

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Client Name : Leighton Consulting, Inc
Site :
Project No. : EE#16-A0007-0237.1.5 Leighton #11561.008

Date Sampled : 26-SEP-18 Account No.: 30549
Date Received: 29-SEP-18 Login No. : L458004
Date Analyzed: 04-OCT-18

Unless otherwise noted below, all quality control results associated with the samples were within established control limits or did not impact reported results.

Note: The findings recorded within this report were drawn from analysis of the sample(s) provided to the laboratory by the Client (or a third party acting at the Client's direction). The laboratory does not have control over the sampling process, including but not limited to the use of field equipment and collection media, as well as the sampling duration, collection volume or any other collection parameter used by the Client. The findings herein constitute no warranty of the sample's representativeness of any sampled environment, and strictly relate to the samples as they were presented to the laboratory. For recommended sampling collection parameters, please refer to the Sampling and Analysis Guide at www.sgsgalson.com

Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceeding the final result column may have been rounded and therefore, if carried through the calculations, may not yield an identical final result to the one reported.

The stated LOQs for each analyte represent the demonstrated LOQ concentrations prior to correction for desorption efficiency (if applicable).

Unless otherwise noted below, reported results have not been blank corrected for any field blank or method blank.

L458004 (Report ID: 1094334):
Reported results reflect elemental analysis of the requested metals. Certain compounds may not be solubilized during digestion, resulting in data that is biased low.
SOPs: MT-SOP-27(1), MT-SOP-29(3)

<	-Less Than	mg	-Milligrams	m3	-Cubic Meters	kg	-Kilograms	ppm	-Parts per Million
>	-Greater Than	ug	-Micrograms	l	-Liters	NS	-Not Specified	ND	-Not Detected	NA	-Not Applicable

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LABORATORY FOOTNOTE REPORT

Client Name : Leighton Consulting, Inc
Site :
Project No. : EE#16-A0007-0237.1.5 Leighton #11561.008

Date Sampled : 26-SEP-18 Account No.: 30549
Date Received: 29-SEP-18 Login No. : L458004
Date Analyzed: 04-OCT-18

L458004 (Report ID: 1094334):

Accuracy and mean recovery data presented below is based on a 95% confidence interval (k=2). The estimated accuracy applies to the media, technology, and SOP referenced in this report and does not account for the uncertainty associated with the sampling process. The accuracy is based solely on spike recovery data from internal quality control samples. Where N/A appears below, insufficient data is available to provide statistical accuracy and mean recovery values for the associated analyte.

Parameter	Accuracy	Mean Recovery
Antimony	+/-12.5%	101%
Arsenic	+/-8.1%	101%
Barium	+/-7.2%	99.4%
Beryllium	+/-9.4%	101%
Cadmium	+/-8.2%	101%
Chromium	+/-9.4%	101%
Cobalt	+/-7.7%	102%
Copper	+/-9.8%	102%
Lead	+/-8.1%	99.2%
Molybdenum	+/-7.3%	100%
Nickel	+/-8.3%	99.8%
Selenium	+/-10.7%	103%
Thallium	+/-6.9%	98.1%
Vanadium	+/-7.3%	99.9%
Zinc	+/-7.3%	99.7%

Parameter	Method
Antimony	mod. NIOSH 7303/mod. OSHA ID-125G; ICP
Arsenic	mod. NIOSH 7303/mod. OSHA ID-125G; ICP
Barium	mod. NIOSH 7303/mod. OSHA ID-125G; ICP
Beryllium	mod. NIOSH 7303/mod. OSHA ID-125G; ICP
Cadmium	mod. NIOSH 7303/mod. OSHA ID-125G; ICP
Chromium	mod. NIOSH 7303/mod. OSHA ID-125G; ICP
Cobalt	mod. NIOSH 7303/mod. OSHA ID-125G; ICP
Copper	mod. NIOSH 7303/mod. OSHA ID-125G; ICP

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms ppm -Parts per Million
> -Greater Than ug -Micrograms l -Liters NS -Not Specified ND -Not Detected NA -Not Applicable

SGS GALSON

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.sgsgalson.com

LABORATORY FOOTNOTE REPORT

Client Name : Leighton Consulting, Inc
Site :
Project No. : EE#16-A0007-0237.1.5 Leighton #11561.008

Date Sampled : 26-SEP-18 Account No.: 30549
Date Received: 29-SEP-18 Login No. : L458004
Date Analyzed: 04-OCT-18

L458004 (Report ID: 1094334):

Parameter	Method
Lead	mod. NIOSH 7303/mod. OSHA ID-125G; ICP
Molybdenum	mod. NIOSH 7303/mod. OSHA ID-125G; ICP
Nickel	mod. NIOSH 7303/mod. OSHA ID-125G; ICP
Selenium	mod. NIOSH 7303/mod. OSHA ID-125G; ICP
Thallium	mod. NIOSH 7303/mod. OSHA ID-125G; ICP
Vanadium	mod. NIOSH 7303/mod. OSHA ID-125G; ICP
Zinc	mod. NIOSH 7303/mod. OSHA ID-125G; ICP

L458004 (Report ID: 1094106):
SOPs: GRAV-SOP-5(19), GRAV-SOP-6(17)
Gravimetric analytical accuracy of the sampling media is 0.002 +/- 0.018 mg (average blank weight change +/- 95% confidence interval or k=2). The estimated uncertainty applies to the media, technology, and SOP(s) referenced in this report and does not account for any uncertainty associated with the sampling process.
PNOR = Particulates Not Otherwise Regulated.

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms ppm -Parts per Million
> -Greater Than ug -Micrograms l -Liters NS -Not Specified ND -Not Detected NA -Not Applicable

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BLANK SPIKE/BLANK SPIKE DUPLICATE REPORT

Client : Leighton Consulting, Inc
Account No: 30549
Login No. : L458004

Lab Sample ID		WG423478-2			WG423478-3				
Type		BS			BSD				
Spike Lot #		30911/30916			30911/30916				
Instrument		ICP4			ICP4				
Analysis Date		Oct 04, 2018 19:37			Oct 04, 2018 19:40				
	Limits (%)	True Value (ug/sample)	Found (ug/sample)	Recovery (%)	True Value (ug/sample)	Found (ug/sample)	Recovery (%)	RPD	RPD Limits
Antimony	81.8 to 119.	15.0	17.4	116.	15.0	17.3	115.	0.692	-10.0 to 10.0
Arsenic	89.3 to 114.	15.0	16.3	109.	15.0	16.0	107.	1.49	-10.0 to 10.0
Barium	88.6 to 110.	15.0	15.0	99.7	15.0	14.8	99.0	0.725	-10.0 to 10.0
Beryllium	86.9 to 115.	15.0	14.4	95.9	15.0	14.3	95.5	0.428	-10.0 to 10.0
Cadmium	88.2 to 113.	15.0	16.3	108.	15.0	16.0	107.	1.58	-10.0 to 10.0
Chromium	87.3 to 116.	75.0	75.4	101.	75.0	74.7	99.6	0.919	-10.0 to 10.0
Cobalt	90.4 to 114.	15.0	14.9	99.3	15.0	14.6	97.2	2.11	-10.0 to 10.0
Copper	87.3 to 117.	15.0	14.6	97.1	15.0	14.4	96.2	0.869	-10.0 to 10.0
Lead	87.1 to 111.	15.0	15.1	101.	15.0	14.9	99.2	1.60	-10.0 to 10.0
Molybdenum	89.3 to 111.	15.0	15.6	104.	15.0	15.4	103.	1.45	-10.0 to 10.0
Nickel	87.3 to 112.	15.0	15.0	99.7	15.0	14.7	97.9	1.85	-10.0 to 10.0
Thallium	87.9 to 108.	15.0	14.8	98.7	15.0	14.6	97.6	1.13	-10.0 to 10.0
Vanadium	88.9 to 111.	15.0	14.5	96.7	15.0	14.4	95.7	0.987	-10.0 to 10.0
Zinc	88.8 to 111.	15.0	15.4	103.	15.0	15.1	101.	1.96	-10.0 to 10.0

Example Calculation:
Formula: ug/L x L = Total ug / Air Vol (L) = mg/m3
Sample : L458004-1 Analyte: ANTIMONY < 60 ug/L x 0.015 L = < 0.90 ug / 14008 L = < 0.000064 mg/m3

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METHOD BLANK REPORT

Client :Leighton Consulting, Inc
Account No:30549
Login No. :L458004

Lab Sample ID		WG423478-1							
Type		MBLANK							
Instrument		ICP4							
Analysis Date		10/04/18							
Analysis Time		19:30							
	LOQ (ug)	Found (ug)							
Antimony	0.90	<0.90							
Arsenic	0.30	<0.30							
Barium	0.15	<0.15							
Beryllium	0.015	<0.015							
Cadmium	0.15	<0.15							
Chromium	7.5	<7.5							
Cobalt	0.45	<0.45							
Copper	0.30	<0.30							
Lead	0.38	<0.38							
Molybdenum	0.15	<0.15							
Nickel	0.30	<0.30							
Selenium	2.3	<2.3							
Thallium	1.5	<1.5							
Vanadium	0.45	<0.45							
Zinc	2.3	<2.3							

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DETECTION LIMIT STANDARD RECOVERY REPORT

Client : Leighton Consulting, Inc
Account No: 30549
Login No. : L458004

Lab Sample ID		WG423402-7			WG423402-198					
Type		DLS			DLS					
Spike Lot #		IH677518			IH677504					
Instrument		ICP4			ICP4					
Analysis Date		Oct 04, 2018 12:41			Oct 04, 2018 12:45					
	Limits (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value ()	Found ()	Recovery (%)
Antimony	80.0 to 120.	0.0600	0.0571	95.2						
Arsenic	80.0 to 120.	0.0200	0.0195	97.5						
Barium	80.0 to 120.	0.0100	0.0106	106.						
Beryllium	80.0 to 120.	0.0100	0.00999	99.9	0.00100	0.00102	102.			
Cadmium	80.0 to 120.	0.0100	0.0101	101.						
Chromium	80.0 to 120.	0.100	0.104	104.						
Cobalt	80.0 to 120.	0.0300	0.0307	102.						
Copper	80.0 to 120.	0.0200	0.0206	103.						
Lead	80.0 to 120.	0.0250	0.0250	100.						
Molybdenum	80.0 to 120.	0.0100	0.00990	99.0						
Nickel	80.0 to 120.	0.0200	0.0201	101.						
Selenium	80.0 to 120.	0.0500	0.0470	94.0						
Thallium	80.0 to 120.	0.100	0.107	107.						
Vanadium	80.0 to 120.	0.0300	0.0310	103.						
Zinc	80.0 to 120.	0.150	0.149	99.3						

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INITIAL/CONTINUING BLANK REPORT

Client :Leighton Consulting, Inc
Account No:30549
Login No. :L458004

Lab Sample ID		WG423402-6	WG423402-12	WG423402-22	WG423402-43	WG423402-31	WG423402-52	WG423402-55	WG423402-28
Type		CCB	CCB	CCB	CCB	CCB	CCB	CCB	CCB
Instrument		ICP4	ICP4	ICP4	ICP4	ICP4	ICP4	ICP4	ICP4
Analysis Date		10/04/18	10/04/18	10/04/18	10/04/18	10/04/18	10/04/18	10/04/18	10/04/18
Analysis Time		12:35	13:01	13:34	14:16	14:39	15:21	15:44	16:26
	LOQ ppm	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)
Antimony	0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
Arsenic	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Barium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Beryllium	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chromium	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cobalt	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Copper	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Lead	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Molybdenum	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Selenium	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Thallium	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Vanadium	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Zinc	0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15

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INITIAL/CONTINUING BLANK REPORT

Client :Leighton Consulting, Inc
Account No:30549
Login No. :L458004

Lab Sample ID		WG423402-46	WG423402-58	WG423402-64	WG423402-67	WG423402-70	WG423402-79	WG423402-82	WG423402-88
Type		CCB	CCB	CCB	CCB	CCB	CCB	CCB	CCB
Instrument		ICP4	ICP4	ICP4	ICP4	ICP4	ICP4	ICP4	ICP4
Analysis Date		10/04/18	10/04/18	10/04/18	10/04/18	10/04/18	10/04/18	10/04/18	10/04/18
Analysis Time		17:08	17:37	18:19	19:01	19:27	20:52	21:34	22:16
	LOQ ppm	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)
Antimony	0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
Arsenic	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Barium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Beryllium	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chromium	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cobalt	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Copper	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Lead	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Molybdenum	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Selenium	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Thallium	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Vanadium	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Zinc	0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15

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INITIAL/CONTINUING CALIBRATION REPORT

Client : Leighton Consulting, Inc
Account No: 30549
Login No. : L458004

Lab Sample ID			WG423402-1								
Type			ICVA								
Spike Lot #			IH677400								
Instrument			ICP4								
Analysis Date			Oct 04, 2018 12:19								
		Limits (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value ()	Found ()	Recovery (%)	True Value ()	Found ()	Recovery (%)
Antimony	90.0 to 110.	88.3 to 108.	1.00	0.994	99.4						
Arsenic		88.1 to 108.	1.00	1.02	102.						
Barium		90.0 to 110.	1.00	0.993	99.3						
Beryllium		84.2 to 115.	1.00	0.987	98.7						
Cadmium		89.9 to 108.	1.00	1.03	103.						
Chromium		87.3 to 115.	1.00	0.997	99.7						
Cobalt		90.0 to 110.	1.00	1.01	101.						
Copper		85.4 to 113.	1.00	0.962	96.2						
Lead		90.0 to 108.	1.00	0.976	97.6						
Molybdenum		90.0 to 110.	1.00	0.994	99.4						
Nickel		90.0 to 110.	1.00	0.988	98.8						
Selenium		89.1 to 107.	1.00	1.01	101.						
Thallium		90.0 to 110.	1.00	1.02	102.						
Vanadium		89.7 to 109.	1.00	1.00	100.						
Zinc		90.0 to 110.	1.00	1.01	101.						

JJL 10/12/2018

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INITIAL/CONTINUING CALIBRATION REPORT

Client : Leighton Consulting, Inc
Account No: 30549
Login No. : L458004

Lab Sample ID		WG423402-4			WG423402-10			WG423402-20		
Type		CCVA			CCVA			CCVA		
Spike Lot #		IH677888			IH677888			IH677888		
Instrument		ICP4			ICP4			ICP4		
Analysis Date		Oct 04, 2018 12:28			Oct 04, 2018 12:55			Oct 04, 2018 13:28		
	Limits (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Antimony	88.3 to 108.	12.5	12.4	98.8	12.5	12.4	99.5	12.5	12.3	98.6
Arsenic	88.1 to 108.	12.5	12.4	99.3	12.5	12.5	99.9	12.5	12.4	98.8
Barium	90.0 to 110.	5.00	5.04	101.	5.00	5.04	101.	5.00	5.05	101.
Beryllium	84.2 to 115.	1.25	1.22	97.5	1.25	1.24	98.8	1.25	1.24	99.0
Cadmium	89.9 to 108.	2.50	2.52	101.	2.50	2.53	101.	2.50	2.50	100.
Chromium	87.3 to 115.	12.5	12.4	99.2	12.5	12.7	101.	12.5	12.5	100.
Cobalt	90.0 to 110.	12.5	12.6	100.	12.5	12.7	102.	12.5	12.6	101.
Copper	85.4 to 113.	12.5	12.5	100.	12.5	12.6	101.	12.5	12.6	101.
Lead	90.0 to 108.	12.5	12.6	101.	12.5	12.7	102.	12.5	12.6	100.
Molybdenum	90.0 to 110.	12.5	12.5	99.6	12.5	12.5	100.	12.5	12.4	99.5
Nickel	90.0 to 110.	10.0	10.1	101.	10.0	10.2	102.	10.0	10.1	101.
Selenium	89.1 to 107.	12.5	12.4	99.4	12.5	12.5	99.8	12.5	12.3	98.6
Thallium	90.0 to 110.	12.5	12.6	100.	12.5	12.6	101.	12.5	12.5	100.
Vanadium	88.7 to 109.	5.00	5.03	101.	5.00	5.05	101.	5.00	5.04	101.
Zinc	90.0 to 110.	5.00	4.99	99.7	5.00	5.03	101.	5.00	4.99	99.8

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INITIAL/CONTINUING CALIBRATION REPORT

Client : Leighton Consulting, Inc
Account No: 30549
Login No. : L458004

Lab Sample ID		WG423402-41			WG423402-29			WG423402-50		
Type		CCVA			CCVA			CCVA		
Spike Lot #		IH677888			IH677888			IH677888		
Instrument		ICP4			ICP4			ICP4		
Analysis Date		Oct 04, 2018 14:10			Oct 04, 2018 14:32			Oct 04, 2018 15:14		
	Limits (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Antimony	88.3 to 108.	12.5	12.4	99.0	12.5	12.3	98.2	12.5	12.4	98.9
Arsenic	88.1 to 108.	12.5	12.4	99.2	12.5	12.3	98.3	12.5	12.3	98.6
Barium	90.0 to 110.	5.00	5.00	100.	5.00	4.97	99.4	5.00	4.95	98.9
Beryllium	84.2 to 115.	1.25	1.21	96.8	1.25	1.21	96.5	1.25	1.20	96.0
Cadmium	89.9 to 108.	2.50	2.52	101.	2.50	2.51	100.	2.50	2.51	100.
Chromium	87.3 to 115.	12.5	12.6	101.	12.5	12.3	98.5	12.5	12.4	98.9
Cobalt	90.0 to 110.	12.5	12.4	99.0	12.5	12.3	98.5	12.5	12.3	98.5
Copper	85.4 to 113.	12.5	12.3	98.7	12.5	12.4	99.0	12.5	12.5	99.9
Lead	90.0 to 108.	12.5	12.6	100.	12.5	12.5	99.8	12.5	12.5	99.9
Molybdenum	90.0 to 110.	12.5	12.5	99.9	12.5	12.4	98.8	12.5	12.4	98.8
Nickel	90.0 to 110.	10.0	9.98	99.8	10.0	9.94	99.4	10.0	9.94	99.4
Selenium	89.1 to 107.	12.5	12.4	99.1	12.5	12.3	98.4	12.5	12.4	99.1
Thallium	90.0 to 110.	12.5	12.6	100.	12.5	12.5	99.7	12.5	12.5	99.8
Vanadium	88.7 to 109.	5.00	4.96	99.1	5.00	4.94	98.8	5.00	4.94	98.9
Zinc	90.0 to 110.	5.00	4.97	99.3	5.00	4.92	98.4	5.00	4.92	98.3

SGS Galson
6601 Kirkville Rd. E. Syracuse,NY 13057

INITIAL/CONTINUING CALIBRATION REPORT

Client : Leighton Consulting, Inc
Account No: 30549
Login No. : L458004

Lab Sample ID		WG423402-53			WG423402-26			WG423402-44		
Type		CCVA			CCVA			CCVA		
Spike Lot #		IH677888			IH677888			IH677888		
Instrument		ICP4			ICP4			ICP4		
Analysis Date		Oct 04, 2018 15:37			Oct 04, 2018 16:19			Oct 04, 2018 17:01		
	Limits (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Antimony	88.3 to 108.	12.5	12.7	101.	12.5	12.5	100.	12.5	12.5	99.8
Arsenic	88.1 to 108.	12.5	12.6	101.	12.5	12.5	99.7	12.5	12.4	99.4
Barium	90.0 to 110.	5.00	4.99	99.9	5.00	4.99	99.7	5.00	4.91	98.2
Beryllium	84.2 to 115.	1.25	1.22	97.2	1.25	1.20	95.9	1.25	1.18	94.2
Cadmium	89.9 to 108.	2.50	2.58	103.	2.50	2.56	102.	2.50	2.55	102.
Chromium	87.3 to 115.	12.5	12.4	99.3	12.5	12.3	98.0	12.5	12.2	97.6
Cobalt	90.0 to 110.	12.5	12.5	99.7	12.5	12.2	97.6	12.5	12.1	96.4
Copper	85.4 to 113.	12.5	12.2	97.6	12.5	12.2	97.3	12.5	12.2	97.2
Lead	90.0 to 108.	12.5	12.8	102.	12.5	12.6	101.	12.5	12.5	100.
Molybdenum	90.0 to 110.	12.5	12.7	102.	12.5	12.5	100.	12.5	12.5	100.
Nickel	90.0 to 110.	10.0	10.1	101.	10.0	9.98	99.8	10.0	9.89	98.9
Selenium	89.1 to 107.	12.5	12.7	101.	12.5	12.6	101.	12.5	12.5	100.
Thallium	90.0 to 110.	12.5	12.8	102.	12.5	12.6	101.	12.5	12.5	100.
Vanadium	88.7 to 109.	5.00	4.93	98.6	5.00	4.90	97.9	5.00	4.86	97.2
Zinc	90.0 to 110.	5.00	5.05	101.	5.00	4.96	99.2	5.00	4.96	99.1

SGS Galson
6601 Kirkville Rd. E. Syracuse,NY 13057

INITIAL/CONTINUING CALIBRATION REPORT

Client : Leighton Consulting, Inc
Account No: 30549
Login No. : L458004

Lab Sample ID		WG423402-56			WG423402-62			WG423402-65		
Type		CCVA			CCVA			CCVA		
Spike Lot #		IH677888			IH677888			IH677888		
Instrument		ICP4			ICP4			ICP4		
Analysis Date		Oct 04, 2018 17:30			Oct 04, 2018 18:12			Oct 04, 2018 18:54		
	Limits (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Antimony	88.3 to 108.	12.5	12.5	99.6	12.5	12.5	100.	12.5	12.3	98.6
Arsenic	88.1 to 108.	12.5	12.4	99.0	12.5	12.5	99.8	12.5	12.3	98.1
Barium	90.0 to 110.	5.00	4.94	98.8	5.00	4.97	99.5	5.00	4.88	97.7
Beryllium	84.2 to 115.	1.25	1.18	94.8	1.25	1.18	94.0	1.25	1.16	92.4
Cadmium	89.9 to 108.	2.50	2.53	101.	2.50	2.57	103.	2.50	2.52	101.
Chromium	87.3 to 115.	12.5	12.3	98.4	12.5	12.3	98.7	12.5	12.0	96.0
Cobalt	90.0 to 110.	12.5	12.0	96.1	12.5	12.0	95.6	12.5	11.8	94.0
Copper	85.4 to 113.	12.5	12.2	97.4	12.5	12.1	96.8	12.5	12.2	97.3
Lead	90.0 to 108.	12.5	12.5	99.7	12.5	12.6	100.	12.5	12.3	98.6
Molybdenum	90.0 to 110.	12.5	12.5	99.7	12.5	12.6	101.	12.5	12.4	98.8
Nickel	90.0 to 110.	10.0	9.83	98.3	10.0	9.87	98.7	10.0	9.69	96.9
Selenium	89.1 to 107.	12.5	12.5	99.8	12.5	12.6	101.	12.5	12.4	99.0
Thallium	90.0 to 110.	12.5	12.5	99.9	12.5	12.6	101.	12.5	12.4	98.9
Vanadium	88.7 to 109.	5.00	4.86	97.3	5.00	4.86	97.2	5.00	4.79	95.8
Zinc	90.0 to 110.	5.00	4.93	98.5	5.00	4.98	99.5	5.00	4.89	97.8

SGS Galson
6601 Kirkville Rd. E. Syracuse,NY 13057

INITIAL/CONTINUING CALIBRATION REPORT

Client : Leighton Consulting, Inc
Account No: 30549
Login No. : L458004

Lab Sample ID		WG423402-68			WG423402-74			WG423402-77		
Type		CCVA			CCVA			CCVA		
Spike Lot #		IH677888			IH677888			IH677888		
Instrument		ICP4			ICP4			ICP4		
Analysis Date		Oct 04, 2018 19:21			Oct 04, 2018 20:03			Oct 04, 2018 20:45		
	Limits (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Antimony	88.3 to 108.	12.5	12.5	99.8	12.5	12.6	101.	12.5	12.4	99.5
Arsenic	88.1 to 108.	12.5	12.4	99.2	12.5	12.5	100.	12.5	12.4	98.9
Barium	90.0 to 110.	5.00	4.95	99.0	5.00	4.93	98.7	5.00	4.91	98.2
Beryllium	84.2 to 115.	1.25	1.16	92.7	1.25	1.16	92.7	1.25	1.15	91.9
Cadmium	89.9 to 108.	2.50	2.56	102.	2.50	2.59	104.	2.50	2.55	102.
Chromium	87.3 to 115.	12.5	12.1	97.0	12.5	12.2	97.4	12.5	12.1	96.9
Cobalt	90.0 to 110.	12.5	11.9	94.8	12.5	11.8	94.2	12.5	11.6	93.0
Copper	85.4 to 113.	12.5	12.1	96.6	12.5	12.1	96.9	12.5	12.0	95.8
Lead	90.0 to 108.	12.5	12.5	100.	12.5	12.6	100.	12.5	12.4	99.1
Molybdenum	90.0 to 110.	12.5	12.5	100.	12.5	12.7	101.	12.5	12.5	100.
Nickel	90.0 to 110.	10.0	9.82	98.2	10.0	9.82	98.2	10.0	9.68	96.8
Selenium	89.1 to 107.	12.5	12.5	100.	12.5	12.7	101.	12.5	12.5	99.8
Thallium	90.0 to 110.	12.5	12.5	100.	12.5	12.6	101.	12.5	12.4	99.3
Vanadium	88.7 to 109.	5.00	4.80	95.9	5.00	4.78	95.5	5.00	4.74	94.9
Zinc	90.0 to 110.	5.00	4.95	98.9	5.00	4.99	99.7	5.00	4.92	98.4

SGS Galson
6601 Kirkville Rd. E. Syracuse,NY 13057

INITIAL/CONTINUING CALIBRATION REPORT

Client : Leighton Consulting, Inc
Account No: 30549
Login No. : L458004

Lab Sample ID		WG423402-80			WG423402-86					
Type		CCVA			CCVA					
Spike Lot #		IH677888			IH677888					
Instrument		ICP4			ICP4					
Analysis Date		Oct 04, 2018 21:27			Oct 04, 2018 22:09					
	Limits (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value ()	Found ()	Recovery (%)
Antimony	88.3 to 108.	12.5	12.7	102.	12.5	12.9	103.			
Arsenic	88.1 to 108.	12.5	12.7	101.	12.5	12.7	102.			
Barium	90.0 to 110.	5.00	4.93	98.6	5.00	4.96	99.2			
Beryllium	84.2 to 115.	1.25	1.17	93.9	1.25	1.14	91.3			
Cadmium	89.9 to 108.	2.50	2.61	104.	2.50	2.65	106.			
Chromium	87.3 to 115.	12.5	12.3	98.0	12.5	12.1	97.1			
Cobalt	90.0 to 110.	12.5	11.8	94.7	12.5	11.6	93.0			
Copper	85.4 to 113.	12.5	12.1	96.6	12.5	11.9	95.4			
Lead	90.0 to 108.	12.5	12.6	101.	12.5	12.7	102.			
Molybdenum	90.0 to 110.	12.5	12.8	102.	12.5	13.0	104.			
Nickel	90.0 to 110.	10.0	9.85	98.5	10.0	9.83	98.3			
Selenium	89.1 to 107.	12.5	12.8	103.	12.5	12.9	103.			
Thallium	90.0 to 110.	12.5	12.7	101.	12.5	12.8	102.			
Vanadium	88.7 to 109.	5.00	4.77	95.4	5.00	4.71	94.2			
Zinc	90.0 to 110.	5.00	4.99	99.9	5.00	5.02	100.			

L4580004

EXECUTIVE ENVIRONMENTAL
HEALTH & SAFETY SIMPLIFIED

Industrial Hygiene Laboratory Submittal

Originating Office (Check-marked)

☑ 310 E. Foothill Blvd., Suite 200, Arcadia, CA 91006, Phone: 626.441.7050, Fax: 626.441.0016

☐ 1440 Broadway, Suite 616, Oakland, CA 94612, Phone: 510.272.9346, Fax: 510.272.9385

☑ Routine (10 Working Days)	☐ RUSH (surcharges may apply) Circle One: 4 hours / 24 hours / 48 hours / 72 hours / 5 days	Project #: EE#16-A0007-0237.1.5 Leighton #11561.008	Submitted by: Meredith Church, Leighton Consulting	Date: 9/28/18	Page 1 of 1

16

Submitted to: (one Lab/Form)

☐ EM Lab 650.829.5800 ☑ Galson 888.577.5227 ☐ Hygeia 626.355.4711 ☐ Forensic 888.813.9417 ☐ Sierra Anal. 949. 348.9389 ☐ SanAir 804.897.1177 ☐ Other & Phone: AETL (American Environmental Testing Lab) – 888.288.2385

The receiving Laboratory is required to complete the following:

1. All invoices are to be sent to: Leighton Consulting, 17781 Cowan, Irvine, CA 92614 **with** a copy of the lab report.
2. Report to the attention of: Meredith Church on Behalf of LA County Public Health, Phone: (949) 681-4208
3. All lab reports and invoices are to contain both Project Number from above.
4. Unsigned and reports marked draft is unacceptable.

Optional Items to be completed by the laboratory (if check marked): ☐ Fax report to: ☐ 626.441.0016 ☐ 510.272.9385 ☐ Other: _____

☑ Email Report to: ☑ Info@execenv.com ☑ Other: dginsborg@execenv.com; kmills@execenv.com, mchurch@leightongroup.com, and kbutler@ph.lacounty.gov

☑ US Mail Report to: ☑ Originating office check marked above ☑ Other: 17781 Cowan, Irvine, CA 92614 with a copy of the lab report. ☑ Alternate billing address: Leighton Consulting

Laboratory Use Only

Prefix: 180926-0237.1.5-DHG-

Lab No.:	Sample No.:	Media	Air Volume	Location	Analyses Requested
	N01	PVC #18-23093704	14,008 Liters	Lincoln ES, Outdoors on Roof of Room #3, Computer Room/Library	NIOSH 0500/7300, See Note 1 below
	N02	PVC #18-23093708	14,342 Liters	Lincoln ES, Room #3, Computer Room/Library	NIOSH 0500/7300, See Note 1 below
	N03	PVC #18-23093724	14,246 Liters	Lincoln ES, Room #31	NIOSH 0500/7300, See Note 1 below
	N04	PVC #18-23093734	14,555 Liters	Gaines ES, Outdoors on Roof of Room 1	NIOSH 0500/7300, See Note 1 below
	N05	PVC #18-23093494	13,858 Liters	Gaines ES, Room #23	NIOSH 0500/7300, See Note 1 below
	N06	PVC #18-23093492	14,421 Liters	Gaines ES, Room #1	NIOSH 0500/7300, See Note 1 below
	N07	PVC #18-23093896	14,544 Liters	Lincoln ES, Room #3, Computer Room/Library, Replicate	NIOSH 0500/7300, See Note 1 below
	N08	PVC #18-23093351	1,241 Liters	Gaines ES, Room #23, Replicate	NIOSH 0500/7300, See Note 1 below *HOLD Analysis pending results, pump failure*
	N09	PVC #18-23093738	N/A	Field Blank	NIOSH 0500/7300, See Note 1 below
	N10	PVC #18-23093700	N/A	Field Blank	NIOSH 0500/7300, See Note 1 below
	N11	PVC #18-23093532	N/A	Lab Blank	NIOSH 0500/7300, See Note 1 below

Notes: 1) Analyze for the following metals: Antimony-7440-36-0; Arsenic-7440-38-2; Barium-7440-39-3; Beryllium-7440-41-7; Cadmium-7440-43-9; Chromium-7440-47-3; Cobalt-7440-48-4; Copper-7440-50-8; Lead-7439-92-1; Molybdenum-7439-98-7; Nickel-7440-02-0; Selenium-7482-49-2; Thallium-7440-28-0; Vanadium-7440-62-2; and Zinc-7440-66-6.
2) Samples collected from 3:00 PM 9/26/18 to 3:00 PM 9/27/18. 3) Blank Correct 4) Sample volume is incredibly large (approximately fourteen **thousand** Liters). **Zip Code**: 90723

Released By, Date, & Time:	Received By, Date, & Time:	Released By, Date, & Time:
Daniel H. Ginsborg, 9/28/18 12:30 PM	Meredith Church 12:30 pm Meredith Church, Leighton Consulting 9/28/18	Meredith Church 1330 Meredith Church, Leighton Consulting 9/28/18
	Zachary King 9/29/18 9:37	

Rev. 12/13

Form: IH-001

L4580004

EXECUTIVE ENVIRONMENTAL
HEALTH & SAFETY SIMPLIFIED

Industrial Hygiene Laboratory Submittal

Originating Office (Check-marked)

☑ 310 E. Foothill Blvd., Suite 200, Arcadia, CA 91006, Phone: 626.441.7050, Fax: 626.441.0016

☐ 1440 Broadway, Suite 616, Oakland, CA 94612, Phone: 510.272.9346, Fax: 510.272.9385

☑ Routine (10 Working Days)	☐ RUSH (surcharges may apply) Circle One: 4 hours / 24 hours / 48 hours / 72 hours / 5 days	Project #: EE#16-A0007-0237.1.5 Leighton #11561.008	Submitted by: Meredith Church, Leighton Consulting 16	Date: 9/28/18	Page 1 of 1

Submitted to: (one Lab/Form)

☐ EM Lab 650.829.5800 ☑ Galson 888.577.5227 ☐ Hygeia 626.355.4711 ☐ Forensic 888.813.9417 ☐ Sierra Anal. 949. 348.9389 ☐ SanAir 804.897.1177 ☐ Other & Phone: AETL (American Environmental Testing Lab) – 888.288.2385

The receiving Laboratory is required to complete the following:

1. All invoices are to be sent to: Leighton Consulting, 17781 Cowan, Irvine, CA 92614 **with** a copy of the lab report.
2. Report to the attention of: Meredith Church on Behalf of LA County Public Health, Phone: (949) 681-4208
3. All lab reports and invoices are to contain both Project Number from above.
4. Unsigned and reports marked draft is unacceptable.

Optional Items to be completed by the laboratory (if check marked): ☐ Fax report to: ☐ 626.441.0016 ☐ 510.272.9385 ☐ Other: _____

☑ Email Report to: ☑ Info@execenv.com ☑ Other: dginsborg@execenv.com; kmills@execenv.com, mchurch@leightongroup.com, and kbutler@ph.lacounty.gov

☑ US Mail Report to: ☑ Originating office check marked above ☑ Other: 17781 Cowan, Irvine, CA 92614 with a copy of the lab report. ☑ Alternate billing address: Leighton Consulting

Laboratory Use Only

Prefix: 180926-0237.1.5-DHG-

Lab No.:	Sample No.:	Media	Air Volume	Location	Analyses Requested
	N01	PVC #18-23093704	14,008 Liters	Lincoln ES, Outdoors on Roof of Room #3, Computer Room/Library	NIOSH 0500/7300, See Note 1 below
	N02	PVC #18-23093708	14,342 Liters	Lincoln ES, Room #3, Computer Room/Library	NIOSH 0500/7300, See Note 1 below
	N03	PVC #18-23093724	14,246 Liters	Lincoln ES, Room #31	NIOSH 0500/7300, See Note 1 below
	N04	PVC #18-23093734	14,555 Liters	Gaines ES, Outdoors on Roof of Room 1	NIOSH 0500/7300, See Note 1 below
	N05	PVC #18-23093494	13,858 Liters	Gaines ES, Room #23	NIOSH 0500/7300, See Note 1 below
	N06	PVC #18-23093492	14,421 Liters	Gaines ES, Room #1	NIOSH 0500/7300, See Note 1 below
	N07	PVC #18-23093896	14,544 Liters	Lincoln ES, Room #3, Computer Room/Library, Replicate	NIOSH 0500/7300, See Note 1 below
	N08	PVC #18-23093351	1,241 Liters	Gaines ES, Room #23, Replicate	NIOSH 0500/7300, See Note 1 below *HOLD Analysis pending results, pump failure*
	N09	PVC #18-23093738	N/A	Field Blank	NIOSH 0500/7300, See Note 1 below
	N10	PVC #18-23093700	N/A	Field Blank	NIOSH 0500/7300, See Note 1 below
	N11	PVC #18-23093532	N/A	Lab Blank	NIOSH 0500/7300, See Note 1 below

Notes: 1) Analyze for the following metals: Antimony-7440-36-0; Arsenic-7440-38-2; Barium-7440-39-3; Beryllium-7440-41-7; Cadmium-7440-43-9; Chromium-7440-47-3; Cobalt-7440-48-4; Copper-7440-50-8; Lead-7439-92-1; Molybdenum-7439-98-7; Nickel-7440-02-0; Selenium-7482-49-2; Thallium-7440-28-0; Vanadium-7440-62-2; and Zinc-7440-66-6.
2) Samples collected from 3:00 PM 9/26/18 to 3:00 PM 9/27/18. 3) Blank Correct 4) Sample volume is incredibly large (approximately fourteen **thousand** Liters). **Zip Code**: 90723

Released By, Date, & Time:	Received By, Date, & Time:	Released By, Date, & Time:
Daniel H. Ginsborg, 9/28/18 12:30 PM	Meredith Church 12:30 pm Meredith Church, Leighton Consulting 9/28/18	Meredith Church 1330 Meredith Church, Leighton Consulting 9/28/18
	Zachary King 9/29/18 9:37	

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

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Number of Pages	**8**
Date Received	**09/28/2018**
Date Reported	**10/08/2018**

Telephone: (949)250-1421
Attention: Meredith Church

Job Number	Order Date	Client
94226	09/28/2018	LGHTN

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008
Site: Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Enclosed please find results of analyses of 15 wipe 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

EXECUTIVE ENVIRONMENTAL
HEALTH & SAFETY SIMPLIFIED

Industrial Hygiene Laboratory Submittal

Originating Office (Check-marked)

☑ 310 E. Foothill Blvd., Suite 200
Arcadia, CA 91006
Phone: 626.441.7050
Fax: 626.441.0016

☐ 1440 Broadway, Suite 616
Oakland, CA 94612
Phone: 510.272.9346
Fax: 510.272.9385

☑ Routine (10 Working Days)	☐ RUSH (surcharges may apply) Circle One: 4 hours / 24 hours / 48 hours / 72 hours / 5 days	Project #: EE#16-A0007-0237.1.5 Leighton #11561.008	Submitted by: Meredith Church, Leighton Consulting	Date: 9/28/18	94226 Page 1 of 2

Submitted to: (one Lab/Form)
☐ EM Lab 650.829.5800 ☐ Galson 888.577.5227 ☐ Hygeia 626.355.4711 ☐ Forensic 888.813.9417 ☐ Sierra Anal. 949. 348.9389 ☐ SanAir 804.897.1177 ☑ Other & Phone: AETL (American Environmental Testing Lab) – 888.288.2385

The receiving Laboratory is required to complete the following:

1. All invoices are to be sent to: Leighton Consulting, 17781 Cowan, Irvine, CA 92614 **with** a copy of the lab report.
2. Report to the attention of: Meredith Church on Behalf of LA County Public Health, Phone: (949) 681-4208
3. All lab reports and invoices are to contain both Project Number from above.
4. Unsigned and reports marked draft is unacceptable.

Optional Items to be completed by the laboratory (if check marked): ☐ Fax report to: ☐ 626.441.0016 ☐ 510.272.9385 ☐ Other: _____

☑ Email Report to: ☑ Info@execenv.com ☑ Other: dginsborg@execenv.com; kmills@execenv.com, mchurch@leightongroup.com, and kbutler@ph.lacounty.gov

☑ US Mail Report to: ☑ Originating office check marked above ☑ Other: 17781 Cowan, Irvine, CA 92614 with a copy of the lab report. ☑ Alternate billing address: Leighton

Prefix: 180926-0237.1.5-DHG-

Lab No.:	Sample No.:	Media	Wipe Size	Location	Analyses Requested
94226.01	M01	Buffer and Gauze supplied by Lab	100 Cm^2	Lincoln ES, Room #3, Computer Room/ Library; North, center computer desk	EPA Method 6010B See Note 1 Below
94226.02	M02	Buffer and Gauze supplied by Lab	100 Cm^2	Lincoln ES, Room #3, Computer Room/ Library; South, bookcase, bottom shelf	EPA Method 6010B See Note 1 Below
94226.03	M03	Buffer and Gauze supplied by Lab	100 Cm^2	Lincoln ES, Room #3, Computer Room/ Library; Southwest, low table	EPA Method 6010B See Note 1 Below
94226.04	M04	Buffer and Gauze supplied by Lab	100 Cm^2	Lincoln ES, Room #31; Southeast, black wood bookcase, 2nd shelf, near front window	EPA Method 6010B See Note 1 Below
94226.05	M05	Buffer and Gauze supplied by Lab	100 Cm^2	Lincoln ES, Room #31; East, Top of child's desk	EPA Method 6010B See Note 1 Below
94226.06	M06	Buffer and Gauze supplied by Lab	100 Cm^2	Lincoln ES, Room #31; Northwest, white metal bookcase, near rear window	EPA Method 6010B See Note 1 Below
94226.07	M07	Buffer and Gauze supplied by Lab	100 Cm^2	Gaines ES, Room #23; North, Child's table	EPA Method 6010B See Note 1 Below
94226.08	M08	Buffer and Gauze supplied by Lab	100 Cm^2	Gaines ES, Room #23; South, Computer table	EPA Method 6010B See Note 1 Below

Notes: 1) EPA 6010B Analyze for the following metals: Antimony-7440-36-0; Arsenic-7440-38-2; Barium-7440-39-3; Beryllium-7440-41-7; Cadmium-7440-43-9; Chromium-7440-47-3; Cobalt-7440-48-4; Copper-7440-50-8; Lead-7439-92-1; Molybdenum-7439-98-7; Nickel-7440-02-0; Selenium-7482-49-2; Thallium-7440-28-0; and Zinc-7440-66-6. 2) Samples Collected on 9/26/18. 3) Blank Correct

Sampling Location Zip Code: 90723

Released By, Date, & Time:	Received By, Date, & Time::	Released By, Date, & Time:
Daniel H. Ginsborg, 9/28/18 12:45 PM	Meredith Church 12:43 PM	Meredith Church 1310
Daniel H. Ginsborg 9/28/18 1310	Meredith Church, Leighton Consulting 9/28/18	Meredith Church, Leighton Consulting 9/28/18
	Daniel H. Ginsborg 9/28/18 1430	Christine Nourhadjayan 9/28/18 14:30

EXECUTIVE ENVIRONMENTAL
HEALTH & SAFETY SIMPLIFIED

Industrial Hygiene Laboratory Submittal

Originating Office (Check-marked)

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Fax: 626.441.0016

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Oakland, CA 94612
Phone: 510.272.9346
Fax: 510.272.9385

☑ Routine (10 Working Days)	☐ RUSH (surcharges may apply) Circle One: 4 hours / 24 hours / 48 hours / 72 hours / 5 days	Project #: EE#16-A0007-0237.1.5 Leighton #11561.008	Submitted by: Meredith Church, Leighton Consulting	Date: 9/28/18	94226 Page 2 of 2

Submitted to: (one Lab/Form)
☐ EM Lab 650.829.5800 ☐ Galson 888.577.5227 ☐ Hygeia 626.355.4711 ☐ Forensic 888.813.9417 ☐ Sierra Anal. 949. 348.9389 ☐ SanAir 804.897.1177 ☑ Other & Phone: AETL (American Environmental Testing Lab) – 888.288.2385

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☑ Email Report to: ☑ Info@execenv.com ☑ Other: dginsborg@execenv.com; kmills@execenv.com, mchurch@leightongroup.com, and kbutler@ph.lacounty.gov

☑ US Mail Report to: ☑ Originating office check marked above ☑ Other: 17781 Cowan, Irvine, CA 92614 with a copy of the lab report. ☑ Alternate billing address: Leighton

Lab No.:	Sample No.: (Prefix: 180926-0237.1.5-DHG-)	Media	Wipe Size	Location	Analyses Requested
94226.09	M09	Buffer and Gauze supplied by Lab	100 Cm^2	Gaines ES, Room #23; South, top of black metal file cabinet	EPA Method 6010B See Note 1 Below
94226.10	M10	Buffer and Gauze supplied by Lab	100 Cm^2	Gaines ES, Room #1; Center of room, child's desk	EPA Method 6010B See Note 1 Below
94226.11	M11	Buffer and Gauze supplied by Lab	100 Cm^2	Gaines ES, Room #1; Northeast, computer desk	EPA Method 6010B See Note 1 Below
94226.12	M12	Buffer and Gauze supplied by Lab	100 Cm^2	Gaines ES, Room #1; Southwest, top of beige metal file cabinet	EPA Method 6010B See Note 1 Below
94226.13	M13	Buffer and Gauze supplied by Lab	100 Cm^2	Lab Blank	EPA Method 6010B See Note 1 Below
94226.14	M14	Buffer and Gauze supplied by Lab	100 Cm^2	Field Blank	EPA Method 6010B See Note 1 Below
94226.15	M15	Buffer and Gauze supplied by Lab	100 Cm^2	Field Blank	EPA Method 6010B See Note 1 Below

Notes: 1) EPA 6010B Analyze for the following metals: Antimony-7440-36-0; Arsenic-7440-38-2; Barium-7440-39-3; Beryllium-7440-41-7; Cadmium-7440-43-9; Chromium-7440-47-3; Cobalt-7440-48-4; Copper-7440-50-8; Lead-7439-92-1; Molybdenum-7439-98-7; Nickel-7440-02-0; Selenium-7482-49-2; Thallium-7440-28-0; and Zinc-7440-66-6. 2) Samples Collected on 9/26/18. 3) Blank Correct

Sampling Location Zip Code: 90723

Released By, Date, & Time:	Received By, Date, & Time:	Released By, Date, & Time:
Daniel H. Ginsborg, 9/28/18 12:43 PM	Meredith Church 12:43 PM	Meredith Church 1310
Sargis P 9/29/18 1310	Meredith Church, Leighton Consulting 9/28/18	Meredith Church, Leighton Consulting 9/28/18
	Sargis P 9/28/18 1930	Christine Norsketyan 9/28/18 14:30

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COOLER RECEIPT FORM

Client Name:	Executive Env.
Project Name:	180926-0237-1.5-DHG - Metals
AETL Job Number:	94226
Date Received: 9/28/18	Received by: Christine
Carrier: ☒ AETL Courier ☐ Client ☐ GSO ☐ FedEx ☐ UPS	
☐ Others:	
Samples were received in: ☒ Cooler (1) ☐ Other (Specify):	
Inside temperature of shipping container No 1: 3.0 , No 2: _____, No 3: _____	
Type of sample containers: ☐ VOA, ☐ Glass bottles, ☐ ☐Wide mouth jars, ☐ ☐HDPE bottles, ☐ Metal sleeves, ☒ Others (Specify): Plastic Bottles + Wipe	
How are samples preserved: ☐ None, ☒ Ice , ☐ Blue Ice, ☐ Dry Ice	
☐ None, ☐ HNO_3, ☐ NaOH, ☐ ZnOAc, ☐ HCl, ☐ $Na_2S_2O_3$, _MeOH	
☐ Other (Specify):	

	Yes	No, explain below	Name, if client was notified.
1. Are the COCs Correct?	✓		
2. Are the Sample labels legible?	✓		
3. Do samples match the COC?	✓		
4. Are the required analyses clear?	✓		
5. Is there enough samples for required analysis?	✓		
6. Are samples sealed with evidence tape?	NA		
7. Are sample containers in good condition?	✓		
8. Are samples preserved?	NA		
9. Are samples preserved properly for the intended analysis?	NA		
10. Are the VOAs free of headspace?	NA		
11. Are the jars free of headspace?	NA		

Explain all "No" answers for above questions:

CYRUS RAZMARA

From: Daniel Ginsborg [dginsborg@execenv.com]
Sent: Monday, October 1, 2018 3:15 PM
To: cyrus@aetlab.com
Cc: mchurch@leightongroup.com; KButler@ph.lacounty.gov; Dan Flores; Kay Mills; Vicki Uchida; Ruben Frutos
Subject: 16-0237.1.5, status question on media picked-up from my office on Friday
Attachments: 16-0237.1.5- COC -Hexavalent Chromium Air Samples.pdf; ATT00001.htm; 16-0237.1.5-COC -Hexavalent Chromium Wipe Sample.pdf; ATT00002.htm; 16-0237.1.5- COC -Metal Wipe Samples.pdf; ATT00003.htm

Dr Razmara,

To avoid any possible confusion, the samples on the attached COC picked-up from our office on Friday were submitted by Leighton Consulting on our COC. They are responsible for payment of this project. Executive Environmental will not pay any lab bill on this project. Please contact Leighton Consulting to establish an account if they do not already have one with your lab. Their contact information is on the COC, please send the report and any project communiqués to the five individuals listed on the COC. Has any communiqués been sent out on this project such as a confirmation that the samples were received and the date we can expect results? If it has, I have not received it and would like a copy resent to the individuals listed on the COC. Please contact me if there are any questions or if they have not made timely payments and I will do what I can.

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Ordered By

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Telephone: (949)250-1421
Attention: Meredith Church

Project ID: EE#16-A0007-0237.1.5
Date Received 09/28/2018
Date Reported 10/08/2018

Job Number	Order Date	Client
94226	09/28/2018	LGHTN

CERTIFICATE OF ANALYSIS
CASE NARRATIVE

AETL received 15 samples with the following specification on 09/28/2018.

Lab ID	Sample ID	Sample Date	Matrix	Quantity Of Containers
94226.01	180926-0237.1.5-DH G-M01	09/26/2018	Solid	1
94226.02	180926-0237.1.5-DH G-M02	09/26/2018	Solid	1
94226.03	180926-0237.1.5-DH G-M03	09/26/2018	Solid	1
94226.04	180926-0237.1.5-DH G-M04	09/26/2018	Solid	1
94226.05	180926-0237.1.5-DH G-M05	09/26/2018	Solid	1
94226.06	180926-0237.1.5-DH G-M06	09/26/2018	Solid	1
94226.07	180926-0237.1.5-DH G-M07	09/26/2018	Solid	1
94226.08	180926-0237.1.5-DH G-M08	09/26/2018	Solid	1
94226.09	180926-0237.1.5-DH G-M09	09/26/2018	Solid	1
94226.10	180926-0237.1.5-DH G-M10	09/26/2018	Solid	1
94226.11	180926-0237.1.5-DH G-M11	09/26/2018	Solid	1
94226.12	180926-0237.1.5-DH G-M12	09/26/2018	Solid	1
94226.13	180926-0237.1.5-DH G-M13	09/26/2018	Solid	1

Continued

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Ordered By

Leighton Consulting **17781 Cowan** **Irvine, CA 92614**	**Project ID: EE#16-A0007-0237.1.5** **Date Received 09/28/2018** **Date Reported 10/08/2018**

Telephone: (949)250-1421
Attention: Meredith Church

Job Number	Order Date	Client
94226	09/28/2018	LGHTN

CERTIFICATE OF ANALYSIS

CASE NARRATIVE

94226.13	180926-0237.1.5-DH G-M13	09/26/2018	Solid	1
94226.14	180926-0237.1.5-DH G-M14	09/26/2018	Solid	1
94226.15	180926-0237.1.5-DH G-M15	09/26/2018	Solid	1

Method ^ Submethod	*Req Date*	*Priority*	*TAT*	*Units*
6010BSCAN ^ WIPE-14MET	10/05/2018	2	Normal	ug/100cm2

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

All samples were kept frozen prior to analysis.

Checked By: _____ Approved By: C. Razmara

Cyrus Razmara, Ph.D.
Laboratory Director

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ANALYTICAL RESULTS

Ordered By

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Attn: Meredith Church
Page: **2**

Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94226	09/28/2018	LGHTN

Method: 6010BSCAN, 14 Metals by ICP

QC Batch No: 1001182C6

Our Lab I.D.			Method Blank	94226.01	94226.02	94226.03	94226.04
Client Sample I.D.				180926-0237.1.5-DHG-M01	180926-0237.1.5-DHG-M02	180926-0237.1.5-DHG-M03	180926-0237.1.5-DHG-M04
Date Sampled				09/26/2018	09/26/2018	09/26/2018	09/26/2018
Date Prepared			10/01/2018	10/01/2018	10/01/2018	10/01/2018	10/01/2018
Preparation Method			3050B	3050B	3050B	3050B	3050B
Date Analyzed			10/03/2018	10/03/2018	10/03/2018	10/03/2018	10/03/2018
Matrix			Solid	Solid	Solid	Solid	Solid
Units			ug/100cm2	ug/100cm2	ug/100cm2	ug/100cm2	ug/100cm2
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Antimony	1.00	2.00	ND	ND	ND	ND	ND
Arsenic	1.00	2.00	ND	ND	ND	ND	ND
Barium	0.60	1.20	ND	ND	106	ND	ND
Beryllium	0.20	0.40	ND	ND	ND	ND	ND
Cadmium	0.20	0.40	ND	ND	ND	ND	ND
Chromium	0.20	0.40	ND	ND	1.73	ND	ND
Cobalt	0.20	0.40	ND	ND	0.479	ND	ND
Copper	0.20	0.40	ND	ND	3.19	ND	ND
Lead	1.00	2.00	ND	ND	6.60	ND	ND
Molybdenum	0.20	0.40	ND	ND	ND	ND	ND
Nickel	0.20	0.40	ND	ND	2.05	ND	ND
Selenium	1.00	2.00	ND	ND	ND	ND	ND
Thallium	1.00	2.00	ND	ND	ND	ND	ND
Zinc	0.20	0.40	ND	ND	62.1	ND	ND

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ANALYTICAL RESULTS

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Page: **3**

Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94226	09/28/2018	LGHTN

Method: 6010BSCAN, 14 Metals by ICP

QC Batch No: 1001182C6

Our Lab I.D.			94226.05	94226.06	94226.07	94226.08	94226.09
Client Sample I.D.			180926-0237.1.5-DHG-M05	180926-0237.1.5-DHG-M06	180926-0237.1.5-DHG-M07	180926-0237.1.5-DHG-M08	180926-0237.1.5-DHG-M09
Date Sampled			09/26/2018	09/26/2018	09/26/2018	09/26/2018	09/26/2018
Date Prepared			10/01/2018	10/01/2018	10/01/2018	10/01/2018	10/01/2018
Preparation Method			3050B	3050B	3050B	3050B	3050B
Date Analyzed			10/03/2018	10/03/2018	10/03/2018	10/03/2018	10/03/2018
Matrix			Solid	Solid	Solid	Solid	Solid
Units			ug/100cm2	ug/100cm2	ug/100cm2	ug/100cm2	ug/100cm2
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Antimony	1.00	2.00	ND	ND	ND	ND	ND
Arsenic	1.00	2.00	ND	ND	ND	ND	ND
Barium	0.60	1.20	ND	ND	ND	0.807J	1.23
Beryllium	0.20	0.40	ND	ND	ND	ND	ND
Cadmium	0.20	0.40	ND	ND	ND	ND	ND
Chromium	0.20	0.40	ND	ND	ND	ND	ND
Cobalt	0.20	0.40	ND	0.393J	ND	ND	ND
Copper	0.20	0.40	ND	ND	ND	ND	ND
Lead	1.00	2.00	ND	ND	ND	ND	ND
Molybdenum	0.20	0.40	0.242J	ND	ND	ND	ND
Nickel	0.20	0.40	ND	0.342J	ND	ND	ND
Selenium	1.00	2.00	ND	ND	ND	ND	ND
Thallium	1.00	2.00	ND	ND	ND	ND	ND
Zinc	0.20	0.40	ND	ND	ND	ND	ND

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ANALYTICAL RESULTS

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Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94226	09/28/2018	LGHTN

Method: 6010BSCAN, 14 Metals by ICP

QC Batch No: 1001182C6

Our Lab I.D.			94226.10				
Client Sample I.D.			180926-0237.1.5-DHG-M10				
Date Sampled			09/26/2018				
Date Prepared			10/01/2018				
Preparation Method			3050B				
Date Analyzed			10/03/2018				
Matrix			Solid				
Units			ug/100cm2				
Dilution Factor			1				
Analytes	**MDL**	**PQL**	**Results**				
Antimony	1.00	2.00	ND				
Arsenic	1.00	2.00	ND				
Barium	0.60	1.20	ND				
Beryllium	0.20	0.40	ND				
Cadmium	0.20	0.40	ND				
Chromium	0.20	0.40	ND				
Cobalt	0.20	0.40	ND				
Copper	0.20	0.40	ND				
Lead	1.00	2.00	ND				
Molybdenum	0.20	0.40	ND				
Nickel	0.20	0.40	ND				
Selenium	1.00	2.00	ND				
Thallium	1.00	2.00	ND				
Zinc	0.20	0.40	ND				

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Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

AETL Job Number	Submitted	Client
94226	09/28/2018	LGHTN

Method: 6010BSCAN, 14 Metals by ICP

QC Batch No: 1001182C7

Our Lab I.D.			Method Blank	94226.11	94226.12	94226.13	94226.14
Client Sample I.D.				180926-0237.1.5-DHG-M1 1	180926-0237.1.5-DHG-M1 2	180926-0237.1.5-DHG-M1 3	180926-0237.1.5-DHG-M1 4
Date Sampled				09/26/2018	09/26/2018	09/26/2018	09/26/2018
Date Prepared			10/01/2018	10/01/2018	10/01/2018	10/01/2018	10/01/2018
Preparation Method			3050B	3050B	3050B	3050B	3050B
Date Analyzed			10/03/2018	10/03/2018	10/03/2018	10/03/2018	10/03/2018
Matrix			Solid	Solid	Solid	Solid	Solid
Units			ug/100cm2	ug/100cm2	ug/100cm2	ug/100cm2	ug/100cm2
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Antimony	1.00	2.00	ND	ND	ND	ND	ND
Arsenic	1.00	2.00	ND	ND	ND	ND	ND
Barium	0.60	1.20	ND	ND	2.19	ND	ND
Beryllium	0.20	0.40	ND	ND	ND	ND	ND
Cadmium	0.20	0.40	ND	ND	ND	ND	ND
Chromium	0.20	0.40	ND	ND	ND	ND	ND
Cobalt	0.20	0.40	ND	ND	ND	ND	ND
Copper	0.20	0.40	ND	ND	ND	ND	ND
Lead	1.00	2.00	ND	ND	ND	ND	ND
Molybdenum	0.20	0.40	ND	ND	ND	ND	ND
Nickel	0.20	0.40	ND	ND	ND	ND	ND
Selenium	1.00	2.00	ND	ND	ND	ND	ND
Thallium	1.00	2.00	ND	ND	ND	ND	ND
Zinc	0.20	0.40	ND	ND	ND	ND	ND

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ANALYTICAL RESULTS

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Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Page: **6**

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94226	09/28/2018	LGHTN

Method: 6010BSCAN, 14 Metals by ICP

QC Batch No: 1001182C7

Our Lab I.D.			94226.15				
Client Sample I.D.			180926-0237.1.5-DHG-M15				
Date Sampled			09/26/2018				
Date Prepared			10/01/2018				
Preparation Method			3050B				
Date Analyzed			10/03/2018				
Matrix			Solid				
Units			ug/100cm2				
Dilution Factor			1				
Analytes	**MDL**	**PQL**	**Results**				
Antimony	1.00	2.00	ND				
Arsenic	1.00	2.00	ND				
Barium	0.60	1.20	ND				
Beryllium	0.20	0.40	ND				
Cadmium	0.20	0.40	ND				
Chromium	0.20	0.40	ND				
Cobalt	0.20	0.40	ND				
Copper	0.20	0.40	ND				
Lead	1.00	2.00	ND				
Molybdenum	0.20	0.40	ND				
Nickel	0.20	0.40	ND				
Selenium	1.00	2.00	ND				
Thallium	1.00	2.00	ND				
Zinc	0.20	0.40	ND				

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QUALITY CONTROL RESULTS

Ordered By

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Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Page: **7**

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94226	09/28/2018	LGHTN

Method: 6010BSCAN, 14 Metals by ICP

QC Batch No: 1001182C6; LCS: Blank; LCS Prepared: 10/01/2018; LCS Analyzed: 10/03/2018; Units: ug/100cm2

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	
Antimony	10.0	10.4	104	10.0	9.81	98.1	5.8	75-125	<15	
Arsenic	10.0	9.83	98.3	10.0	9.78	97.8	<1	75-125	<15	
Barium	10.0	10.4	104	10.0	10.2	102	1.9	75-125	<15	
Beryllium	10.0	9.82	98.2	10.0	9.75	97.5	<1	75-125	<15	
Cadmium	10.0	10.1	101	10.0	10.0	100	<1	75-125	<15	
Chromium	10.0	9.83	98.3	10.0	9.74	97.4	<1	75-125	<15	
Cobalt	10.0	9.79	97.9	10.0	9.68	96.8	1.1	75-125	<15	
Copper	10.0	9.81	98.1	10.0	9.73	97.3	<1	75-125	<15	
Lead	10.0	9.48	94.8	10.0	9.79	97.9	3.2	75-125	<15	
Molybdenum	10.0	9.98	99.8	10.0	9.77	97.7	2.1	75-125	<15	
Nickel	10.0	9.75	97.5	10.0	9.59	95.9	1.7	75-125	<15	
Selenium	10.0	9.70	97.0	10.0	8.24	82.4	16.3	75-125	<15	
Thallium	10.0	10.3	103	10.0	10.1	101	2.0	75-125	<15	
Zinc	10.0	9.75	97.5	10.0	9.68	96.8	<1	75-125	<15	

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QUALITY CONTROL RESULTS

Ordered By

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Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Page: **8**

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94226	09/28/2018	LGHTN

Method: 6010BSCAN, 14 Metals by ICP

QC Batch No: 1001182C7; LCS: Blank; LCS Prepared: 10/01/2018; LCS Analyzed: 10/03/2018; Units: ug/100cm2

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	
Antimony	10.0	9.77	97.7	10.0	9.75	97.5	<1	75-125	<15	
Arsenic	10.0	8.00	80.0	10.0	8.81	88.1	9.6	75-125	<15	
Barium	10.0	9.99	99.9	10.0	9.86	98.6	1.3	75-125	<15	
Beryllium	10.0	9.62	96.2	10.0	9.46	94.6	1.7	75-125	<15	
Cadmium	10.0	9.57	95.7	10.0	9.46	94.6	1.2	75-125	<15	
Chromium	10.0	9.49	94.9	10.0	9.35	93.5	1.5	75-125	<15	
Cobalt	10.0	9.47	94.7	10.0	9.30	93.0	1.8	75-125	<15	
Copper	10.0	9.52	95.2	10.0	9.32	93.2	2.1	75-125	<15	
Lead	10.0	9.43	94.3	10.0	9.24	92.4	2.0	75-125	<15	
Molybdenum	10.0	9.45	94.5	10.0	9.30	93.0	1.6	75-125	<15	
Nickel	10.0	9.11	91.1	10.0	8.95	89.5	1.8	75-125	<15	
Selenium	10.0	8.98	89.8	10.0	8.16	81.6	9.6	75-125	<15	
Thallium	10.0	9.93	99.3	10.0	9.48	94.8	4.6	75-125	<15	
Zinc	10.0	9.32	93.2	10.0	9.19	91.9	1.4	75-125	<15	

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Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

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

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Ordered By

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Number of Pages	**8**
Date Received	**09/28/2018**
Date Reported	**10/08/2018**

Telephone: (949)250-1421
Attention: Meredith Church

Job Number	Order Date	Client
94226	09/28/2018	LGHTN

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008
Site: Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Enclosed please find results of analyses of 15 wipe 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

EXECUTIVE ENVIRONMENTAL
HEALTH & SAFETY SIMPLIFIED

Industrial Hygiene Laboratory Submittal

Originating Office (Check-marked)

☑ 310 E. Foothill Blvd., Suite 200, Arcadia, CA 91006, Phone: 626.441.7050, Fax: 626.441.0016

☐ 1440 Broadway, Suite 616, Oakland, CA 94612, Phone: 510.272.9346, Fax: 510.272.9385

☑ **Routine** (10 Working Days)	☐ **RUSH** (surcharges may apply) Circle One: 4 hours / 24 hours / 48 hours / 72 hours / 5 days	**Project #:** EE#16-A0007-0237.1.5 Leighton #11561.008	**Submitted by:** Meredith Church, Leighton Consulting	**Date:** 9/28/18

94226 **Page 1 of 2**

Submitted to: (one Lab/Form)
☐ EM Lab 650.829.5800 ☐ Galson 888.577.5227 ☐ Hygeia 626.355.4711 ☐ Forensic 888.813.9417 ☐ Sierra Anal. 949. 348.9389 ☐ SanAir 804.897.1177 ☑ Other & Phone: AETL (American Environmental Testing Lab) – 888.288.2385

The receiving Laboratory is required to complete the following:

1. All invoices are to be sent to: Leighton Consulting, 17781 Cowan, Irvine, CA 92614 **with** a copy of the lab report.
2. Report to the attention of: Meredith Church on Behalf of LA County Public Health, Phone: (949) 681-4208
3. All lab reports and invoices are to contain both Project Number from above.
4. Unsigned and reports marked draft is unacceptable.

Optional Items to be completed by the laboratory (if check marked): ☐ Fax report to: ☐ 626.441.0016 ☐ 510.272.9385 ☐ Other: _____

☑ Email Report to: ☑ Info@execenv.com ☑ Other: dginsborg@execenv.com; kmills@execenv.com, mchurch@leightongroup.com, and kbutler@ph.lacounty.gov

☑ US Mail Report to: ☑ Originating office check marked above ☑ Other: 17781 Cowan, Irvine, CA 92614 with a copy of the lab report. ☑ Alternate billing address: Leighton

Lab No.:	Sample No.: (Prefix: 180926-0237.1.5-DHG-)	Media	Wipe Size	Location	Analyses Requested
94226.01	M01	Buffer and Gauze supplied by Lab	100 Cm^2	Lincoln ES, Room #3, Computer Room/ Library; North, center computer desk	EPA Method 6010B See Note 1 Below
94226.02	M02	Buffer and Gauze supplied by Lab	100 Cm^2	Lincoln ES, Room #3, Computer Room/ Library; South, bookcase, bottom shelf	EPA Method 6010B See Note 1 Below
94226.03	M03	Buffer and Gauze supplied by Lab	100 Cm^2	Lincoln ES, Room #3, Computer Room/ Library; Southwest, low table	EPA Method 6010B See Note 1 Below
94226.04	M04	Buffer and Gauze supplied by Lab	100 Cm^2	Lincoln ES, Room #31; Southeast, black wood bookcase, 2nd shelf, near front window	EPA Method 6010B See Note 1 Below
94226.05	M05	Buffer and Gauze supplied by Lab	100 Cm^2	Lincoln ES, Room #31; East, Top of child's desk	EPA Method 6010B See Note 1 Below
94226.06	M06	Buffer and Gauze supplied by Lab	100 Cm^2	Lincoln ES, Room #31; Northwest, white metal bookcase, near rear window	EPA Method 6010B See Note 1 Below
94226.07	M07	Buffer and Gauze supplied by Lab	100 Cm^2	Gaines ES, Room #23; North, Child's table	EPA Method 6010B See Note 1 Below
94226.08	M08	Buffer and Gauze supplied by Lab	100 Cm^2	Gaines ES, Room #23; South, Computer table	EPA Method 6010B See Note 1 Below

Notes: 1) EPA 6010B Analyze for the following metals: Antimony-7440-36-0; Arsenic-7440-38-2; Barium-7440-39-3; Beryllium-7440-41-7; Cadmium-7440-43-9; Chromium-7440-47-3; Cobalt-7440-48-4; Copper-7440-50-8; Lead-7439-92-1; Molybdenum-7439-98-7; Nickel-7440-02-0; Selenium-7482-49-2; Thallium-7440-28-0; and Zinc-7440-66-6. 2) Samples Collected on 9/26/18. 3) Blank Correct

Sampling Location Zip Code: 90723

Released By, Date, & Time:	Received By, Date, & Time:	Released By, Date, & Time:
Daniel H. Ginsberg, 9/28/18 12:45 PM	Meredith Church 12:43 PM	Meredith Church 1310
Sample 9/28/18 1310	Meredith Church, Leighton Consulting 9/28/18	Meredith Church, Leighton Consulting 9/28/18
	Sample 9/28/18 1430	Christine Nowhadayan 9/28/18 14:30

Rev. 12/13

Form: IH-001

EXECUTIVE ENVIRONMENTAL
HEALTH & SAFETY SIMPLIFIED

Industrial Hygiene Laboratory Submittal

Originating Office (Check-marked)

☑ 310 E. Foothill Blvd., Suite 200
Arcadia, CA 91006
Phone: 626.441.7050
Fax: 626.441.0016

☐ 1440 Broadway, Suite 616
Oakland, CA 94612
Phone: 510.272.9346
Fax: 510.272.9385

☑ Routine (10 Working Days)	☐ RUSH (surcharges may apply) Circle One: 4 hours / 24 hours / 48 hours / 72 hours / 5 days	Project #: EE#16-A0007-0237.1.5 Leighton #11561.008	Submitted by: Meredith Church, Leighton Consulting	Date: 9/28/18	94226 Page 2 of 2

Submitted to: (one Lab/Form)
☐ EM Lab 650.829.5800 ☐ Galson 888.577.5227 ☐ Hygeia 626.355.4711 ☐ Forensic 888.813.9417 ☐ Sierra Anal. 949. 348.9389 ☐ SanAir 804.897.1177 ☑ Other & Phone: AETL (American Environmental Testing Lab) – 888.288.2385

The receiving Laboratory is required to complete the following:

1. All invoices are to be sent to: Leighton Consulting, 17781 Cowan, Irvine, CA 92614 **with** a copy of the lab report.
2. Report to the attention of: Meredith Church on Behalf of LA County Public Health, Phone: (949) 681-4208
3. All lab reports and invoices are to contain both Project Number from above.
4. Unsigned and reports marked draft is unacceptable.

Optional Items to be completed by the laboratory (if check marked): ☐ Fax report to: ☐ 626.441.0016 ☐ 510.272.9385 ☐ Other: _____

☑ Email Report to: ☑ Info@execenv.com ☑ Other: dginsborg@execenv.com; kmills@execenv.com, mchurch@leightongroup.com, and kbutler@ph.lacounty.gov

☑ US Mail Report to: ☑ Originating office check marked above ☑ Other: 17781 Cowan, Irvine, CA 92614 with a copy of the lab report. ☑ Alternate billing address: Leighton

Lab No.:	Sample No.: (Prefix: 180926-0237.1.5-DHG-)	Media	Wipe Size	Location	Analyses Requested
94226.09	M09	Buffer and Gauze supplied by Lab	100 Cm^2	Gaines ES, Room #23; South, top of black metal file cabinet	EPA Method 6010B See Note 1 Below
94226.10	M10	Buffer and Gauze supplied by Lab	100 Cm^2	Gaines ES, Room #1; Center of room, child's desk	EPA Method 6010B See Note 1 Below
94226.11	M11	Buffer and Gauze supplied by Lab	100 Cm^2	Gaines ES, Room #1; Northeast, computer desk	EPA Method 6010B See Note 1 Below
94226.12	M12	Buffer and Gauze supplied by Lab	100 Cm^2	Gaines ES, Room #1; Southwest, top of beige metal file cabinet	EPA Method 6010B See Note 1 Below
94226.13	M13	Buffer and Gauze supplied by Lab	100 Cm^2	Lab Blank	EPA Method 6010B See Note 1 Below
94226.14	M14	Buffer and Gauze supplied by Lab	100 Cm^2	Field Blank	EPA Method 6010B See Note 1 Below
94226.15	M15	Buffer and Gauze supplied by Lab	100 Cm^2	Field Blank	EPA Method 6010B See Note 1 Below

Notes: 1) EPA 6010B Analyze for the following metals: Antimony-7440-36-0; Arsenic-7440-38-2; Barium-7440-39-3; Beryllium-7440-41-7; Cadmium-7440-43-9; Chromium-7440-47-3; Cobalt-7440-48-4; Copper-7440-50-8; Lead-7439-92-1; Molybdenum-7439-98-7; Nickel-7440-02-0; Selenium-7482-49-2; Thallium-7440-28-0; and Zinc-7440-66-6. 2) Samples Collected on 9/26/18. 3) Blank Correct

Sampling Location Zip Code: 90723

Released By, Date, & Time:	Received By, Date, & Time:	Released By, Date, & Time:
Daniel H. Ginsborg, 9/28/18 12:43 PM	Meredith Church 12:43 PM Meredith Church, Leighton Consulting 9/28/18	Meredith Church 1310 Meredith Church, Leighton Consulting 9/28/18
Sargis P 9/29/18 1310	Sargis P 9/28/18 1430	Christine Nersesyan 9/28/18 14:3

Rev. 12/13

Form: IH-001

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 NORTH NAOMI ST. BURBANK, CALIFORNIA 91504 DHS # 1541 LACSD# 10181
TEL (888) 288-AETL (818) 845-8200 FAX (818) 845-8840 www.aetlab.com

COOLER RECEIPT FORM

Client Name:	Executive Env.
Project Name:	180926-0237-1-5-DHG - Metals
AETL Job Number:	94226
Date Received: 9/28/18	Received by: Christine
Carrier: ☒ AETL Courier ☐ Client ☐ GSO ☐ FedEx ☐ UPS	
☐ Others:	

Samples were received in: ☒ Cooler (1) ☐ Other (Specify):

Inside temperature of shipping container No 1: 3.0 , No 2: _____, No 3: _____

Type of sample containers: ☐ VOA, ☐ Glass bottles, ☐ ☐Wide mouth jars, ☐ ☐HDPE bottles, ☐ Metal sleeves, ☒ Others (Specify): Plastic Bottles + Wipe

How are samples preserved: ☐ None, ☒ Ice , ☐ Blue Ice, ☐ Dry Ice

☐ None, ☐ HNO_3, ☐ NaOH, ☐ ZnOAc, ☐ HCl, ☐ $Na_2S_2O_3$, _MeOH

☐ Other (Specify):

	Yes	No, explain below	Name, if client was notified.
1. Are the COCs Correct?	✓		
2. Are the Sample labels legible?	✓		
3. Do samples match the COC?	✓		
4. Are the required analyses clear?	✓		
5. Is there enough samples for required analysis?	✓		
6. Are samples sealed with evidence tape?	NA		
7. Are sample containers in good condition?	✓		
8. Are samples preserved?	NA		
9. Are samples preserved properly for the intended analysis?	NA		
10. Are the VOAs free of headspace?	NA		
11. Are the jars free of headspace?	NA		

Explain all "No" answers for above questions:

CYRUS RAZMARA

From: Daniel Ginsborg [dginsborg@execenv.com]
Sent: Monday, October 1, 2018 3:15 PM
To: cyrus@aetlab.com
Cc: mchurch@leightongroup.com; KButler@ph.lacounty.gov; Dan Flores; Kay Mills; Vicki Uchida; Ruben Frutos
Subject: 16-0237.1.5, status question on media picked-up from my office on Friday
Attachments: 16-0237.1.5- COC -Hexavalent Chromium Air Samples.pdf; ATT00001.htm; 16-0237.1.5-COC -Hexavalent Chromium Wipe Sample.pdf; ATT00002.htm; 16-0237.1.5- COC -Metal Wipe Samples.pdf; ATT00003.htm

Dr Razmara,

To avoid any possible confusion, the samples on the attached COC picked-up from our office on Friday were submitted by Leighton Consulting on our COC. They are responsible for payment of this project. Executive Environmental will not pay any lab bill on this project. Please contact Leighton Consulting to establish an account if they do not already have one with your lab. Their contact information is on the COC, please send the report and any project communiqués to the five individuals listed on the COC. Has any communiqués been sent out on this project such as a confirmation that the samples were received and the date we can expect results? If it has, I have not received it and would like a copy resent to the individuals listed on the COC. Please contact me if there are any questions or if they have not made timely payments and I will do what I can.

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

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Telephone: (949)250-1421
Attention: Meredith Church

Project ID: EE#16-A0007-0237.1.5
Date Received 09/28/2018
Date Reported 10/08/2018

Job Number	Order Date	Client
94226	09/28/2018	LGHTN

CERTIFICATE OF ANALYSIS
CASE NARRATIVE

AETL received 15 samples with the following specification on 09/28/2018.

Lab ID	Sample ID	Sample Date	Matrix	Quantity Of Containers
94226.01	180926-0237.1.5-DH G-M01	09/26/2018	Solid	1
94226.02	180926-0237.1.5-DH G-M02	09/26/2018	Solid	1
94226.03	180926-0237.1.5-DH G-M03	09/26/2018	Solid	1
94226.04	180926-0237.1.5-DH G-M04	09/26/2018	Solid	1
94226.05	180926-0237.1.5-DH G-M05	09/26/2018	Solid	1
94226.06	180926-0237.1.5-DH G-M06	09/26/2018	Solid	1
94226.07	180926-0237.1.5-DH G-M07	09/26/2018	Solid	1
94226.08	180926-0237.1.5-DH G-M08	09/26/2018	Solid	1
94226.09	180926-0237.1.5-DH G-M09	09/26/2018	Solid	1
94226.10	180926-0237.1.5-DH G-M10	09/26/2018	Solid	1
94226.11	180926-0237.1.5-DH G-M11	09/26/2018	Solid	1
94226.12	180926-0237.1.5-DH G-M12	09/26/2018	Solid	1
94226.13	180926-0237.1.5-DH G-M13	09/26/2018	Solid	1

Continued

American Environmental Testing Laboratory Inc.
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Ordered By

Leighton Consulting **17781 Cowan** **Irvine, CA 92614**	**Project ID: EE#16-A0007-0237.1.5** **Date Received 09/28/2018** **Date Reported 10/08/2018**

Telephone: (949)250-1421
Attention: Meredith Church

Job Number	Order Date	Client
94226	09/28/2018	LGHTN

CERTIFICATE OF ANALYSIS

CASE NARRATIVE

94226.13	180926-0237.1.5-DH G-M13	09/26/2018	Solid	1
94226.14	180926-0237.1.5-DH G-M14	09/26/2018	Solid	1
94226.15	180926-0237.1.5-DH G-M15	09/26/2018	Solid	1

Method ^ Submethod	*Req Date*	*Priority*	*TAT*	*Units*
6010BSCAN ^ WIPE-14M-2	10/05/2018	2	Normal	ug/Sample
6010BSCAN ^ WIPE-14MET	10/05/2018	2	Normal	ug/100cm2

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

All samples were kept frozen prior to analysis.

Checked By: _____ Approved By: C. Razmara

Cyrus Razmara, Ph.D.
Laboratory Director

American Environmental Testing Laboratory Inc.
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ANALYTICAL RESULTS

Ordered By

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Telephone: (949)250-1421
Attn: Meredith Church

Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Page: **2**

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94226	09/28/2018	LGHTN

Method: 6010BSCAN, 14 Metals by ICP

QC Batch No: 1001182C6

Our Lab I.D.			Method Blank	94226.01	94226.02	94226.03	94226.04
Client Sample I.D.				180926-0237.1.5-DHG-M01	180926-0237.1.5-DHG-M02	180926-0237.1.5-DHG-M03	180926-0237.1.5-DHG-M04
Date Sampled				09/26/2018	09/26/2018	09/26/2018	09/26/2018
Date Prepared			10/01/2018	10/01/2018	10/01/2018	10/01/2018	10/01/2018
Preparation Method			3050B	3050B	3050B	3050B	3050B
Date Analyzed			10/03/2018	10/03/2018	10/03/2018	10/03/2018	10/03/2018
Matrix			Solid	Solid	Solid	Solid	Solid
Units			ug/Sample	ug/Sample	ug/Sample	ug/Sample	ug/Sample
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Antimony	1.00	2.00	ND	ND	ND	ND	ND
Arsenic	1.00	2.00	ND	ND	ND	ND	ND
Barium	0.60	1.20	ND	ND	106	ND	ND
Beryllium	0.20	0.40	ND	ND	ND	ND	ND
Cadmium	0.20	0.40	ND	ND	ND	ND	ND
Chromium	0.20	0.40	ND	ND	1.73	ND	ND
Cobalt	0.20	0.40	ND	ND	0.479	ND	ND
Copper	0.20	0.40	ND	ND	3.19	ND	ND
Lead	1.00	2.00	ND	ND	6.60	ND	ND
Molybdenum	0.20	0.40	ND	ND	ND	ND	ND
Nickel	0.20	0.40	ND	ND	2.05	ND	ND
Selenium	1.00	2.00	ND	ND	ND	ND	ND
Thallium	1.00	2.00	ND	ND	ND	ND	ND
Zinc	0.20	0.40	ND	ND	62.1	ND	ND

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ANALYTICAL RESULTS

Ordered By

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Telephone: (949)250-1421
Attn: Meredith Church
Page: **3**

Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94226	09/28/2018	LGHTN

Method: 6010BSCAN, 14 Metals by ICP

QC Batch No: 1001182C6

Our Lab I.D.			94226.05	94226.06	94226.07	94226.08	94226.09
Client Sample I.D.			180926-0237.1.5-DHG-M05	180926-0237.1.5-DHG-M06	180926-0237.1.5-DHG-M07	180926-0237.1.5-DHG-M08	180926-0237.1.5-DHG-M09
Date Sampled			09/26/2018	09/26/2018	09/26/2018	09/26/2018	09/26/2018
Date Prepared			10/01/2018	10/01/2018	10/01/2018	10/01/2018	10/01/2018
Preparation Method			3050B	3050B	3050B	3050B	3050B
Date Analyzed			10/03/2018	10/03/2018	10/03/2018	10/03/2018	10/03/2018
Matrix			Solid	Solid	Solid	Solid	Solid
Units			ug/Sample	ug/Sample	ug/Sample	ug/Sample	ug/Sample
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Antimony	1.00	2.00	ND	ND	ND	ND	ND
Arsenic	1.00	2.00	ND	ND	ND	ND	ND
Barium	0.60	1.20	ND	ND	ND	0.807J	1.23
Beryllium	0.20	0.40	ND	ND	ND	ND	ND
Cadmium	0.20	0.40	ND	ND	ND	ND	ND
Chromium	0.20	0.40	ND	ND	ND	ND	ND
Cobalt	0.20	0.40	ND	0.393J	ND	ND	ND
Copper	0.20	0.40	ND	ND	ND	ND	ND
Lead	1.00	2.00	ND	ND	ND	ND	ND
Molybdenum	0.20	0.40	0.242J	ND	ND	ND	ND
Nickel	0.20	0.40	ND	0.342J	ND	ND	ND
Selenium	1.00	2.00	ND	ND	ND	ND	ND
Thallium	1.00	2.00	ND	ND	ND	ND	ND
Zinc	0.20	0.40	ND	ND	ND	ND	ND

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

ANALYTICAL RESULTS

Ordered By

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Telephone: (949)250-1421
Attn: Meredith Church

Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Page: **4**

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94226	09/28/2018	LGHTN

Method: 6010BSCAN, 14 Metals by ICP

QC Batch No: 1001182C6

Our Lab I.D.			94226.10				
Client Sample I.D.			180926-0237.1.5-DHG-M10				
Date Sampled			09/26/2018				
Date Prepared			10/01/2018				
Preparation Method			3050B				
Date Analyzed			10/03/2018				
Matrix			Solid				
Units			ug/Sample				
Dilution Factor			1				
Analytes	**MDL**	**PQL**	**Results**				
Antimony	1.00	2.00	ND				
Arsenic	1.00	2.00	ND				
Barium	0.60	1.20	ND				
Beryllium	0.20	0.40	ND				
Cadmium	0.20	0.40	ND				
Chromium	0.20	0.40	ND				
Cobalt	0.20	0.40	ND				
Copper	0.20	0.40	ND				
Lead	1.00	2.00	ND				
Molybdenum	0.20	0.40	ND				
Nickel	0.20	0.40	ND				
Selenium	1.00	2.00	ND				
Thallium	1.00	2.00	ND				
Zinc	0.20	0.40	ND				

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ANALYTICAL RESULTS

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Irvine, CA 92614

Telephone: (949)250-1421
Attn: Meredith Church
Page: **5**

Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94226	09/28/2018	LGHTN

Method: 6010BSCAN, 14 Metals by ICP

QC Batch No: 1001182C7

Our Lab I.D.			Method Blank	94226.11	94226.12	94226.13	94226.14
Client Sample I.D.				180926-0237.1.5-DHG-M1 1	180926-0237.1.5-DHG-M1 2	180926-0237.1.5-DHG-M1 3	180926-0237.1.5-DHG-M1 4
Date Sampled				09/26/2018	09/26/2018	09/26/2018	09/26/2018
Date Prepared			10/01/2018	10/01/2018	10/01/2018	10/01/2018	10/01/2018
Preparation Method			3050B	3050B	3050B	3050B	3050B
Date Analyzed			10/03/2018	10/03/2018	10/03/2018	10/03/2018	10/03/2018
Matrix			Solid	Solid	Solid	Solid	Solid
Units			ug/Sample	ug/Sample	ug/Sample	ug/Sample	ug/Sample
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Antimony	1.00	2.00	ND	ND	ND	ND	ND
Arsenic	1.00	2.00	ND	ND	ND	ND	ND
Barium	0.60	1.20	ND	ND	2.19	ND	ND
Beryllium	0.20	0.40	ND	ND	ND	ND	ND
Cadmium	0.20	0.40	ND	ND	ND	ND	ND
Chromium	0.20	0.40	ND	ND	ND	ND	ND
Cobalt	0.20	0.40	ND	ND	ND	ND	ND
Copper	0.20	0.40	ND	ND	ND	ND	ND
Lead	1.00	2.00	ND	ND	ND	ND	ND
Molybdenum	0.20	0.40	ND	ND	ND	ND	ND
Nickel	0.20	0.40	ND	ND	ND	ND	ND
Selenium	1.00	2.00	ND	ND	ND	ND	ND
Thallium	1.00	2.00	ND	ND	ND	ND	ND
Zinc	0.20	0.40	ND	ND	ND	ND	ND

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ANALYTICAL RESULTS

Ordered By

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Telephone: (949)250-1421
Attn: Meredith Church

Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Page: **6**

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94226	09/28/2018	LGHTN

Method: 6010BSCAN, 14 Metals by ICP

QC Batch No: 1001182C7

Our Lab I.D.			94226.15				
Client Sample I.D.			180926-0237.1.5-DHG-M15				
Date Sampled			09/26/2018				
Date Prepared			10/01/2018				
Preparation Method			3050B				
Date Analyzed			10/03/2018				
Matrix			Solid				
Units			ug/Sample				
Dilution Factor			1				
Analytes	**MDL**	**PQL**	**Results**				
Antimony	1.00	2.00	ND				
Arsenic	1.00	2.00	ND				
Barium	0.60	1.20	ND				
Beryllium	0.20	0.40	ND				
Cadmium	0.20	0.40	ND				
Chromium	0.20	0.40	ND				
Cobalt	0.20	0.40	ND				
Copper	0.20	0.40	ND				
Lead	1.00	2.00	ND				
Molybdenum	0.20	0.40	ND				
Nickel	0.20	0.40	ND				
Selenium	1.00	2.00	ND				
Thallium	1.00	2.00	ND				
Zinc	0.20	0.40	ND				

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QUALITY CONTROL RESULTS

Ordered By

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Telephone: (949)250-1421
Attn: Meredith Church

Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Page: **7**

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94226	09/28/2018	LGHTN

Method: 6010BSCAN, 14 Metals by ICP

QC Batch No: 1001182C6; LCS: Blank; LCS Prepared: 10/01/2018; LCS Analyzed: 10/03/2018; Units: ug/Sample

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	
Antimony	10.0	10.4	104	10.0	9.81	98.1	5.8	75-125	<15	
Arsenic	10.0	9.83	98.3	10.0	9.78	97.8	<1	75-125	<15	
Barium	10.0	10.4	104	10.0	10.2	102	1.9	75-125	<15	
Beryllium	10.0	9.82	98.2	10.0	9.75	97.5	<1	75-125	<15	
Cadmium	10.0	10.1	101	10.0	10.0	100	<1	75-125	<15	
Chromium	10.0	9.83	98.3	10.0	9.74	97.4	<1	75-125	<15	
Cobalt	10.0	9.79	97.9	10.0	9.68	96.8	1.1	75-125	<15	
Copper	10.0	9.81	98.1	10.0	9.73	97.3	<1	75-125	<15	
Lead	10.0	9.48	94.8	10.0	9.79	97.9	3.2	75-125	<15	
Molybdenum	10.0	9.98	99.8	10.0	9.77	97.7	2.1	75-125	<15	
Nickel	10.0	9.75	97.5	10.0	9.59	95.9	1.7	75-125	<15	
Selenium	10.0	9.70	97.0	10.0	8.24	82.4	16.3	75-125	<15	
Thallium	10.0	10.3	103	10.0	10.1	101	2.0	75-125	<15	
Zinc	10.0	9.75	97.5	10.0	9.68	96.8	<1	75-125	<15	

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QUALITY CONTROL RESULTS

Ordered By

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Telephone: (949)250-1421
Attn: Meredith Church

Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Page: **8**

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94226	09/28/2018	LGHTN

Method: 6010BSCAN, 14 Metals by ICP

QC Batch No: 1001182C7; LCS: Blank; LCS Prepared: 10/01/2018; LCS Analyzed: 10/03/2018; Units: ug/Sample

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	
Antimony	10.0	9.77	97.7	10.0	9.75	97.5	<1	75-125	<15	
Arsenic	10.0	8.00	80.0	10.0	8.81	88.1	9.6	75-125	<15	
Barium	10.0	9.99	99.9	10.0	9.86	98.6	1.3	75-125	<15	
Beryllium	10.0	9.62	96.2	10.0	9.46	94.6	1.7	75-125	<15	
Cadmium	10.0	9.57	95.7	10.0	9.46	94.6	1.2	75-125	<15	
Chromium	10.0	9.49	94.9	10.0	9.35	93.5	1.5	75-125	<15	
Cobalt	10.0	9.47	94.7	10.0	9.30	93.0	1.8	75-125	<15	
Copper	10.0	9.52	95.2	10.0	9.32	93.2	2.1	75-125	<15	
Lead	10.0	9.43	94.3	10.0	9.24	92.4	2.0	75-125	<15	
Molybdenum	10.0	9.45	94.5	10.0	9.30	93.0	1.6	75-125	<15	
Nickel	10.0	9.11	91.1	10.0	8.95	89.5	1.8	75-125	<15	
Selenium	10.0	8.98	89.8	10.0	8.16	81.6	9.6	75-125	<15	
Thallium	10.0	9.93	99.3	10.0	9.48	94.8	4.6	75-125	<15	
Zinc	10.0	9.32	93.2	10.0	9.19	91.9	1.4	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

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Ordered By

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Number of Pages	**6**
Date Received	**09/28/2018**
Date Reported	**10/03/2018**

Telephone: (949)681-4208
Attention: Meredith Church

Job Number	Order Date	Client
94227	09/28/2018	LGHTN

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008
Site: Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Enclosed please find results of analyses of 15 wipe 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

EXECUTIVE ENVIRONMENTAL
HEALTH & SAFETY SIMPLIFIED

Industrial Hygiene Laboratory Submittal

Originating Office (Check-marked)

☑ 310 E. Foothill Blvd., Suite 200
Arcadia, CA 91006
Phone: 626.441.7050
Fax: 626.441.0016

☐ 1440 Broadway, Suite 616
Oakland, CA 94612
Phone: 510.272.9346
Fax: 510.272.9385

☑ Routine (10 Working Days)	☐ RUSH (surcharges may apply) Circle One: 4 hours / 24 hours / 48 hours / 72 hours / 5 days	Project #: EE#16-A0007-0237.1.5 Leighton #11561.008	Submitted by: Meredith Church, Leighton Consulting	Date: 9/28/18	94227 Page 1 of 2

Submitted to: (one Lab/Form)
☐ EM Lab 650.829.5800 ☐ Galson 888.577.5227 ☐ Hygeia 626.355.4711 ☐ Forensic 888.813.9417 ☐ Sierra Anal. 949. 348.9389 ☐ SanAir 804.897.1177 ☑ Other & Phone: AETL (American Environmental Testing Lab) – 888.288.2385

The receiving Laboratory is required to complete the following:

1. All invoices are to be sent to: Leighton Consulting, 17781 Cowan, Irvine, CA 92614 **with** a copy of the lab report.
2. Report to the attention of: Meredith Church on Behalf of LA County Public Health, Phone: (949) 681-4208
3. All lab reports and invoices are to contain both Project Number from above.
4. Unsigned and reports marked draft is unacceptable.

Optional Items to be completed by the laboratory (if check marked): ☐ Fax report to: ☐ 626.441.0016 ☐ 510.272.9385 ☐ Other: _____

☑ Email Report to: ☑ Info@execenv.com ☑ Other: dginsborg@execenv.com; kmills@execenv.com, mchurch@leightongroup.com, and kbutler@ph.lacounty.gov

☑ US Mail Report to: ☑ Originating office check marked above ☑ Other: 17781 Cowan, Irvine, CA 92614 with a copy of the lab report ☑ Alternate billing address:Leighton

Lab No.:	Sample No.:	Media	Wipe Size	Location	Analyses Requested
94227.01	Prefix: 180926-0237.1.5-DHG- W01	Buffer and Gauze supplied by Lab	100 Cm²	Lincoln ES, Room #3, Computer Room/ Library; North, center computer desk	Hexavalent Chromium by EPA Method 7199
94227.02	W02	Buffer and Gauze supplied by Lab	100 Cm²	Lincoln ES, Room #3, Computer Room/ Library; South, bookcase, bottom shelf	Hexavalent Chromium by EPA Method 7199
94227.03	W03	Buffer and Gauze supplied by Lab	100 Cm²	Lincoln ES, Room #3, Computer Room/ Library; Southwest, low table	Hexavalent Chromium by EPA Method 7199
94227.04	W04	Buffer and Gauze supplied by Lab	100 Cm²	Lincoln ES, Room #31; Southeast, black wood bookcase, 2nd shelf, near front window	Hexavalent Chromium by EPA Method 7199
94227.05	W05	Buffer and Gauze supplied by Lab	100 Cm²	Lincoln ES, Room #31; East, Top of child's desk	Hexavalent Chromium by EPA Method 7199
94227.06	W06	Buffer and Gauze supplied by Lab	100 Cm²	Lincoln ES, Room #31; Northwest, white metal bookcase, near rear window	Hexavalent Chromium by EPA Method 7199
94227.07	W07	Buffer and Gauze supplied by Lab	100 Cm²	Gaines ES, Room #23; North, Child's table	Hexavalent Chromium by EPA Method 7199
94227.08	W08	Buffer and Gauze supplied by Lab	100 Cm²	Gaines ES, Room #23; South, Computer table	Hexavalent Chromium by EPA Method 7199

Notes: 1) Samples Collected on 9/26/18 2. Blank Correct.

Sampling Location Zip Code: 90723

Released By, Date, & Time:	Received By, Date, & Time:	Released By, Date, & Time:
Daniel H. Ginsborg, 9/28/18 12:47 pm	Meredith Church, Leighton Consulting 9/28/18 12:47 P.M	Meredith Church, Leighton Consulting 9/28/18 1310
Ginsborg 9/28/18 1340 SP	Ginsborg 9/28/18 1430	Christine Nashadaya 9/28/18 14:30

EXECUTIVE ENVIRONMENTAL
HEALTH & SAFETY SIMPLIFIED

Industrial Hygiene Laboratory Submittal

Originating Office (Check-marked)

☑ 310 E. Foothill Blvd., Suite 200
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Phone: 626.441.7050
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Oakland, CA 94612
Phone: 510.272.9346
Fax: 510.272.9385

☑ Routine (10 Working Days)	☐ RUSH (surcharges may apply) Circle One: 4 hours / 24 hours / 48 hours / 72 hours / 5 days	Project #: EE#16-A0007-0237.1.5 Leighton #11561.008	Submitted by: Meredith Church, Leighton Consulting	Date: 9/28/18	94227 Page 2 of 2

Submitted to: (one Lab/Form)
☐ EM Lab 650.829.5800 ☐ Galson 888.577.5227 ☐ Hygeia 626.355.4711 ☐ Forensic 888.813.9417 ☐ Sierra Anal. 949. 348.9389 ☐ SanAir 804.897.1177 ☑ Other & Phone: AETL (American Environmental Testing Lab) – 888.288.2385

The receiving Laboratory is required to complete the following:

1. All invoices are to be sent to: Leighton Consulting, 17781 Cowan, Irvine, CA 92614 **with** a copy of the lab report.
2. Report to the attention of: Meredith Church on Behalf of LA County Public Health, Phone: (949) 681-4208
3. All lab reports and invoices are to contain both Project Number from above.
4. Unsigned and reports marked draft is unacceptable.

Optional Items to be completed by the laboratory (if check marked): ☐ Fax report to: ☐ 626.441.0016 ☐ 510.272.9385 ☐ Other: _____

☑ Email Report to: ☑ Info@execenv.com ☑ Other: dginsborg@execenv.com; kmills@execenv.com, mchurch@leightongroup.com, and kbutler@ph.lacounty.gov

☑ US Mail Report to: ☑ Originating office check marked above ☑ Other: 17781 Cowan, Irvine, CA 92614 with a copy of the lab report ☑ Alternate billing address:Leighton

Prefix: 180926-0237.1.5-DHG-

Lab No.:	Sample No.:	Media	Wipe Size	Location	Analyses Requested
94227.09	W09	Buffer and Gauze supplied by Lab	100 Cm^2	Gaines ES, Room #23; South, top of black metal file cabinet	Hexavalent Chromium by EPA Method 7199
94227.10	W10	Buffer and Gauze supplied by Lab	100 Cm^2	Gaines ES, Room #1; Center of room, child's desk	Hexavalent Chromium by EPA Method 7199
94227.11	W11	Buffer and Gauze supplied by Lab	100 Cm^2	Gaines ES, Room #1; Northeast, computer desk	Hexavalent Chromium by EPA Method 7199
94227.12	W12	Buffer and Gauze supplied by Lab	100 Cm^2	Gaines ES, Room #1; Southwest, top of beige metal file cabinet	Hexavalent Chromium by EPA Method 7199
94227.13	W13	Buffer and Gauze supplied by Lab	100 Cm^2	Lab Blank	Hexavalent Chromium by EPA Method 7199
94227.14	W14	Buffer and Gauze supplied by Lab	100 Cm^2	Field Blank	Hexavalent Chromium by EPA Method 7199
94227.15	W15	Buffer and Gauze supplied by Lab	100 Cm^2	Field Blank	Hexavalent Chromium by EPA Method 7199

Notes: 1) Samples Collected on 9/26/18 2. Blank Correct.

Sampling Location Zip Code: 90723

Released By, Date, & Time:	Received By, Date, & Time:	Released By, Date, & Time:
Daniel H. Ginsborg, 9/28/18 12:47 PM	Meredith Church, Leighton Consulting 9/28/18 12:47 PM	Meredith Church, Leighton Consulting 9/28/18 1310
Sargis 9/28/18 1748 SP	Sargis 9/28/18 1430	Christina Manzhadyan 9/28/18 14:30

Rev. 12/13

Form: IH-001

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 NORTH NAOMI ST. BURBANK, CALIFORNIA 91504 DHS # 1541 LACSD# 10181
TEL (888) 288-AETL (818) 845-8200 FAX (818) 845-8840 www.aetlab.com

COOLER RECEIPT FORM

Client Name:	Executive Env.
Project Name:	180926-0237.1.5-DHG Cr VI
AETL Job Number:	94227
Date Received: 9/28/18	Received by: Christina
Carrier: ☒ AETL Courier ☐ Client ☐ GSO ☐ FedEx ☐ UPS	
☐Others:	
Samples were received in: ☒ Cooler (1) ☐ Other (Specify):	
Inside temperature of shipping container No 1: 3.0 , No 2: _____, No 3: _____	
Type of sample containers: ☐ VOA, ☐ Glass bottles, ☐ ☐Wide mouth jars, ☐ ☐HDPE bottles, ☐ Metal sleeves, ☒ Others (Specify): PL Bottles + wipes	
How are samples preserved: ☐ None, ☒ Ice , ☐ Blue Ice, ☐ Dry Ice	
☐ None, ☐ HNO_3, ☐ NaOH, ☐ ZnOAc, ☐ HCl, ☐ $Na_2S_2O_3$, _MeOH	
☒ Other (Specify): Buffer of Bicarbonate	

	Yes	No, explain below	Name, if client was notified.
1. Are the COCs Correct?	✓		
2. Are the Sample labels legible?	✓		
3. Do samples match the COC?	✓		
4. Are the required analyses clear?	✓		
5. Is there enough samples for required analysis?	✓		
6. Are samples sealed with evidence tape?	NA		
7. Are sample containers in good condition?	✓		
8. Are samples preserved?	✓		
9. Are samples preserved properly for the intended analysis?	✓		
10. Are the VOAs free of headspace?	NA		
11. Are the jars free of headspace?	NA		

Explain all "No" answers for above questions:

CYRUS RAZMARA

From: Daniel Ginsborg [dginsborg@execenv.com]
Sent: Monday, October 1, 2018 3:15 PM
To: cyrus@aetlab.com
Cc: mchurch@leightongroup.com; KButler@ph.lacounty.gov; Dan Flores; Kay Mills; Vicki Uchida; Ruben Frutos
Subject: 16-0237.1.5, status question on media picked-up from my office on Friday
Attachments: 16-0237.1.5- COC -Hexavalent Chromium Air Samples.pdf; ATT00001.htm; 16-0237.1.5-COC -Hexavalent Chromium Wipe Sample.pdf; ATT00002.htm; 16-0237.1.5- COC -Metal Wipe Samples.pdf; ATT00003.htm

Dr Razmara,

To avoid any possible confusion, the samples on the attached COC picked-up from our office on Friday were submitted by Leighton Consulting on our COC. They are responsible for payment of this project. Executive Environmental will not pay any lab bill on this project. Please contact Leighton Consulting to establish an account if they do not already have one with your lab. Their contact information is on the COC, please send the report and any project communiqués to the five individuals listed on the COC. Has any communiqués been sent out on this project such as a confirmation that the samples were received and the date we can expect results? If it has, I have not received it and would like a copy resent to the individuals listed on the COC. Please contact me if there are any questions or if they have not made timely payments and I will do what I can.

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Ordered By

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Telephone: (949)681-4208
Attention: Meredith Church

Project ID: EE#16-A0007-0237.1.5
Date Received 09/28/2018
Date Reported 10/03/2018

Job Number	Order Date	Client
94227	09/28/2018	LGHTN

CERTIFICATE OF ANALYSIS
CASE NARRATIVE

AETL received 15 samples with the following specification on 09/28/2018.

Lab ID	Sample ID	Sample Date	Matrix	Quantity Of Containers
94227.01	180926-0237.1.5-DH G-W01	09/26/2018	Solid	1
94227.02	180926-0237.1.5-DH G-W02	09/26/2018	Solid	1
94227.03	180926-0237.1.5-DH G-W03	09/26/2018	Solid	1
94227.04	180926-0237.1.5-DH G-W04	09/26/2018	Solid	1
94227.05	180926-0237.1.5-DH G-W05	09/26/2018	Solid	1
94227.06	180926-0237.1.5-DH G-W06	09/26/2018	Solid	1
94227.07	180926-0237.1.5-DH G-W07	09/26/2018	Solid	1
94227.08	180926-0237.1.5-DH G-W08	09/26/2018	Solid	1
94227.09	180926-0237.1.5-DH G-W09	09/26/2018	Solid	1
94227.10	180926-0237.1.5-DH G-W10	09/26/2018	Solid	1
94227.11	180926-0237.1.5-DH G-W11	09/26/2018	Solid	1
94227.12	180926-0237.1.5-DH G-W12	09/26/2018	Solid	1
94227.13	180926-0237.1.5-DH G-W13	09/26/2018	Solid	1

Continued

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Ordered By

Leighton Consulting **17781 Cowan** **Irvine, CA 92614**	**Project ID: EE#16-A0007-0237.1.5** **Date Received 09/28/2018** **Date Reported 10/03/2018**

Telephone: (949)681-4208
Attention: Meredith Church

Job Number	Order Date	Client
94227	09/28/2018	LGHTN

CERTIFICATE OF ANALYSIS

CASE NARRATIVE

94227.13	180926-0237.1.5-DH G-W13	09/26/2018	Solid	1
94227.14	180926-0237.1.5-DH G-W14	09/26/2018	Solid	1
94227.15	180926-0237.1.5-DH G-W15	09/26/2018	Solid	1

Method ^ Submethod	*Req Date*	*Priority*	*TAT*	*Units*
7199 ^ WIPE	10/05/2018	2	Normal	ug/100cm2

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

All samples were kept frozen prior to analysis.

Checked By: _____ Approved By: C. Razmara

Cyrus Razmara, Ph.D.
Laboratory Director

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ANALYTICAL RESULTS

Ordered By

Leighton Consulting
17781 Cowan
Irvine, CA 92614

Telephone: (949)681-4208
Attn: Meredith Church

Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Page: **2**

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94227	09/28/2018	LGHTN

Method: 7199, Chromium Hexavalent by Ion Chromatography

QC Batch No: 10012018-2

Our Lab I.D.			Method Blank	94227.01	94227.02	94227.03	94227.04
Client Sample I.D.				180926-0237.1.5-DHG-W01	180926-0237.1.5-DHG-W02	180926-0237.1.5-DHG-W03	180926-0237.1.5-DHG-W04
Date Sampled				09/26/2018	09/26/2018	09/26/2018	09/26/2018
Date Prepared			10/01/2018	10/01/2018	10/01/2018	10/01/2018	10/01/2018
Preparation Method			7199	7199	7199	7199	7199
Date Analyzed			10/01/2018	10/01/2018	10/01/2018	10/01/2018	10/01/2018
Matrix			Solid	Solid	Solid	Solid	Solid
Units			ug/100cm2	ug/100cm2	ug/100cm2	ug/100cm2	ug/100cm2
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Chromium (VI)	0.05	0.05	ND	ND	ND	ND	ND

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ANALYTICAL RESULTS

Ordered By

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Telephone: (949)681-4208
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Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Page: **3**

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94227	09/28/2018	LGHTN

Method: 7199, Chromium Hexavalent by Ion Chromatography

QC Batch No: 10012018-2

Our Lab I.D.			94227.05	94227.06	94227.07	94227.08	94227.09
Client Sample I.D.			180926-0237.1.5-DHG-W05	180926-0237.1.5-DHG-W06	180926-0237.1.5-DHG-W07	180926-0237.1.5-DHG-W08	180926-0237.1.5-DHG-W09
Date Sampled			09/26/2018	09/26/2018	09/26/2018	09/26/2018	09/26/2018
Date Prepared			10/01/2018	10/01/2018	10/01/2018	10/01/2018	10/01/2018
Preparation Method			7199	7199	7199	7199	7199
Date Analyzed			10/01/2018	10/01/2018	10/01/2018	10/01/2018	10/01/2018
Matrix			Solid	Solid	Solid	Solid	Solid
Units			ug/100cm2	ug/100cm2	ug/100cm2	ug/100cm2	ug/100cm2
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Chromium (VI)	0.05	0.05	ND	ND	ND	ND	ND

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ANALYTICAL RESULTS

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Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Page: **4**

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94227	09/28/2018	LGHTN

Method: 7199, Chromium Hexavalent by Ion Chromatography

QC Batch No: 10012018-2

Our Lab I.D.			94227.10	94227.11	94227.12	94227.13	94227.14
Client Sample I.D.			180926-0237.1.5-DHG-W10	180926-0237.1.5-DHG-W11	180926-0237.1.5-DHG-W12	180926-0237.1.5-DHG-W13	180926-0237.1.5-DHG-W14
Date Sampled			09/26/2018	09/26/2018	09/26/2018	09/26/2018	09/26/2018
Date Prepared			10/01/2018	10/01/2018	10/01/2018	10/01/2018	10/01/2018
Preparation Method			7199	7199	7199	7199	7199
Date Analyzed			10/01/2018	10/01/2018	10/01/2018	10/01/2018	10/01/2018
Matrix			Solid	Solid	Solid	Solid	Solid
Units			ug/100cm2	ug/100cm2	ug/100cm2	ug/100cm2	ug/100cm2
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Chromium (VI)	0.05	0.05	ND	ND	ND	ND	ND

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ANALYTICAL RESULTS

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Site

Lincoln Elementary School
Wesley Gains Elementary School
Paramount, CA 90723

Page: **5**

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94227	09/28/2018	LGHTN

Method: 7199, Chromium Hexavalent by Ion Chromatography

QC Batch No: 10012018-2

Our Lab I.D.			94227.15				
Client Sample I.D.			180926-0237.1.5-DHG-W15				
Date Sampled			09/26/2018				
Date Prepared			10/01/2018				
Preparation Method			7199				
Date Analyzed			10/01/2018				
Matrix			Solid				
Units			ug/100cm2				
Dilution Factor			1				
Analytes	**MDL**	**PQL**	**Results**				
Chromium (VI)	0.05	0.05	ND				

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QUALITY CONTROL RESULTS

Ordered By

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Wesley Gains Elementary School
Paramount, CA 90723

Page: **6**

Project ID: EE#16-A0007-0237.1.5
Project Name: Leighton#11561.008

AETL Job Number	Submitted	Client
94227	09/28/2018	LGHTN

Method: 7199, Chromium Hexavalent by Ion Chromatography

QC Batch No: 10012018-2; LCS: Blank; LCS Prepared: 10/01/2018; LCS Analyzed: 10/01/2018; Units: ug/100cm2

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	
Chromium (VI)	**0.200**	**0.190**	**94.9**	**0.200**	**0.185**	**92.4**	**2.7**	**80-120**	**<20**	

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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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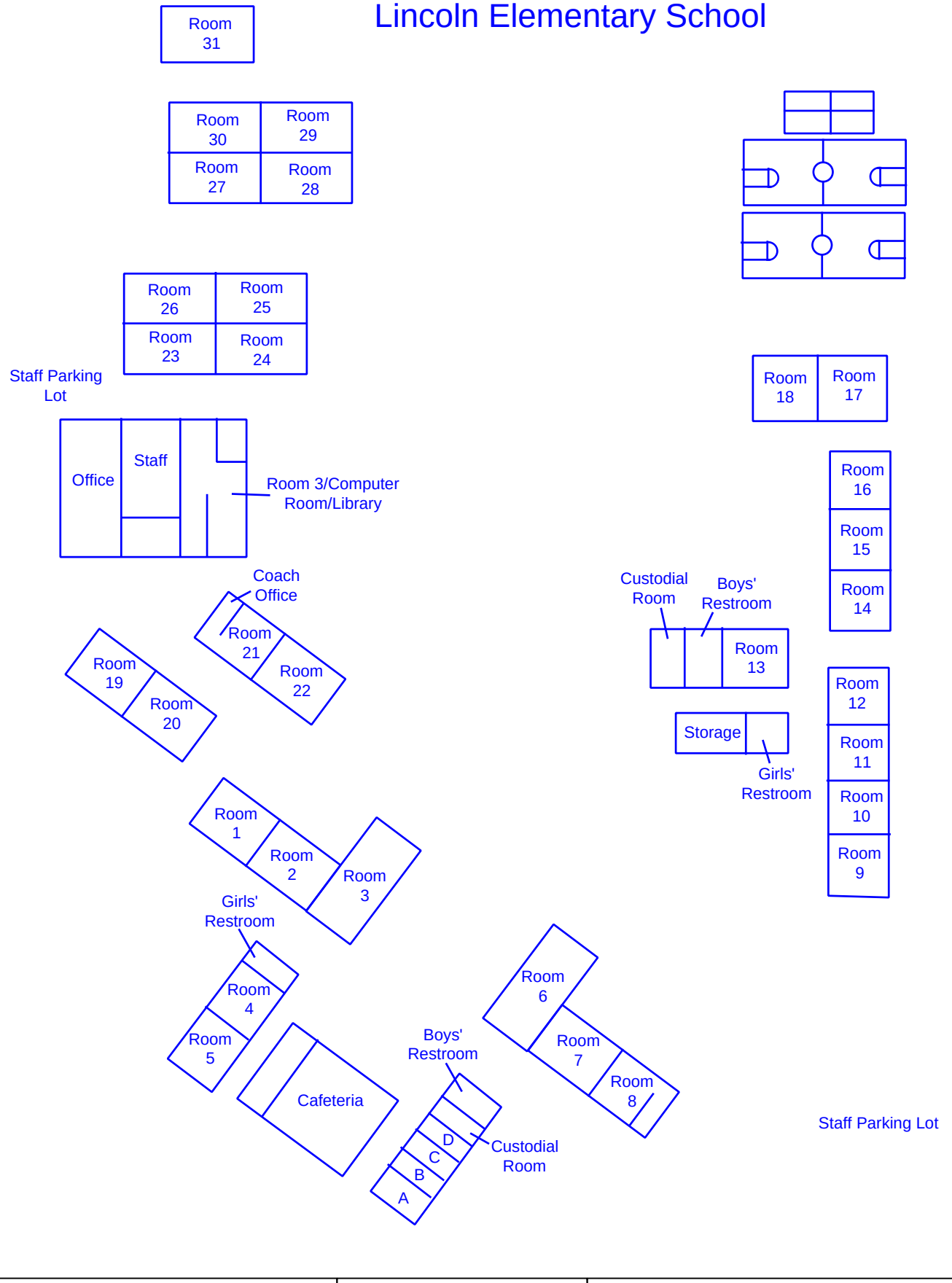
Data Qualifiers and Descriptors

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

Appendix B

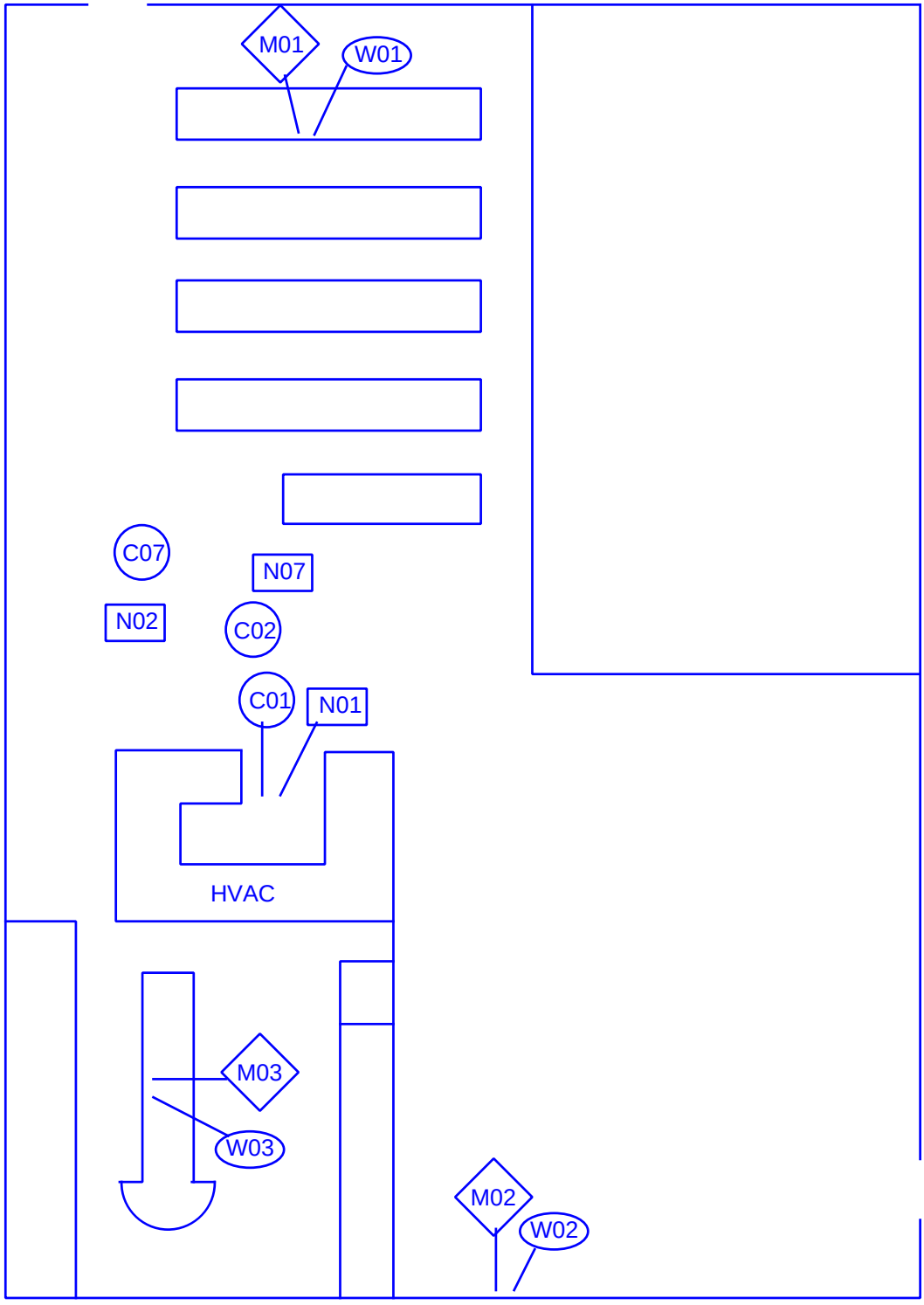
Site Maps Showing Room Locations And Sample Locations Within Rooms

Lincoln Elementary School



Client: Paramount Unified School District	**Project#:**16-A0007-0237.1.5	**Info:** Site Map
EXECUTIVE ENVIRONMENTAL **HEALTH & SAFETY SIMPLIFIED** Drawing Not to Scale - © 2012		**Site:** Lincoln Elementary School **Address:** 15324 California Avenue Paramount, California 90723

Room 3/Computer Room/Library

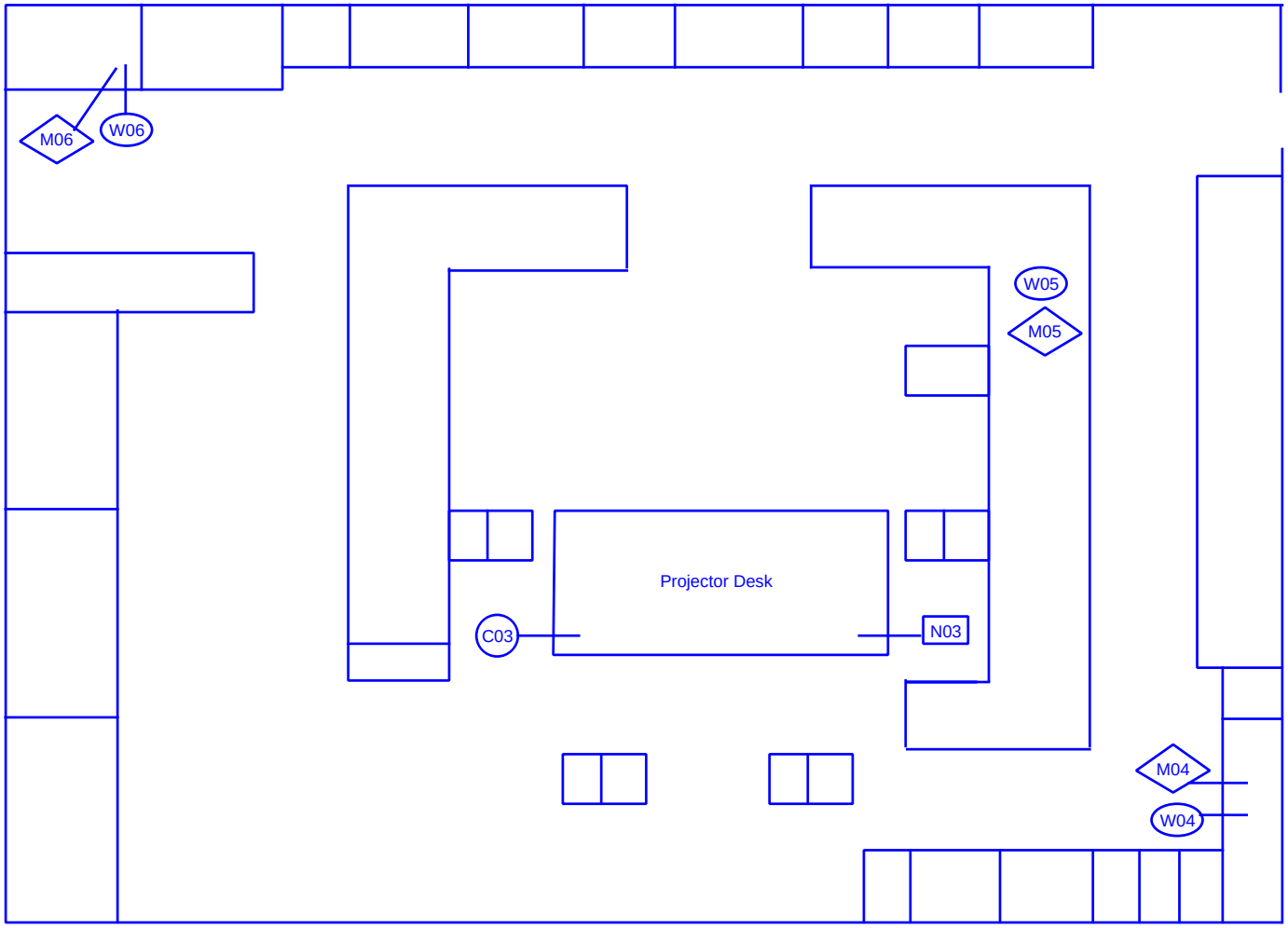


- Metal/Dust NIOSH Sample Location
- Hexavalent Chromium Wipe Sample
- Metal Wipe Sample Location
- Hexavalent Chromium Air Sample Location

N

Client: Paramount Unified School District	**Project#:** 16-A0007-0237.1.5	**Info:** Sample Locations
EXECUTIVE ENVIRONMENTAL HEALTH & SAFETY SIMPLIFIED	Drawing Not to Scale - © 2012	**Site:** Lincoln Elementary School **Address:** 15324 California Avenue Paramount, California 90723

Room 31



- Hexavalent Chromium Air Sample Location
- Metal/Dust NIOSH Sample Location
- Metal Wipe Sample Location
- Hexavalent Chromium Wipe Sample

N

Client: Paramount Unified School District

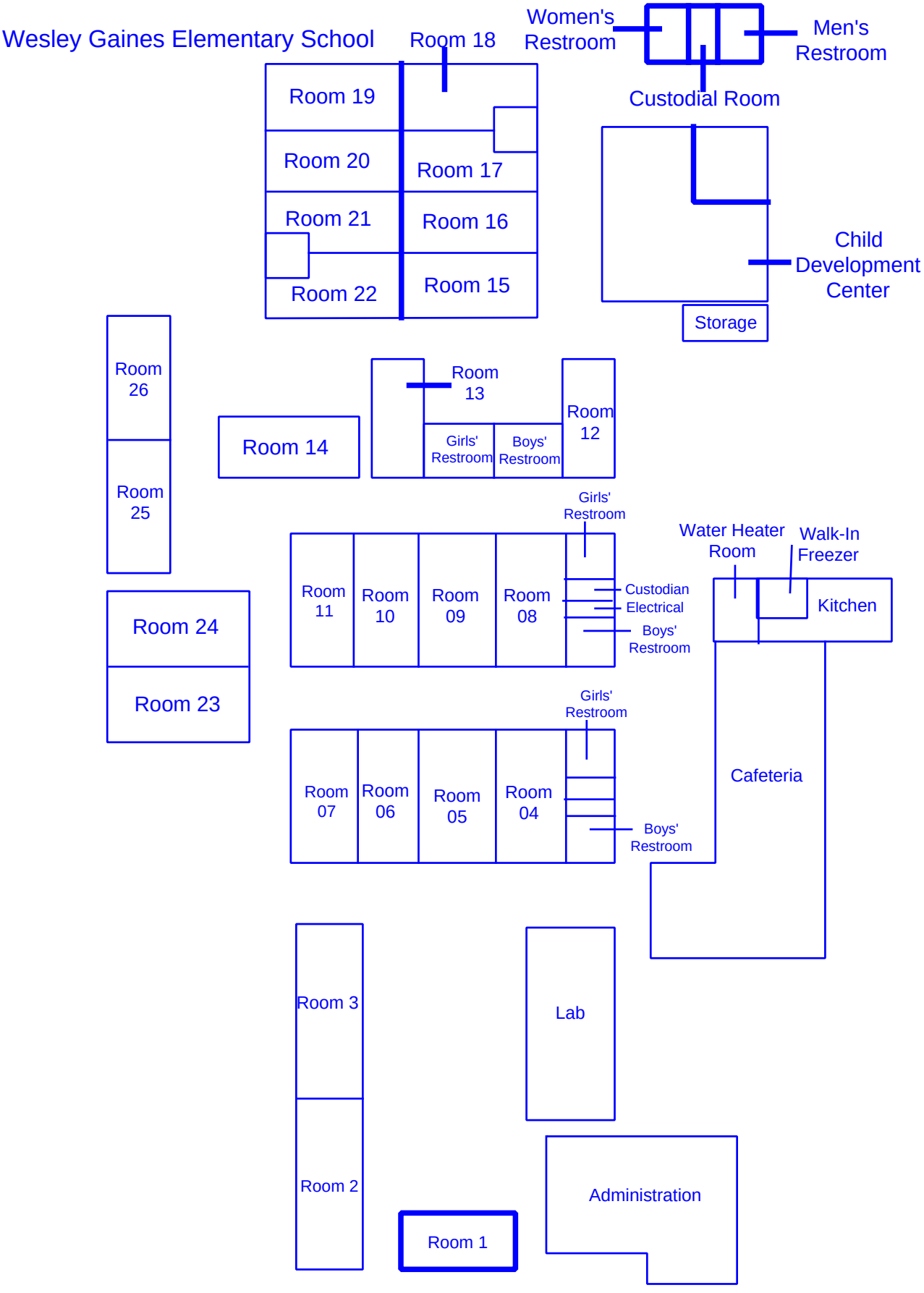
Project #: 16-A0007-0237.1.5

Info: Sample Locations

EXECUTIVE ENVIRONMENTAL
HEALTH & SAFETY SIMPLIFIED

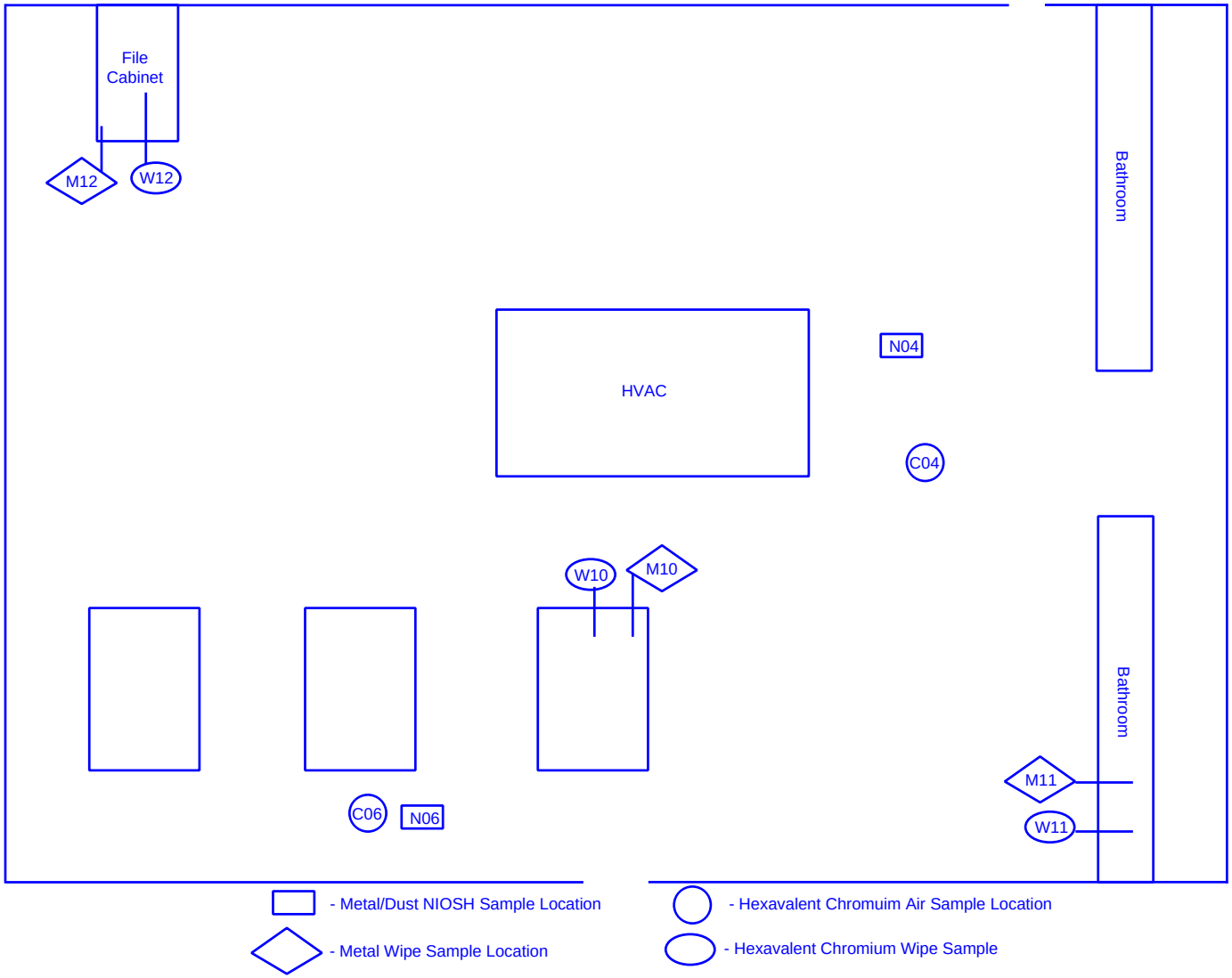
Site: Lincoln Elementary School
Address: 15324 California Avenue
Paramount, CA 90723

Wesley Gaines Elementary School



Client: Paramount Unified School District	**Project#:** 16-A0007-0237	**Info:**
EXECUTIVE ENVIRONMENTAL HEALTH & SAFETY SIMPLIFIED		**Site:** Wesley Gaines Elementary School **Address:** 7340 Jackson Street Paramount, California 90732

Room 1

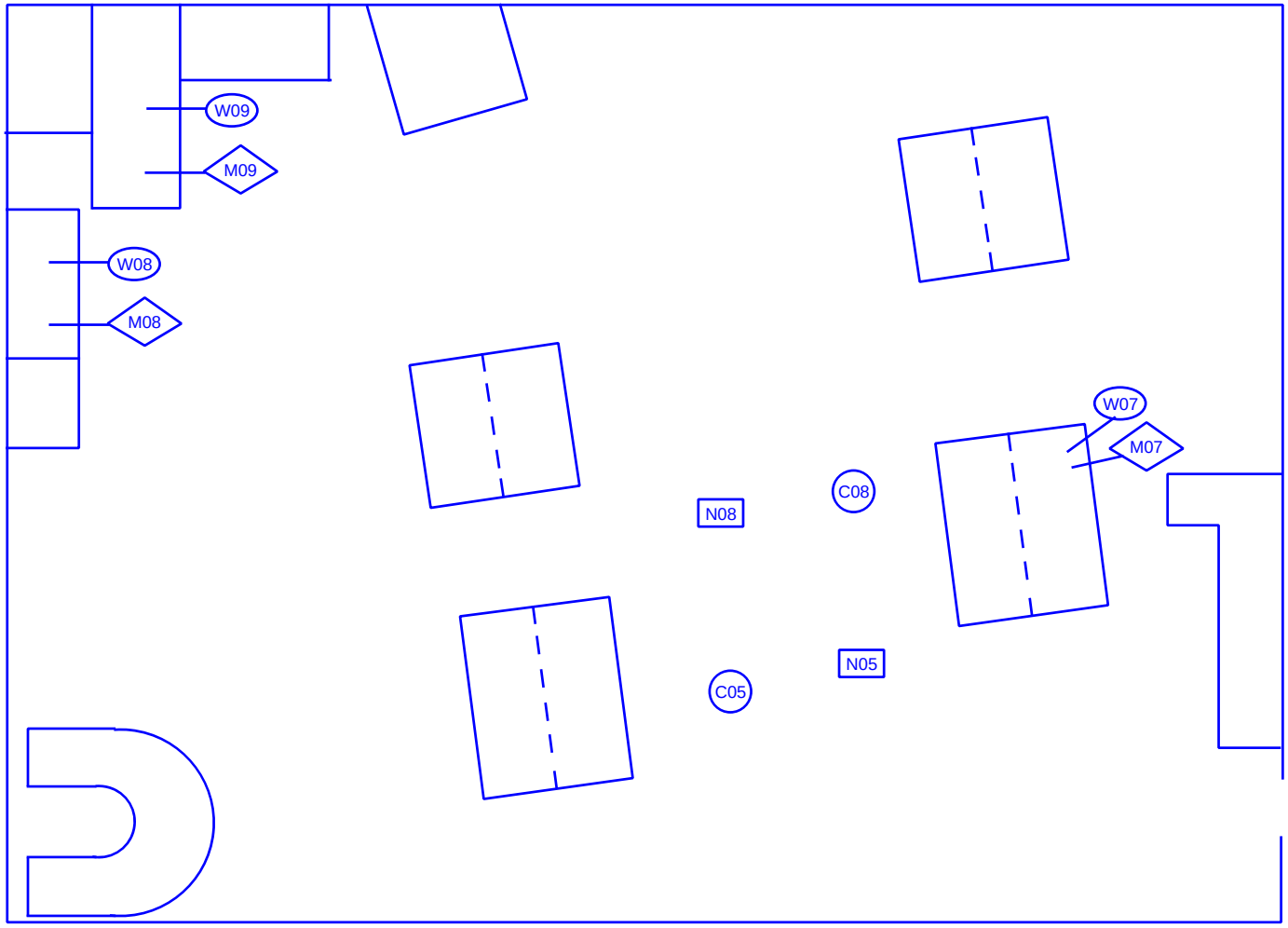


Client: Paramount Unified School District | **Project #:** 16-A0007-0237.1.5 | **Info:** Sample Locations

EXECUTIVE ENVIRONMENTAL
HEALTH & SAFETY SIMPLIFIED

Site: Wesley Gaines Elementary School
Address: 7340 Jackson Street
Paramount, CA 90723

Room 23



- Hexavalent Chromium Air Sample Location
- Metal Wipe Sample Location
- Metal/Dust NIOSH Sample Location
- Hexavalent Chromium Wipe Sample

Client: Paramount Unified School District

Project #: 16-A0007-0237.1.5

Info: Sample Locations

EXECUTIVE ENVIRONMENTAL
HEALTH & SAFETY SIMPLIFIED

Site: Wesley Gaines Elementary School
Address: 7340 Jackson Street
Paramount, CA 90723

Appendix C

Step-by-Step Sampling Procedure

Note: The following were changes made in the field and agreed by LACDPH through Leighton Consulting:

1. All Cr(VI) media was kept frozen in the freezer prior to use.
2. All Cr(VI) media was frozen after and packed with Blue and Dry Ice in transit to the site.
3. All Cr(VI) media was packed with Blue and Dry Ice after use.
4. All Cr(VI) media was frozen in the freezer picked up by the lab.
5. The Microvac samples were not collected because there was insufficient dust loading to provide a meaning full result.
6. Sample collection was shifted 12:00, September 26, 2018 to 12:00 PM PDT September 27, 2018. It was shifted to 3:00 PM PDT, September 26, 2018 to 3:00 PM PDT September 27, 2018 to accommodate academic instruction.

EXECUTIVE ENVIRONMENTAL
HEALTH & SAFETY SIMPLIFIED

310 E. Foothill Blvd., Suite 200
Arcadia, CA 91006
Ph: 626.441.7050 Fax: 626.441.0016

Standard Operating Procedure for Joint Paramount Unified School District/Los Angeles County Department of Public Health Monitoring in Four Classrooms at Gaines and Lincoln Elementary Schools

1. Project Summary:

1.1. The Paramount Unified School District (hereafter, the District) will jointly collect samples with the Los Angeles County Department of Public Health (hereafter, LACDPH) for Hexavalent Chromium in air and surface wipes samples; Title 22 Metals (excluding silver and mercury) in air, surface wipes, and bulk vacuum samples; and total dust not otherwise classified.

1.1.1. These samples will be collected on a date to be mutually determined between the District and LACDPH. LACDPH will provide a date that is 3 to 4 weeks in advance of the planned sampling.

1.1.2. The date chosen will be on a typical school day during the current academic term in which the students are not in the rooms being monitored.

1.1.3. The date chosen will not be on or over the weekend or on a school holiday.

1.1.4. Monitoring will be for 24 hours commencing at 12:00 PM.

2. Project Equipment:

2.1. 15 SKC Leland Legacy pumps pre-programed to 10 liter per minutes, or equivalent.

2.2. 15 SKC Leland Legacy pump individual chargers.

2.3. 15 Sampling tripods

2.4. 15 ten foot Tygon tubing to connect sample media.

2.5. 15 Sample frits to connect tubing to media.

2.6. 6 extension cords with a 3 female plug at one end.

2.7. 1 Mass flow calibrator or calibrated rotometer.

2.8. 1 Pullman Hold model 45-D HEPA vacuum sampler (specified to capture 99.97% of all particles 0.3 µm and larger) or equivalent.

2.8.1. 6 new hoses and 6 new vacuum heads

2.9. 25 disposable 100 cm^2 templates.

2.10. Pre-filled Executive Environmental (EE) Chain Of Custodies (COCs).

2.11. Pre-printed labels

2.12. Pumps and mass flow meter will be supplied by Eco-Rental (Tustin, California) or equivalent. Rotometer will be supplied by EE.

3. Media:

3.1. Air Samples

3.1.1. Title 22 Metals will be collected on 37-mm polyvinyl chloride (PVC) pre-weighed filter loaded in an SKC styrene cartridge provided by SGS Galson Laboratory, Syracuse, New York.

3.1.2. Hexavalent Chromium will be collected on a laboratory-supplied 37-mm sodium bicarbonate treated cellulose filter loaded in an SKC styrene cartridge. The cartridge will be provided by American Environmental Testing Laboratory (AETL), Burbank, California.

3.1.2.1. Media will be will be kept frozen after preparation and will be kept chilled to a temperature of approximately 4 degrees Celsius during transport.

3.1.3. 15 cartridges of each media will need to be obtained for this project.

3.2. Wipe Samples

3.2.1. Title 22 Metals will be collected on laboratory-supplied wipes and buffer. Media and buffer will be provided by AETL or equivalent.

3.2.2. Hexavalent Chromium will be collected on laboratory-supplied wipes and buffer. Media and buffer will be provided by AETL or equivalent.

3.2.2.1. AETL will modify the buffer if possible such that the Metals and Hexavalent Chromium can be done on one wipe.

3.2.3. 10 wipe sampling sets will be needed for each sampling media.

3.3. Bulk Dust Vacuum Samples

3.3.1. 15 DUSTREAM® Collector supplied by Indoor Biotechnologies, Charlottesville, Virginia.

4. Project Personnel:

4.1. All project personnel will be familiar with the project, have reviewed this document, be aware of the hazards on the project sites and follow all federal, state and local safety, health, and labor regulations. All project personnel will attend a safety/tailgate meeting reviewing the project and health and safety issues.

4.2. Executive Environmental (EE), representing the District will use a three-member field team:

4.2.1. Principal Industrial Hygienist (PIH): Daniel H. Ginsborg, MSIH, CIH, CSP.

4.2.1.1. The PIH will be responsible for ordering of the media, obtaining equipment to collect samples, pre-planning actives prior to sample collection, all site activities, collection of the samples in conformation with this document; documentation of sample collection, completion of the Chain-of-Custody (COC), and releasing the sample to designated LACDPH recipient.

4.2.1.2. EE will use their standard COC for submission/release of samples to the designated LACDPH recipient.

4.2.2. Senior Industrial Hygienist (SrIH): Kay Mills, MSIH, CSP

4.2.2.1. The SrIH will be responsible for completing all documentation during project activities under the direction of the PIH, maintaining and completing the COC, labeling of all samples, crosschecking and accounting for all samples prior to leaving the site, and to document the projects through photography.

4.2.3. Senior Industrial Hygiene Technician (SrIHT), David Hernandez

4.2.3.1. The SrIHT will place and retrieve samples and sampling equipment under the direction of the PIH, SrIHT will concurrently place and retrieve sampling equipment on the roof while the PIH places and retrieve samples and sampling equipment in the classrooms, assist in crosschecking and accounting for all samples with the SrIH prior to leaving the site.

4.3. The LACDPH will provide a two-member observation team to observe EE's work.

4.3.1. Observer 1 (O1): Name and qualifications to be identified five-business days before Field sampling date.

4.3.1.1. O1 will observe EE's field work in the classrooms and ensure it conforms to this SOP. It will be the responsibility of O1 to contact the PIH and to stop work if an irregularity with this SOP is observed. The PIH will either mutually correct the irregularity with O1, or stop the project and reschedule the fieldwork.

4.3.1.2. At the conclusion of all field work and completion of the COC by EE, O1 will travel with the PIH to the local lab(s), at the laboratory, the PIH will release the samples to O1 who then will release them to the lab. For SGS Galson, O1 will travel with the PIH to the local Federal Express Office; the PIH will release the samples to O1 who then will deposit them in Federal Express' care to deliver the samples to SGS Galson.

4.3.1.3. Once the samples have been released by the PIH to O1, the District will have no further responsibility for the samples or communication with the laboratory. The LACDPH will be responsible for all expenses related to the analysis of the samples, expenses related to shipping, or issues at the Laboratory. The LACDPH will provide the District with all sample reports through EE of laboratory reports, signed COC, laboratory intake assessment, excel spreadsheets, correspondence between the lab and LACDPH, etc.

4.3.1.3.1. LACDPH will instruct the Laboratories to provide the District (EE) the full results, documentation, countersigned COC and report, etc, at the same time that transmission is made to LACDPH.

4.3.1.4. O1 will provide billing and shipping information five-business days before the field sampling date to EE.

4.3.1.4.1. EE will place the billing information on the COC.

4.3.2. Observer 2 (O2): Name and qualifications to be identified five-business days before Field sampling date.

4.3.2.1. O2 will observe EE's fieldwork on the Roof and ensure it conforms to this SOP. It will be the responsibility of O2 to contact the PIH and to stop work if an irregularity with this SOP is observed. The PIH with input from the SrIHT will either mutually correct the irregularity with O2, or stop the project and reschedule the fieldwork.

4.3.2.2. Because of limited site time, EE anticipates setting up rooftop units while units are set up in the rooms.

5. Location of Samples to be collected:

5.1. Air Samples:

5.1.1. Gaines Elementary School, Indoors, Room #1;

5.1.2. Gaines Elementary School, Indoors, Room #23;

5.1.3. Gaines Elementary School, Outdoors on Roof of Room #1;

5.1.4. Lincoln Elementary School, Indoors, Room #3, Computer Room/Library;

5.1.5. Lincoln Elementary School, Indoors, Room #3, Computer Room/Library, Replicate;

5.1.6. Lincoln Elementary School, Indoors, Room #31;

5.1.7. Lincoln Elementary School, Outdoors on Roof of Room #3, Computer Room/Library; and

5.1.8. Plus two field blanks and one laboratory blank.

5.2. Wipe Samples:
- 5.2.1. Gaines Elementary School, Indoors, Room #1; Student Desk Surface
- 5.2.2. Gaines Elementary School, Indoors, Room #1; Counter
- 5.2.3. Gaines Elementary School, Indoors, Room #1; Visibly Dusty surface such as a bookshelf
- 5.2.4. Gaines Elementary School, Indoors, Room #23; Student Desk Surface
- 5.2.5. Gaines Elementary School, Indoors, Room #23; Counter
- 5.2.6. Gaines Elementary School, Indoors, Room #23; Visibly Dusty surface such as a bookshelf
- 5.2.7. Lincoln Elementary School, Indoors, Room #3; Student Desk Surface
- 5.2.8. Lincoln Elementary School, Indoors, Room #3; Counter
- 5.2.9. Lincoln Elementary School, Indoors, Room #3; Visibly Dusty surface such as a bookshelf
- 5.2.10. Lincoln Elementary School, Indoors, Room #3; Student Desk Surface, Replicate – side-by-side
- 5.2.11. Lincoln Elementary School, Indoors, Room #3; Counter, Replicate – side-by-side
- 5.2.12. Lincoln Elementary School, Indoors, Room #3; Visibly Dusty surface such as a bookshelf, Replicate – side-by-side
- 5.2.13. Lincoln Elementary School, Indoors, Room #31; Student Desk Surface
- 5.2.14. Lincoln Elementary School, Indoors, Room #31; Counter
- 5.2.15. Lincoln Elementary School, Indoors, Room #31; Visibly Dusty surface such as a bookshelf
- 5.2.16. Plus two field blanks and two laboratory blank of each media.

5.3. Composite Bulk Vacuum Samples:
- 5.3.1. Gaines Elementary School, Indoors, Room #1; Floor
- 5.3.2. Gaines School, Indoors, Room #23; Floors
- 5.3.3. Lincoln Elementary School, Indoors, Room #3, Computer Room/Library; Floors, and select top of books and bookshelves
- 5.3.4. Lincoln Elementary School, Indoors, Room #31, Floor
- 5.3.5. No Replicate
- 5.3.6. Plus two field blanks and one laboratory blank.

6. Air Sampling

6.1. Two indoor samples and one outdoor air sample will be collected from each of the selected sites.
- 6.1.1. The first indoor air samples will be collected from the center of a classroom in a permanent building.
- 6.1.2. The second indoor air samples will be collected from the center of a classroom in a portable building.

6.2. The outdoors sample will be collected on the roof of a site building that has a 120 volt electrical plug.
- 6.2.1. Outdoor air samples will be collected from a location that is protected from possible water sources and at an approximate height of 10 to 18 feet above the ground surface.

6.3. All samples will be collected in the breathing zone at an approximate height of 4 to 5 feet above the floor/roof surface.

6.4. Each sample will be collected with a SKC Leland Legacy High Volumes Sampling Pump for a minimum period of 24 hours calibrated to a rate of 10.0 Liters per minute (L/min).

6.4.1. Each pump will be programmed to start at 12 PM on the sampling day and stop sampling 24 hours later.

6.5. The steps to collect the samples include the following:

6.5.1. Verify that all pumps are functional 24 to 36 hours before deployment.

6.5.2. Verify that District Security Personnel are available for the duration of the project 2 to 3 days before the commencement of field monitoring.

6.5.2.1. The District will provide Security Personnel to:

6.5.2.1.1. To provide access for EE and :LACDPH Personnel to place samplers and retrieve samplers after 24 hour samples.

6.5.2.1.2. To open each of the selected rooms for 5 to 10 minutes every 60 to 90 minutes during the period of 7:30 AM to 3:30 PM to simulate faculty, staff and student activities, i.e., entering and exiting rooms, etc.

6.5.2.1.3. District Security Personnel will add the time of their visit and their name to the Table on the White board in each room.

6.5.3. At a central location, calibrate/verify each pump using a representative in-line media/cassette to the appropriate volume per minute.

6.5.4. Deploy pumps at selected indoor and outdoor locations.

6.5.4.1. Set the pump on a stable flat surface in the center of the selected location and plug into an electrical outlet.

6.5.4.2. Label the cartridge with the sample ID and record on the sampling form.

6.5.4.3. Wearing a pair of clean disposable nitrile or latex gloves, remove the protective caps from the inlet and outlet of the cartridge.

6.5.4.4. Connect the cartridge to the pump via flexible tubing. The connecting lines between the filter assembly and the sampling pump should be kept as short as possible.

6.5.4.5. The side of the cartridge marked “outlet” should be connected to the tubing and the side marked “inlet” should be facing outward.

6.5.4.6. A tripod will be used to place the cartridge at an approximate height of to 4 to 5 feet above the ground.

6.5.4.7. Remove the gloves and dispose at the EE Office.

6.5.4.8. Collect Carbon Dioxide, Temperature and Relative Humidity measurements on the sampling form.

6.5.4.9. Repeat steps 6.5.4.1 to 6.5.4.9 at the next sample location.

6.5.5. At the end of 24 hours of sample collection, return to the site:

6.5.5.1. Wear a pair of clean, new, disposable nitrile or latex gloves.

6.5.5.2. Turn off the pump and connect the mass flow/rotometer to the sample, turn the pump on and record the flow rate.

6.5.5.3. Turn the pump off.

6.5.5.4. Remove the mass flow/rotometer.

6.5.5.5. Remove the sample cartridge from the pump and replace the protective caps over the inlet and outlet of the cartridge.

6.5.5.6. Verify the label on the cartridge with the sample ID and the sampling form.

6.5.5.7. Place the cartridge in a protective bag, such as a Ziploc™.

6.5.5.8. Remove the gloves and dispose at the EE office.

6.5.5.9. Collect Carbon Dioxide, Temperature and Relative Humidity measurements and record on the sampling form.

6.5.5.10. Repeat steps 7.1 to 7.10 at the next sample location.

7. Wipe Sampling

7.1. Wipe samples will be collected over a 100 cm^2 surface area using the wipes and disposable 100 cm^2 templates.

7.2. Sample media, containers and buffer will be provided by the laboratory.

7.3. The steps to collect the wipe samples include the following:

7.3.1. Wearing a pair of clean, new disposable nitrile or latex gloves, place the disposable 100 cm^2 template over the surface area to be sampled, and secure the outside edges with blue painter's-type masking tape.

7.3.2. Remove the laboratory prepared wipe from its container and fold into fourths.

7.3.3. Wipe the horizontal surface area with firm pressure. Use an overlapping "Z" wiping pattern to cover the entire surface area with five (5) back and forth strokes.

7.3.4. Fold the wipe to expose a fresh surface, rotate the direction of the wipe by 90 degrees and wipe the same area using five (5) top to bottom "Z" strokes.

7.3.5. Fold the wipe once more to reveal an unexposed surface, rotate the direction of the wipe by 90 degrees and wipe the surface a third time using five (5) top to bottom "Z" strokes.

7.3.6. After sampling, fold the wipe such that the used portions of the wipe are not exposed and place the wipe sample in a clean laboratory-supplied sample jar.

7.3.6.1. The Hexavalent Chromium and Metals wipe will be placed in an amber jar/container or covered with aluminum foil to prevent exposure to sunlight.

7.3.6.2. Label the wipe samples with the sample ID and record on the sampling form.

7.3.6.2.1. Place the label both on the sample container and the foil cover, if it is wrapped in foil.

7.3.7. Remove the gloves and dispose at the EE office.

7.3.8. Repeat steps 7.3.1 to 7.3.8 at the next sample location.

8. Bulk Vacuum Dust Sampling

8.1. A composite bulk dust sample will be collected from the aforementioned classrooms using a Pullman Hold model 45-D HEPA vacuum sampler or equivalent.

8.2. The composite sample will be collected by vacuuming the floor surface throughout the classroom.

8.2.1. Other observed dusty areas in the classroom may be vacuumed including storage closets, window sills, desks, tables, book shelves, etc.

8.2.2. Provided that the quantity of dust material present is sufficient, a minimum of three (3) 1-gram DUSTSTREAM samples will be collected from each room.

8.3. The steps to collect the dust samples include the following:

8.3.1. Wearing a pair of clean new disposable nitrile or latex gloves, insert the nylon filter into the DUSTREAM™ collector and attach the collector to the vacuum cleaner tube.

8.3.2. Turn on the vacuum cleaner and vacuum the desired area.

8.3.2.1. Perform a minimum of two orthogonal passes of the surface and vacuum until there is no visible dust or particulate matter.

8.3.3. Remove the nylon filter containing the dust sample and place it in a small Ziploc™ bag

8.3.4. Place a clean nylon filter inside for repeat sampling until three (3) 1-gram samples have been collected.

8.3.4.1. Multiple nylon filters will be composited for a representative dust sample.
8.3.5. Label the wipe samples with the sample ID and record on the sampling form.
8.3.6. Remove the DUSTSTREAM collector and discard at the EE Office.
8.3.7. Remove the gloves and dispose at the EE office.
8.3.8. Repeat steps 7.3.1 to 7.3.8 at the next sample location.

9. Processing samples for distribution to the laboratory:

9.1. Verify that all samples have been accounted for and recorded on the COC and project paperwork.
9.2. From the field sampling sheets calculate the total volume of air collected for each sample.
9.3. Prepare the Chain of Custody (COC) with regular turn-a-round (TAT) time of 10 business days.
9.4. Travel to the local laboratories with O1. Once at the laboratories' sample receiving counter, release the samples to O1 to turn into the laboratory.
9.5. Travel to the local Federal Express with O1. Once at Federal Express, release the samples to O1 to ship samples to the respective laboratory by Federal Express.
9.5.1. Send the appropriate samples via "next day morning delivery", signature required.
9.5.2. Send the appropriate samples and COC to SGS Galson Sample Receiving Department in Syracuse, New York.
9.6. Return all field equipment to the EE Office.

Prepared by,

Daniel H. Ginsborg, MSIH, CIH, CSP
Chief Executive Officer

Reviewed by,

Kay Mills, MSIH, CSP
Senior Industrial Hygienist

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Appendix D

Photograph Log

(All photos taken 9/26/18)

Photo 1 – Equipment calibration with a direct read primary standard traceable to NIST[1]

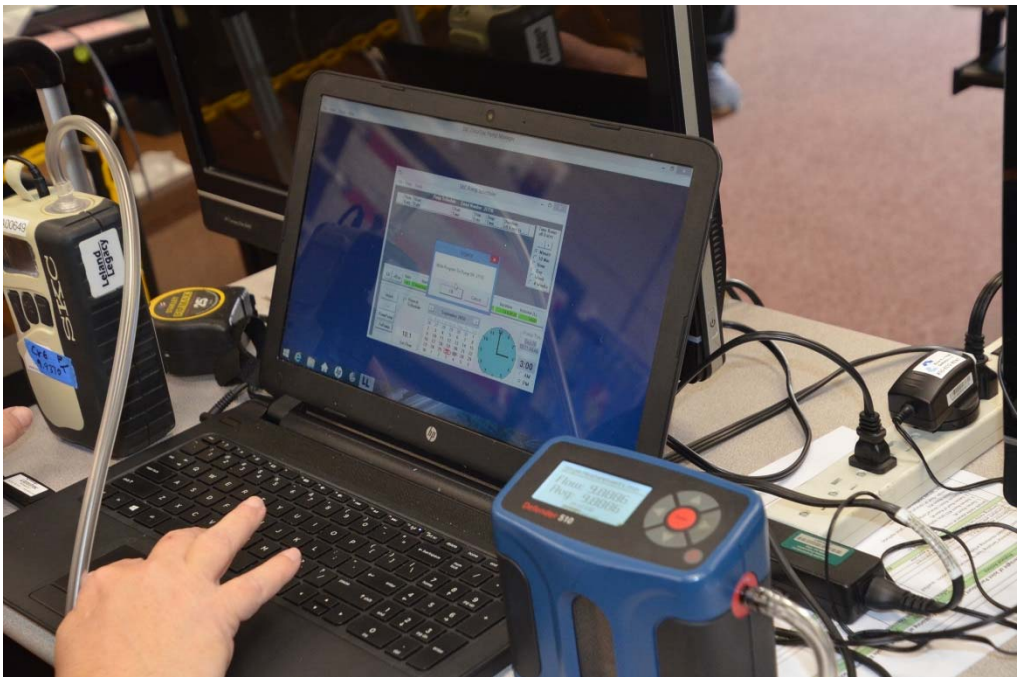

Photo 2 – Computer and pump set-up and interface with primary standard.

[111] National Institute of Standards and Technology (NIST), a unit of the U.S. Commerce Department. Formerly known as the National Bureau of Standards, **NIST** promotes and maintains measurement standards.

Photo 3 – Lincoln ES, Room 3 (Computer Room/Library), Air sampling and replicate air samples.

Photo 4 – Lincoln ES, Room 3 (Computer Room/Library), Example of Wipe Sampling Location

Photo 5 – Lincoln ES, Portable Room 31, Air samples

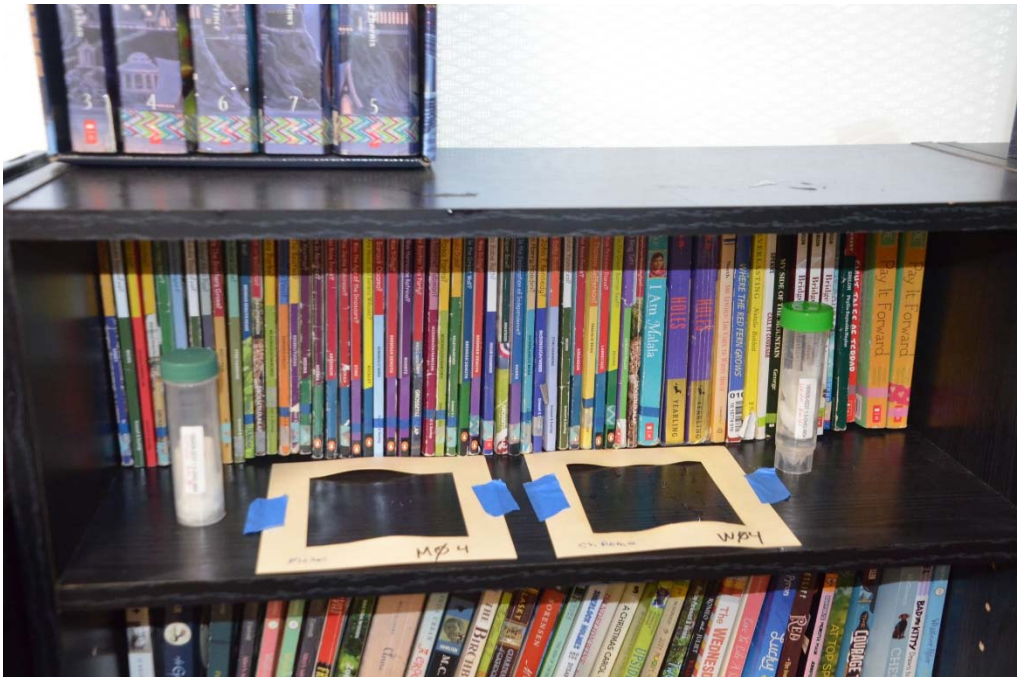

Photo 6 – Lincoln ES, Portable Room 31, Example of Wipe Sampling Location

Photo 7 – Lincoln ES, Rooftop, Air sampling

Photo 8 – Gaines ES, Room 1, Air sampling

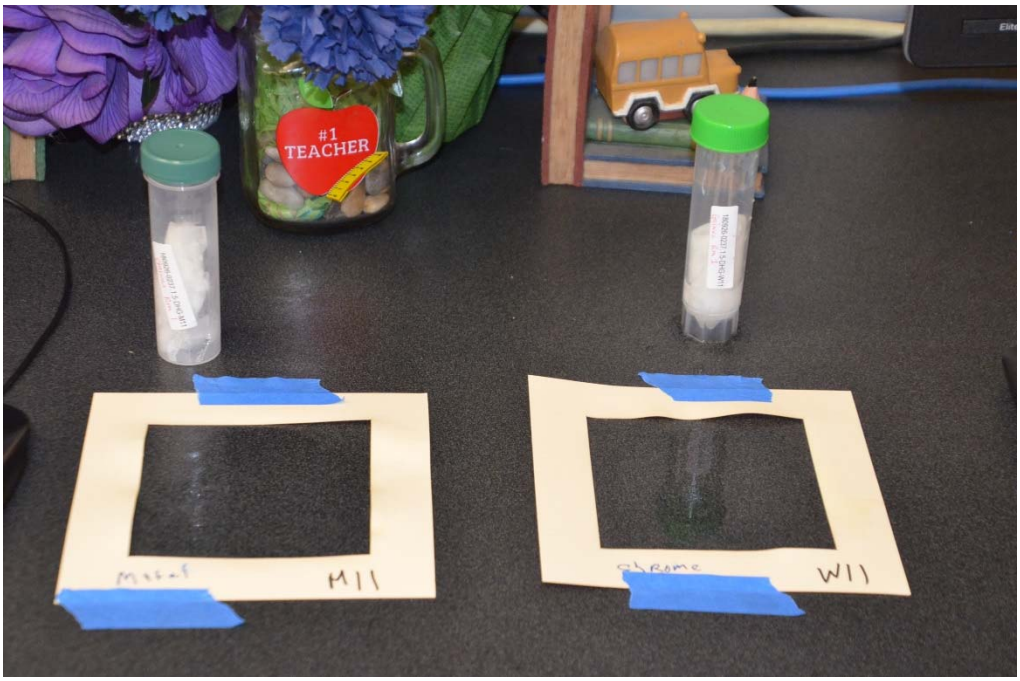

Photo 9 – Gaines ES, Room 1, Example of Wipe Sampling Location

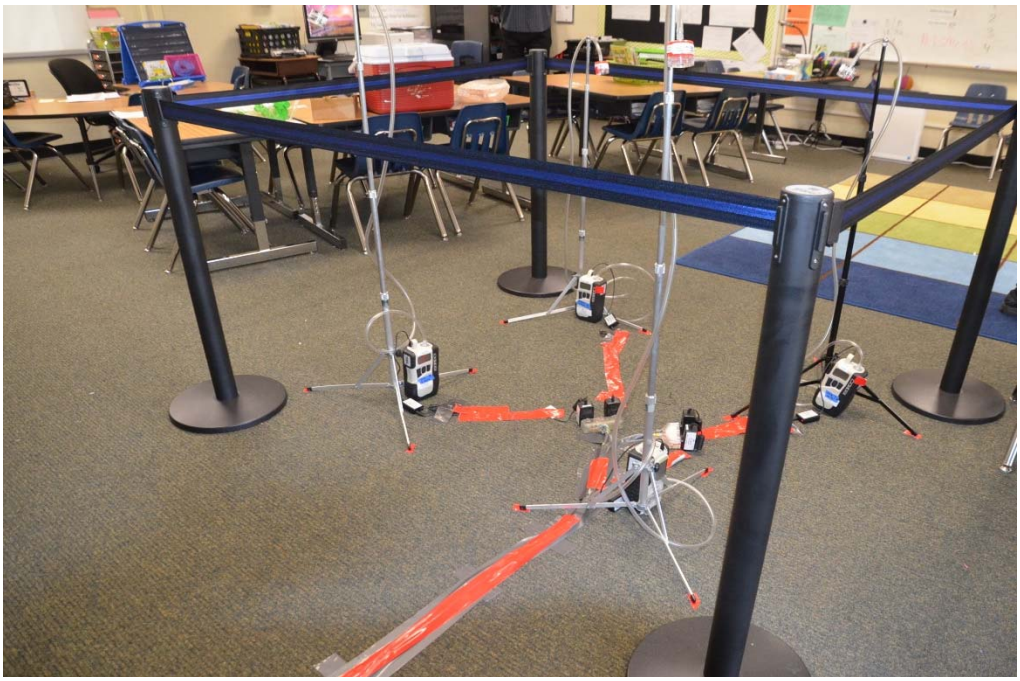

Photo 10 – Gaines ES, Portable Room 23, Air samples and Replicate Samples

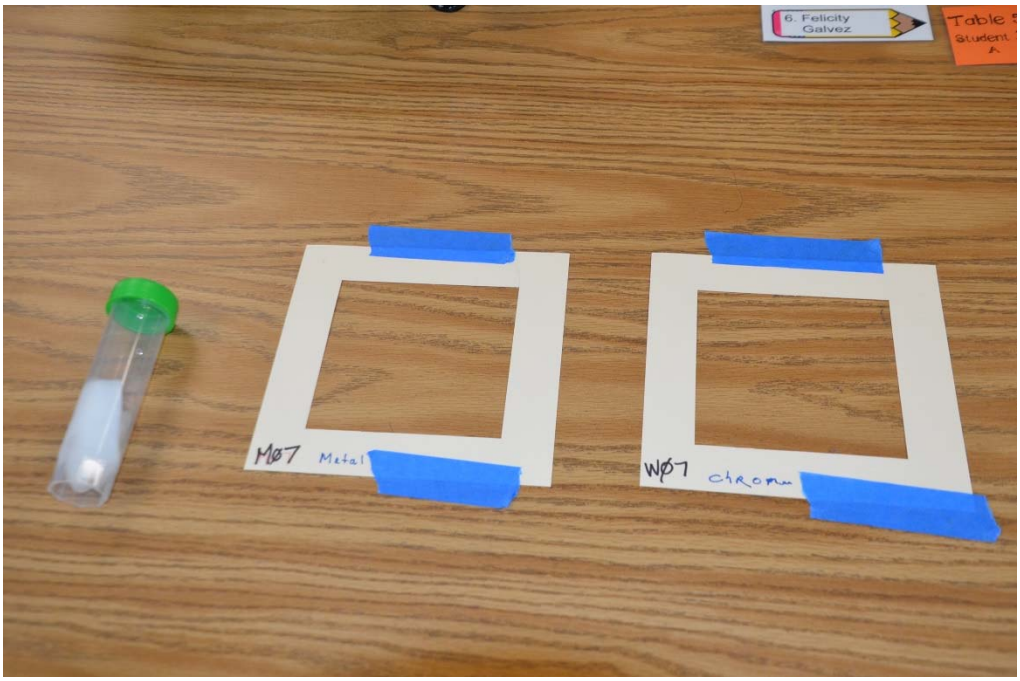

Photo 11 – Gaines ES, Portable Room 23, Example of Wipe Sampling Location

Photo 12 – Gaines ES, Rooftop, Air sampling

Appendix E

Leighton Consulting's Joint Classroom Monitoring Oversight Report Paramount Unified School District & Los Angeles County Department Of Public Health Abraham Lincoln And Wesley Gaines Elementary Schools Paramount, California

JOINT CLASSROOM MONITORING OVERSIGHT REPORT PARAMOUNT UNIFIED SCHOOL DISTRICT & LOS ANGELES COUNTY DEPARTMENT OF PUBLIC HEALTH ABRAHAM LINCOLN AND WESLEY GAINES ELEMENTARY SCHOOLS PARAMOUNT, CALIFORNIA

Los Angeles County
Department of Public Health

695 South Vermont Avenue, South Tower, 14th Floor
Los Angeles, California 90005

Project No. 11561.008

March 29, 2019

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

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March 29, 2019

Project No. 11561.008

Los Angeles County Department of Public Health
695 South Vermont Avenue, South Tower, 14th Floor
Los Angeles, California 90005

Attention: Ms. Katie Butler

Subject: Joint Classroom Monitoring Oversight Report
Paramount Unified School District &
Los Angeles County Department of Public Health
Abraham Lincoln and Wesley Gaines Elementary Schools
Paramount, California

INTRODUCTION

Leighton Consulting, Inc. (Leighton Consulting) is pleased to present this report summarizing the oversight of a joint classroom monitoring project between the Paramount Unified School District (i.e. District) and the Los Angeles County Department of Public Health (i.e. DPH). DPH and the District entered into a memorandum of understanding (MOU) as part of a joint collaboration to conduct indoor and outdoor monitoring at select District schools. The objective of the assessment was to measure hexavalent chromium (Cr(VI)) and select heavy metals in ambient air and settled dust in response to elevated levels of Cr(VI) measured by the South Coast Air Quality Management District (AQMD) in outdoor air from surrounding industrial facilities. The purpose of the project is to utilize the data collected to assess if Cr(VI) and/or other heavy metals exists in classrooms above regulatory screening levels and at concentrations that would present a potential health risk. The monitoring was conducted at the request by Supervisor Janice Hahn for DPH to conduct follow-up indoor air testing in District classrooms, after an initial assessment completed by the District between August 4 and 9, 2017 (Executive Environmental, 2017). References are provided in Appendix A.

17781 Cowan ▪ Irvine, CA 92614-6009
949.250.1421 ▪ 949.250.1114 Fax

Wesley Gaines Elementary School (i.e. Gaines) and Abraham Lincoln Elementary School (i.e. Lincoln) were selected by DPH and the District based on their proximity to industrial facilities and locations where elevated concentrations of Cr(VI) have been detected in outdoor air by AQMD. Gaines is located at 7340 East Jackson Street, Paramount, California, 90723. Lincoln is located at 15324 California Avenue, Paramount, California, 90723. The sampling was completed by Executive Environmental (EE) on behalf of the District and oversight of the sampling was completed by Leighton Consulting, Inc. (Leighton Consulting), on behalf of DPH. The sampling methods and locations were discussed and approved by the District, DPH, EE, and Leighton Consulting, and the assessment is considered a collaborative effort.

SAMPLING PROCEDURES

A Standard Operating Procedure (SOP) report was prepared by EE to conduct sampling at four classrooms at Gaines and Lincoln Elementary Schools (Executive Environmental, 2018). The SOP was reviewed and approved by DPH and Leighton Consulting and is included as Appendix B. A pre-project meeting was held at Gaines and Lincoln on September 21, 2018, to complete a final review of the sampling methods and inspect the sampling locations. A permanent classroom, portable classroom, and outdoor location were selected at each school as documented in the SOP.

Variations to the SOP approved during the pre-project meeting included the following:

1. Surficial dust was not deemed to be present at a quantity sufficient to collect bulk vacuum samples based on the classroom inspections; therefore, bulk vacuum samples were not collected as documented in Section 8 of the SOP.

2. Air samples were proposed to be collected for 24 hours starting at 12:00 PM on a typical school day during the academic term when students would not be present in the rooms being monitored; however, the school classrooms are fully occupied during each school day and unoccupied classrooms were not available. Therefore, the air sampling was conducted for 24 hours starting at 3:00 PM, in order to cause the least amount of disturbance to classroom operations. Air pumps are utilized to draw ambient air through a filter and the presence of people does not affect the sampling provided that the pump is not turned off or the sampling rate changed. The pumps are equipped with a timer and record the volume or air collected to confirm that the samples were collected as planned.

3. It was confirmed that one set of collaborative samples would be collected and that there would be full communication with the laboratories regarding the sample status and receipt of the laboratory results. The chain-of-custodies would be jointly reviewed and submitted together with the samples to the respective laboratory courier.

SAMPLING OBSERVATIONS

The field sampling and observations was conducted on September 26 and 27, 2018. The sampling personnel from EE consisted of the following individuals:

- Mr. Daniel H. Ginsborg, MSIH, CIH, CSP, Principal Industrial Hygienist
- Vicki M. Uchida, MBA, CIH, CSP, Senior Industrial Hygienist
- Kay Mills, MSIH, CSP, Senior Industrial Hygienist
- David Hernandez, CLP, Industrial Hygienist
- Anthony Perez, CLP, Industrial Hygiene Technician

The field sampling was observed by the following individuals:

- Meredith Church, MS, PG, Associate Geologist, Leighton Consulting
- Hovaness Dekeyan, MS, CLP, Industrial Hygienist, Health Science Associates (HSA, subcontractor to Leighton Consulting) (9/26/18)
- Camilla Westberg, CAC, CLP, Industrial Hygienist, HSA (9/27/18)
- Raul Sobero, DrPH, MPH, Health Program Analyst III, DPH (portion of 9/26/18 and 9/27/18)

EE calibrated the air sampling pumps on September 25, 2018. The EE sampling team and observation team met at the Lincoln library on September 26, 2018. The pump program and calibration method was confirmed by EE and reviewed by the observation team. The sampling pumps and equipment were set up in the classrooms and roof locations while students were out on break and prior to 3:00 PM. The pumps turned on automatically at 3:00 PM and each location was inspected to ensure that the pump turned on as programmed. Wipes samples were then collected from each classroom after the students had departed for the day.

The wipe sample locations were jointly selected by EE and Leighton Consulting. Three wipe sample locations were selected from each classroom and the surfaces included a student desk, a commonly utilized surface (such as a counter top or shelf), and a location where surficial dust was observed. The classrooms are routinely cleaned and a build-up of dust was not observed on student desks and other commonly utilized surfaces. However, surficial dust was observed at some locations that are not typically accessed such as the top of cabinets and bookcases and a sample was collected from one dusty area of each classroom. Windows are not open in classrooms and the window sills are very narrow; therefore, a wipe sample was not collected from sills.

The team members reconvened on September 27, 2018 to collect the air sampling equipment and conduct a post-calibration of the sampling pumps. Each sample was collected for the full 24-hours as programmed with the exception of one sample. Four pumps were set up in Room 23 of Gaines to collect an air sample for metals analysis, another for Cr(VI) analysis, and a duplicate of each. One of the pumps collecting metals had turned off after a period of 2 hours and 6 minutes. The pump and outlet were inspected and the battery showed as fully charged, the program was correct, the outlet was in working order, and the other three pumps had operated for the full 24-hours. Therefore, the reason for the pump failure is unknown but it does not appear to be due to human error. The sample was sent to the laboratory but was instructed to not be analyzed because a sufficient volume of air was not collected to provide meaningful and comparative results. A total of six primary air samples were collected for metals analysis. Two duplicates samples of metals in air were planned and one was unable to be analyzed; however, one duplicate sample was able to be obtained at a rate of at least ten percent of the primary samples, which is a typical rate for quality control.

The observation team did not physically participate in the collection of samples; however, the team assisted in confirming that the SOP was conformed to and that the sampling was conducted in accordance with the best standard of practice. Each step of the field sampling was overseen by the sampling team and a checklist was completed to document the procedures. Each of the protocols was successfully completed and the only variation to the planned activities was the pump failure discussed in the previous paragraph. The observation checklist is included as Appendix D.

INVESTIGATIVE RESULTS

The laboratory results were received by EE, Leighton Consulting, DPH, and the District. Leighton Consulting and DPH provided input for regulatory screening criteria based on current chemical toxicity data and factors that represent Reasonable Maximum Exposure (RME) conditions for long-term/chronic exposures. The presence of a chemical at a concentration in excess of a screening level does not indicate that adverse impacts to human health are occurring or will occur, but suggests that further evaluation of potential human health concerns may be warranted, such as additional sampling and/or a Site Specific Human Health Risk Assessment.

The investigative laboratory results and recommendations are provided in a report prepared by EE (EE, 2019). DPH and Leighton Consulting reviewed the EE Report and provided input. DPH has prepared a memorandum regarding Cr(VI) at schools in the city of Paramount based on the results of the EE investigation (DPH, 2019).

The laboratory reports are included in the EE Report. The reports were submitted to an outside validation company by Leighton Consulting to assess the acceptability of the data and the review is summarized in the following section.

Data Validation

The laboratory data package provided includes quality control sample results for blanks, matrix spike/matrix spike duplicates, surrogate recoveries, and laboratory control samples/laboratory control sample duplicates, as specified by the method. The laboratory also provides laboratory data qualifiers.

HSW Engineering, Inc. performed data validation under EPA Level II guidelines, including a summary of precision, accuracy, representativeness, completeness, and comparability (PARCC) parameters. The results of the laboratory data validation for PARCC parameters were reported to be within the acceptable goals of the EPA guidelines. None of the sample results were rejected and the completeness of the samples analyzed was reported at 100 percent. The data validation report is provided in Appendix D.

One sample was not collected as planned, the metals replicate from Gaines, Room Number 23. Data quality objectives for this project were to collect duplicate samples at a rate of at least ten percent of the six primary air samples. Collection of one of the two

planned duplicates for metals analysis completed the data quality objectives of this project.

It is noted that the reporting limits for some of the metals are above the conservative calculated regulatory screening limits for residential property. The regulatory agencies do not take into account the feasibility of laboratories to achieve the calculated screening limits utilizing the standard methods and required quality control. Laboratories and analytical and sampling methods, including high-volume sampling pumps, were selected in order to achieve low detection limits within accepted laboratory practices during the sampling duration (24-hours) and utilizing surface areas present for wipe samples.

Overall, the dataset is considered to be of acceptable quality. Percent completeness is acceptable and the primary samples and ten percent air duplicates were collected from sampling locations as planned. The data set is acceptable for use in completing the primary objects of the project.

CONCLUSIONS

The field investigation and laboratory analysis was completed in accordance with the SOP prepared for the District and DPH. The project objectives were met and the dataset is considered to be of acceptable quality for use in completing the purpose of the project.

LIMITATIONS

The activities were conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions.

The observations and conclusions presented in this report are professional opinions based on the scope of activities, work schedule, and information obtained through the activities described herein, and are limited to the portion of the Site investigated. Opinions presented herein apply to property conditions existing at the time of our study and cannot necessarily be taken to apply to property conditions outside of the area investigated or changes that we are not aware of or have not had the opportunity to

evaluate. Although Leighton Consulting has taken steps to obtain true copies of available information, we make no representation or warranty with respect to the accuracy or completeness of the information provided by others.

CLOSING

We appreciate the opportunity to work with you on this project. If you have any questions regarding this report, please call us at your convenience.

Respectfully submitted,

LEIGHTON CONSULTING, INC.

Meredith Church

Meredith Church, PG
Associate Geologist

MDC/gv

Attachments: Appendix A – References
Appendix B – SOP for District/DPH Monitoring at Gaines and Lincoln
Appendix C – Oversight Checklist
Appendix D – Data Validation Report

Distribution: (1) Addressee

Leighton

APPENDIX A

REFERENCES

APPENDIX A

References

Executive Environmental, 2017, Industrial Hygiene Survey Report, Paramount Unified School District, Various Sites, Paramount, California, dated September 30, 2017.

Executive Environmental, 2018, Standard Operating Procedure for Joint Paramount Unified School District/Los Angeles County Department of Public Health Monitoring in Four Classrooms at Gaines and Lincoln Elementary Schools, dated July 30, 2018.

Executive Environmental, 2019, Standard Operating Procedure for Joint Paramount Unified School District/Los Angeles County Department of Public Health Monitoring in Four Classrooms at Gaines and Lincoln Elementary Schools, dated July 30, 2018.

Los Angeles County Department of Public Health, 2019, Hexavalent Chromium in the City of Paramount – School Update, www.publichealth.lacounty.gov

APPENDIX B

STANDARD OPERATING PROCEDURE FOR DISTRICT/DPH MONITORING AT GAINES AND LINCOLN ELEMENTARY SCHOOLS

Leighton

EXECUTIVE ENVIRONMENTAL
HEALTH & SAFETY SIMPLIFIED

310 E. Foothill Blvd., Suite 200
Arcadia, CA 91006
Ph: 626.441.7050 Fax: 626.441.0016

Standard Operating Procedure for Joint Paramount Unified School District/Los Angeles County Department of Public Health Monitoring in Four Classrooms at Gaines and Lincoln Elementary Schools

1. Project Summary:

1.1. The Paramount Unified School District (hereafter, the District) will jointly collect samples with the Los Angeles County Department of Public Health (hereafter, LACDPH) for Hexavalent Chromium in air and surface wipes samples; Title 22 Metals (excluding silver and mercury) in air, surface wipes, and bulk vacuum samples; and total dust not otherwise classified.

1.1.1. These samples will be collected on a date to be mutually determined between the District and LACDPH. LACDPH will provide a date that is 3 to 4 weeks in advance of the planned sampling.

1.1.2. The date chosen will be on a typical school day during the current academic term in which the students are not in the rooms being monitored.

1.1.3. The date chosen will not be on or over the weekend or on a school holiday.

1.1.4. Monitoring will be for 24 hours commencing at 12:00 PM.

2. Project Equipment:

2.1. 15 SKC Leland Legacy pumps pre-programed to 10 liter per minutes, or equivalent.

2.2. 15 SKC Leland Legacy pump individual chargers.

2.3. 15 Sampling tripods

2.4. 15 ten foot Tygon tubing to connect sample media.

2.5. 15 Sample frits to connect tubing to media.

2.6. 6 extension cords with a 3 female plug at one end.

2.7. 1 Mass flow calibrator or calibrated rotometer.

2.8. 1 Pullman Hold model 45-D HEPA vacuum sampler (specified to capture 99.97% of all particles 0.3 µm and larger) or equivalent.

2.8.1. 6 new hoses and 6 new vacuum heads

2.9. 25 disposable 100 cm^2 templates.

2.10. Pre-filled Executive Environmental (EE) Chain Of Custodies (COCs).

2.11. Pre-printed labels

2.12. Pumps and mass flow meter will be supplied by Eco-Rental (Tustin, California) or equivalent. Rotometer will be supplied by EE.

3. Media:

3.1. Air Samples

3.1.1. Title 22 Metals will be collected on 37-mm polyvinyl chloride (PVC) pre-weighed filter loaded in an SKC styrene cartridge provided by SGS Galson Laboratory, Syracuse, New York.

3.1.2. Hexavalent Chromium will be collected on a laboratory-supplied 37-mm sodium bicarbonate treated cellulose filter loaded in an SKC styrene cartridge. The cartridge will be provided by American Environmental Testing Laboratory (AETL), Burbank, California.

3.1.2.1. Media will be will be kept frozen after preparation and will be kept chilled to a temperature of approximately 4 degrees Celsius during transport.

3.1.3. 15 cartridges of each media will need to be obtained for this project.

3.2. Wipe Samples

3.2.1. Title 22 Metals will be collected on laboratory-supplied wipes and buffer. Media and buffer will be provided by AETL or equivalent.

3.2.2. Hexavalent Chromium will be collected on laboratory-supplied wipes and buffer. Media and buffer will be provided by AETL or equivalent.

3.2.2.1. AETL will modify the buffer if possible such that the Metals and Hexavalent Chromium can be done on one wipe.

3.2.3. 10 wipe sampling sets will be needed for each sampling media.

3.3. Bulk Dust Vacuum Samples

3.3.1. 15 DUSTREAM® Collector supplied by Indoor Biotechnologies, Charlottesville, Virginia.

4. Project Personnel:

4.1. All project personnel will be familiar with the project, have reviewed this document, be aware of the hazards on the project sites and follow all federal, state and local safety, health, and labor regulations. All project personnel will attend a safety/tailgate meeting reviewing the project and health and safety issues.

4.2. Executive Environmental (EE), representing the District will use a three-member field team:

4.2.1. Principal Industrial Hygienist (PIH): Daniel H. Ginsborg, MSIH, CIH, CSP.

4.2.1.1. The PIH will be responsible for ordering of the media, obtaining equipment to collect samples, pre-planning actives prior to sample collection, all site activities, collection of the samples in conformation with this document; documentation of sample collection, completion of the Chain-of-Custody (COC), and releasing the sample to designated LACDPH recipient.

4.2.1.2. EE will use their standard COC for submission/release of samples to the designated LACDPH recipient.

4.2.2. Senior Industrial Hygienist (SrIH): Kay Mills, MSIH, CSP

4.2.2.1. The SrIH will be responsible for completing all documentation during project activities under the direction of the PIH, maintaining and completing the COC, labeling of all samples, crosschecking and accounting for all samples prior to leaving the site, and to document the projects through photography.

4.2.3. Senior Industrial Hygiene Technician (SrIHT), David Hernandez

4.2.3.1. The SrIHT will place and retrieve samples and sampling equipment under the direction of the PIH, SrIHT will concurrently place and retrieve sampling equipment on the roof while the PIH places and retrieve samples and sampling equipment in the classrooms, assist in crosschecking and accounting for all samples with the SrIH prior to leaving the site.

4.3. The LACDPH will provide a two-member observation team to observe EE's work.

4.3.1. Observer 1 (O1): Name and qualifications to be identified five-business days before Field sampling date.

4.3.1.1. O1 will observe EE's field work in the classrooms and ensure it conforms to this SOP. It will be the responsibility of O1 to contact the PIH and to stop work if an irregularity with this SOP is observed. The PIH will either mutually correct the irregularity with O1, or stop the project and reschedule the fieldwork.

4.3.1.2. At the conclusion of all field work and completion of the COC by EE, O1 will travel with the PIH to the local lab(s), at the laboratory, the PIH will release the samples to O1 who then will release them to the lab. For SGS Galson, O1 will travel with the PIH to the local Federal Express Office; the PIH will release the samples to O1 who then will deposit them in Federal Express' care to deliver the samples to SGS Galson.

4.3.1.3. Once the samples have been released by the PIH to O1, the District will have no further responsibility for the samples or communication with the laboratory. The LACDPH will be responsible for all expenses related to the analysis of the samples, expenses related to shipping, or issues at the Laboratory. The LACDPH will provide the District with all sample reports through EE of laboratory reports, signed COC, laboratory intake assessment, excel spreadsheets, correspondence between the lab and LACDPH, etc.

4.3.1.3.1. LACDPH will instruct the Laboratories to provide the District (EE) the full results, documentation, countersigned COC and report, etc, at the same time that transmission is made to LACDPH.

4.3.1.4. O1 will provide billing and shipping information five-business days before the field sampling date to EE.

4.3.1.4.1. EE will place the billing information on the COC.

4.3.2. Observer 2 (O2): Name and qualifications to be identified five-business days before Field sampling date.

4.3.2.1. O2 will observe EE's fieldwork on the Roof and ensure it conforms to this SOP. It will be the responsibility of O2 to contact the PIH and to stop work if an irregularity with this SOP is observed. The PIH with input from the SrIHT will either mutually correct the irregularity with O2, or stop the project and reschedule the fieldwork.

4.3.2.2. Because of limited site time, EE anticipates setting up rooftop units while units are set up in the rooms.

5. Location of Samples to be collected:

5.1. Air Samples:

5.1.1. Gaines Elementary School, Indoors, Room #1;

5.1.2. Gaines Elementary School, Indoors, Room #23;

5.1.3. Gaines Elementary School, Outdoors on Roof of Room #1;

5.1.4. Lincoln Elementary School, Indoors, Room #3, Computer Room/Library;

5.1.5. Lincoln Elementary School, Indoors, Room #3, Computer Room/Library, Replicate;

5.1.6. Lincoln Elementary School, Indoors, Room #31;

5.1.7. Lincoln Elementary School, Outdoors on Roof of Room #3, Computer Room/Library; and

5.1.8. Plus two field blanks and one laboratory blank.

5.2. Wipe Samples:
- 5.2.1. Gaines Elementary School, Indoors, Room #1; Student Desk Surface
- 5.2.2. Gaines Elementary School, Indoors, Room #1; Counter
- 5.2.3. Gaines Elementary School, Indoors, Room #1; Visibly Dusty surface such as a bookshelf
- 5.2.4. Gaines Elementary School, Indoors, Room #23; Student Desk Surface
- 5.2.5. Gaines Elementary School, Indoors, Room #23; Counter
- 5.2.6. Gaines Elementary School, Indoors, Room #23; Visibly Dusty surface such as a bookshelf
- 5.2.7. Lincoln Elementary School, Indoors, Room #3; Student Desk Surface
- 5.2.8. Lincoln Elementary School, Indoors, Room #3; Counter
- 5.2.9. Lincoln Elementary School, Indoors, Room #3; Visibly Dusty surface such as a bookshelf
- 5.2.10. Lincoln Elementary School, Indoors, Room #3; Student Desk Surface, Replicate – side-by-side
- 5.2.11. Lincoln Elementary School, Indoors, Room #3; Counter, Replicate – side-by-side
- 5.2.12. Lincoln Elementary School, Indoors, Room #3; Visibly Dusty surface such as a bookshelf, Replicate – side-by-side
- 5.2.13. Lincoln Elementary School, Indoors, Room #31; Student Desk Surface
- 5.2.14. Lincoln Elementary School, Indoors, Room #31; Counter
- 5.2.15. Lincoln Elementary School, Indoors, Room #31; Visibly Dusty surface such as a bookshelf
- 5.2.16. Plus two field blanks and two laboratory blank of each media.

5.3. Composite Bulk Vacuum Samples:
- 5.3.1. Gaines Elementary School, Indoors, Room #1; Floor
- 5.3.2. Gaines School, Indoors, Room #23; Floors
- 5.3.3. Lincoln Elementary School, Indoors, Room #3, Computer Room/Library; Floors, and select top of books and bookshelves
- 5.3.4. Lincoln Elementary School, Indoors, Room #31, Floor
- 5.3.5. No Replicate
- 5.3.6. Plus two field blanks and one laboratory blank.

6. Air Sampling

6.1. Two indoor samples and one outdoor air sample will be collected from each of the selected sites.
- 6.1.1. The first indoor air samples will be collected from the center of a classroom in a permanent building.
- 6.1.2. The second indoor air samples will be collected from the center of a classroom in a portable building.

6.2. The outdoors sample will be collected on the roof of a site building that has a 120 volt electrical plug.
- 6.2.1. Outdoor air samples will be collected from a location that is protected from possible water sources and at an approximate height of 10 to 18 feet above the ground surface.

6.3. All samples will be collected in the breathing zone at an approximate height of 4 to 5 feet above the floor/roof surface.

6.4. Each sample will be collected with a SKC Leland Legacy High Volumes Sampling Pump for a minimum period of 24 hours calibrated to a rate of 10.0 Liters per minute (L/min).

6.4.1. Each pump will be programmed to start at 12 PM on the sampling day and stop sampling 24 hours later.

6.5. The steps to collect the samples include the following:

6.5.1. Verify that all pumps are functional 24 to 36 hours before deployment.

6.5.2. Verify that District Security Personnel are available for the duration of the project 2 to 3 days before the commencement of field monitoring.

6.5.2.1. The District will provide Security Personnel to:

6.5.2.1.1. To provide access for EE and :LACDPH Personnel to place samplers and retrieve samplers after 24 hour samples.

6.5.2.1.2. To open each of the selected rooms for 5 to 10 minutes every 60 to 90 minutes during the period of 7:30 AM to 3:30 PM to simulate faculty, staff and student activities, i.e., entering and exiting rooms, etc.

6.5.2.1.3. District Security Personnel will add the time of their visit and their name to the Table on the White board in each room.

6.5.3. At a central location, calibrate/verify each pump using a representative in-line media/cassette to the appropriate volume per minute.

6.5.4. Deploy pumps at selected indoor and outdoor locations.

6.5.4.1. Set the pump on a stable flat surface in the center of the selected location and plug into an electrical outlet.

6.5.4.2. Label the cartridge with the sample ID and record on the sampling form.

6.5.4.3. Wearing a pair of clean disposable nitrile or latex gloves, remove the protective caps from the inlet and outlet of the cartridge.

6.5.4.4. Connect the cartridge to the pump via flexible tubing. The connecting lines between the filter assembly and the sampling pump should be kept as short as possible.

6.5.4.5. The side of the cartridge marked “outlet” should be connected to the tubing and the side marked “inlet” should be facing outward.

6.5.4.6. A tripod will be used to place the cartridge at an approximate height of to 4 to 5 feet above the ground.

6.5.4.7. Remove the gloves and dispose at the EE Office.

6.5.4.8. Collect Carbon Dioxide, Temperature and Relative Humidity measurements on the sampling form.

6.5.4.9. Repeat steps 6.5.4.1 to 6.5.4.9 at the next sample location.

6.5.5. At the end of 24 hours of sample collection, return to the site:

6.5.5.1. Wear a pair of clean, new, disposable nitrile or latex gloves.

6.5.5.2. Turn off the pump and connect the mass flow/rotometer to the sample, turn the pump on and record the flow rate.

6.5.5.3. Turn the pump off.

6.5.5.4. Remove the mass flow/rotometer.

6.5.5.5. Remove the sample cartridge from the pump and replace the protective caps over the inlet and outlet of the cartridge.

6.5.5.6. Verify the label on the cartridge with the sample ID and the sampling form.

6.5.5.7. Place the cartridge in a protective bag, such as a Ziploc™.

6.5.5.8. Remove the gloves and dispose at the EE office.

6.5.5.9. Collect Carbon Dioxide, Temperature and Relative Humidity measurements and record on the sampling form.

6.5.5.10. Repeat steps 7.1 to 7.10 at the next sample location.

7. Wipe Sampling

7.1. Wipe samples will be collected over a 100 cm^2 surface area using the wipes and disposable 100 cm^2 templates.

7.2. Sample media, containers and buffer will be provided by the laboratory.

7.3. The steps to collect the wipe samples include the following:

7.3.1. Wearing a pair of clean, new disposable nitrile or latex gloves, place the disposable 100 cm^2 template over the surface area to be sampled, and secure the outside edges with blue painter's-type masking tape.

7.3.2. Remove the laboratory prepared wipe from its container and fold into fourths.

7.3.3. Wipe the horizontal surface area with firm pressure. Use an overlapping "Z" wiping pattern to cover the entire surface area with five (5) back and forth strokes.

7.3.4. Fold the wipe to expose a fresh surface, rotate the direction of the wipe by 90 degrees and wipe the same area using five (5) top to bottom "Z" strokes.

7.3.5. Fold the wipe once more to reveal an unexposed surface, rotate the direction of the wipe by 90 degrees and wipe the surface a third time using five (5) top to bottom "Z" strokes.

7.3.6. After sampling, fold the wipe such that the used portions of the wipe are not exposed and place the wipe sample in a clean laboratory-supplied sample jar.

7.3.6.1. The Hexavalent Chromium and Metals wipe will be placed in an amber jar/container or covered with aluminum foil to prevent exposure to sunlight.

7.3.6.2. Label the wipe samples with the sample ID and record on the sampling form.

7.3.6.2.1. Place the label both on the sample container and the foil cover, if it is wrapped in foil.

7.3.7. Remove the gloves and dispose at the EE office.

7.3.8. Repeat steps 7.3.1 to 7.3.8 at the next sample location.

8. Bulk Vacuum Dust Sampling

8.1. A composite bulk dust sample will be collected from the aforementioned classrooms using a Pullman Hold model 45-D HEPA vacuum sampler or equivalent.

8.2. The composite sample will be collected by vacuuming the floor surface throughout the classroom.

8.2.1. Other observed dusty areas in the classroom may be vacuumed including storage closets, window sills, desks, tables, book shelves, etc.

8.2.2. Provided that the quantity of dust material present is sufficient, a minimum of three (3) 1-gram DUSTSTREAM samples will be collected from each room.

8.3. The steps to collect the dust samples include the following:

8.3.1. Wearing a pair of clean new disposable nitrile or latex gloves, insert the nylon filter into the DUSTREAM™ collector and attach the collector to the vacuum cleaner tube.

8.3.2. Turn on the vacuum cleaner and vacuum the desired area.

8.3.2.1. Perform a minimum of two orthogonal passes of the surface and vacuum until there is no visible dust or particulate matter.

8.3.3. Remove the nylon filter containing the dust sample and place it in a small Ziploc™ bag

8.3.4. Place a clean nylon filter inside for repeat sampling until three (3) 1-gram samples have been collected.

8.3.4.1. Multiple nylon filters will be composited for a representative dust sample.
8.3.5. Label the wipe samples with the sample ID and record on the sampling form.
8.3.6. Remove the DUSTSTREAM collector and discard at the EE Office.
8.3.7. Remove the gloves and dispose at the EE office.
8.3.8. Repeat steps 7.3.1 to 7.3.8 at the next sample location.

9. Processing samples for distribution to the laboratory:

9.1. Verify that all samples have been accounted for and recorded on the COC and project paperwork.
9.2. From the field sampling sheets calculate the total volume of air collected for each sample.
9.3. Prepare the Chain of Custody (COC) with regular turn-a-round (TAT) time of 10 business days.
9.4. Travel to the local laboratories with O1. Once at the laboratories' sample receiving counter, release the samples to O1 to turn into the laboratory.
9.5. Travel to the local Federal Express with O1. Once at Federal Express, release the samples to O1 to ship samples to the respective laboratory by Federal Express.
9.5.1. Send the appropriate samples via "next day morning delivery", signature required.
9.5.2. Send the appropriate samples and COC to SGS Galson Sample Receiving Department in Syracuse, New York.
9.6. Return all field equipment to the EE Office.

Prepared by,

Daniel H. Ginsborg, MSIH, CIH, CSP
Chief Executive Officer

Reviewed by,

Kay Mills, MSIH, CSP
Senior Industrial Hygienist

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APPENDIX C

OVERSIGHT CHECKLIST

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CHECKLIST COMPELTED BY: **Meredith Church & Hovaness Dekeyan (Day 1) / Meredith Church & Camilla Westberg (Day 2)**

DATE: **September 26 and 27, 2018**

Oversight of Joint Paramount USD/LACDPH Monitoring at Gaines & Lincoln Elementary Schools[1]

No.	Protocol Actions	Yes	No	Notes
	Safety, Training, and Other Requirements			
1	Executive Environmental Sampling Team Names and Certifications - qualified to conduct proposed monitoring activates (4.)	X		Daniel H. Ginsborg, MSIH, CIH, CSP - Principal Industrial Hygienist (PIH) Kay Mills, MSIH, CSP - Senior Industrial Hygienist Vicki Uchida, MBA, CIH, CSP - Senior Industrial Hygienist David Herandez - Associate Industrial Hygienist Technician Anthony Perez, Industrial Hygienist Technician
2	Supervisor was onsite (4.2.1)	X		Daniel H. Ginsborg (PIH)
3	Compliant with OSHA safety requirements - ladder placement	X		Proper angle, extend 2.5' above roof line. Staff ascend/descend carrying equipment in one hand, but additional safety precaution employed of holding ladder at top and bottom and hand off equipment.
3	Sampling media has not passed expiration dates, if applicable	X		Media obtained directly from laboratories, AETL & SGS, specific for this project.
	Air Monitoring - Indoors and Outdoors			
4	Sample media placed at correct locations (5.1, 6.1, 6.2): 1. Gaines Room #1 2. Gaines Room #23 (plus replicate) 3. Gaines Roof of Room #1 4. Lincoln Room Library/Computer Room (plus replicate) 5. Lincoln Room #31 6. Lincoln, Roof of Library/Computer Room	1. X 2. X 3. X 4. X 5. X 6. X	1. 2. 3. 4. 5. 6.	1. Southeast quadrant of room 2. Slightly southeast from center of room 3. Set up 3 feet off the main air intake 4. Center of room 5. Central area of library in computer area 6. Set up 3 feet off the main air intake Pump areas cordoned off, see maps for sample locations, ID, and pump serial number
5	PVC & Cr6 Filters attached correctly at appropriate height (3'-5 ' above floor or roof surface) (6.3 & 6.5.4)	1. X 2. X 3. X 4. X 5. X 6. X	1. 2. 3. 4. 5. 6.	Sample filters set at approximately four feet above the floor and measured with measuring tape.
6	Nitrile gloves worn during placement and removal of filters (6.5.4.3 & 6.5.5.1)	1. X 2. X 3. X 4. X 5. X 6. X	1. 2. 3. 4. 5. 6.	Gloves worn when uncapping and capping filters and whenever handling uncapped filters.
7	SKC Leland Legacy Pumps have been calibrated to 10 L/min and verified with sampler in-line with field rotameter (6.4, 6.5.3). (It is noted that pump rate achievable is variable and may not be exactly 10 L/min)	1. X 2. X 3. X 4. X 5. X 6. X	1. 2. 3. 4. 5. 6.	Pumps were calibrated on 9/25/18 utilizing a Defender 510 and a calibration filter (metals or Cr6 as appropriate to pump). Setting on pumps recorded (set between 9.6 to 10.8) with media in line in order to achieve pump rate of ~10 L/min. Three calibration checks completed and recorded along with average (between 9.6501 to 10.1490). Utilized SKD DataTrac Pump Manager Software to program run time for 24 hours. Demonstrate calibration on pump 31716: 9.8886. The average of the 3 tests was 9.9795 set at a rate of 9.8. The program had to be removed from the pump in order to conduct a calibration; therefore, the calibration notes and the programming was reviewed for each pump versus additional calibration with the Defender. Pump rates and programming reviewed to be set appropriately.

Oversight of Joint Paramount USD/LACDPH Monitoring at Gaines & Lincoln Elementary Schools[1]

No.	Protocol Actions	Yes	No	Notes
8	Sample collected over 24 hour period (1.1.4, start time changed to 3 pm to 3 pm, 9/26-2/27) . Note start and stop time and field rotameter readings. Note rotameter number and calibration date	1. X 2. 3. X 4. X 5. X 6. X	1. 2. X 3. 4. 5. 6.	One pump failure from sample location #2, the metals replicate, NO8, Pump # 31202. The pump recorded 126 minutes and 1,265 L. Battery showed as charged, outlet was working, checked program and it was set same as others, 3 pm to 3 pm. Reason for pump failure is unknown; however, does not appear to be due to user error. All other pumps ran for full 24 hours (time recorded as 1439-1440 minutes). A second set of air replicates was added to the sampling plan; therefore, replicates still obtained at a rate of 10% total samples.
9	Filters disconnected and labeled appropriately (6.5.5)	X		
10	Normal classroom activity conducted - doors open for ~5-10 minutes every 60-90 minutes from 7:30-3:30 (6.5.2)	X		Normal classroom activity during school hours. Doors remained closed as usual after hours.
11	Filters for metals analysis: 6 samples, 2 replicates, 2 field blanks and 1 laboratory blank; labeled appropriately and submitted to SGS Galson Filters for Cr6 analysis: 6 samples, 2 replicates, 2 field blanks, and 1 laboratory blank; labeled appropriately and submitted to AETL (note, a replicate sample was added to SOP at Wesley Gaines for metals & Cr6)	X		
12	Sodium bicarbonate treated filters for Cr6 sampling kept frozen prior to sampling, placed on ice during transport, & kept frozen until picked up by AETL courier or delivered to laboratory (3.1.2.1)	X		Blue ice and dry ice in cooler on 9/26. Blue ice in cooler 9/27. Samples kept chilled before set up and after collection.
	Wipe Sampling - Indoors			
13	Wipes are laboratory supplied; Note media type (pre-moistened with DI water gauze wipe, other) (3.2)	X		Pre-moistened gauze wipes provided by AETL. Sodium bicarbonate buffer utilized for Cr6 wipes.
14	Three wipe samples for Metals and Cr6 analysis collected from each of the four classrooms (5.2) 1. Gaines Room #1 (desk/counter/visibly dusty surface) 2. Gaines Room #23 (desk/counter/visibly dusty surface) 3. Lincoln Library/Computer Room (desk/counter/visibly dusty surface) 4. Lincoln Room #31 (desk/counter/visibly dusty surface) No replicate/side-by-side sample deemed necessary by District & Public Health (note ~sample locations on sketch map & take photos)	1. X 2. X 3. X 4. X	1. 2. 3. 4.	G#1: 1 - desk in center of room (northernmost desk of 3), in front of eastern door 2 - North computer counter/desk 3 - Southwest file cabinet G#23: 1 - North desk 2 - South computer desk 3 - South bookshelf Library: 1 - Northern computer desk near north door 2 - Center book shelf, southwest section of library 3 - Bottom shelf of built in bookshelf, south central portion of library L#1: 1 - Desk nearest door, northeast corner 2 - Book shelf, southeast corner
15	Wipe samples collected over 100 cm2 surface according to proper procedures (7.)	1. X 2. X 3. X 4. X		
16	Nitrile gloves worn during sampling and replaced between sample locations (7.3.1 and 7.3.7)	X		

Oversight of Joint Paramount USD/LACDPH Monitoring at Gaines & Lincoln Elementary Schools[1]

No.	Protocol Actions	Yes	No	Notes
17	Wipe samples for Title 22 metals analysis: 12 samples, 2 field blanks and 1 laboratory blank (15 total); labeled appropriately and submitted to AETL Wipe samples for Cr6 analysis: 12 samples, 2 field blanks and 1 laboratory blank (15 total); labeled appropriately and submitted to AETL	X		
18	Wipe samples for Cr6 kept out of sunlight (7.3.6.1) and placed on ice after collection until picked by AETL courier or delivery to laboratory	X		
Bulk Dust Sampling				
19	Examine rooms to assess if there appears to be sufficient dust to allow for collection of a bulk dust sample and analysis of metals and Cr6; Laboratory indicated 3 grams to analyze for metals and 3 grams to analyze Cr6	X		Rooms inspected, very low profile glue down carpet. They are reported to be vacuumed every other day, dust/dirt build up not observed. Light dust observed on cabinets and shelves. Does not appear to be significant dust for collection and analysis. No sample collected.
20	If sufficient dust identified, samples collected according to Section 8.0	N/A		
Chain of Custody (COC) and Sample Distribution to Laboratory (Reviewed by Meredith Church on 9/28/18)				
21	Calculate total volume of air samples collected from field sampling sheets (9.2)	1. X 2. X 3. X 4. X 5. X 6. X	1. 2. 3. 4. 5. 6.	Volume calculation from excel spreadsheet using total time multiplied by the average of the pre/post flow rates. Reviewed times, rates, and calculations.
22	Verify all samples accounted for and recorded on COC and COC is filled out correctly (sample ID, methodology, contact info, etc.) (9.1, 9.2, 9.3)	X		Reviewed all samples and COCs at Executive Environmental office at noon on 9/28/18.
23	Samples are delivered to courier, laboratory, or Fed Ex under proper COC (9.4 and 9.5) Metals in Air Via Fed Ex to SGS Galson; Remainder to AETL	X		AETL Courier picked up samples from Executive Environmental at 1300 on 9/28/18. Air samples for metals analysis shipped from FedEx. Daniel Ginsborg signed samples to Meredith Church who then released the samples to the courier/FedEx. Both present for the transfer.
Total Number of Protocol Work Actions/Job Tasks Complied With		**23/23**	**#8, Part 2**	**Pump set up appropriately; however, shut off due to undetermined pump failure**
Percentage of Protocol Work Actions/Job Tasks Complied With		**100%**	**#8, Part 2**	**Pump set up appropriately; however, shut off due to undetermined pump failure**

Note:

1 Standard Operating Procedure (SOP) for Joint Paramount USD/LACDPH in Four Classrooms at Gaines & Lincoln Elementary Schools, Executive Environmental, dated July 30, 2018. SOP Section referred to in Protocol Action is listed in parentheses.

X = Work Actions/Job Tasks Complied With

APPENDIX D

DATA VALIDATION REPORT

Leighton

DATA VALIDATION REPORT
REVISED

PARAMOUNT STUDY

SGS GALSON, NY
DATA DELIVERY GROUP L458004

AMERICAN ENVIRONMENTAL TESTING LABORATORY, INC.
DATA DELIVERY GROUPS 94226, 94227, AND 94228

ORIGINAL REPORT DATE: DECEMBER 3, 2018
REVISION DATE: MARCH 15, 2019

Prepared for:

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HSW Project No: 1CM100601

1.0 Introduction

This Data Validation Report (DVR) is a summary of the review and validation of environmental analytical data for data delivery groups (DDGs) **L458004, 94226, 94227,** and **94228**. The analytical data for L458004 were generated by SGS, Galson, New York (SGS), while the analytical data for the other three DDGs were generated by American Environmental Testing Laboratory, Inc., (AETL), Burbank, California. The analytical deliverables conformed to Stage 2a reporting as defined by the U.S. Environmental Protection Agency (USEPA) in the document titled *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (EPA 540-R-08-005). Validation was limited to these Stage 2a deliverables.

Validation was performed by HSW Engineering, Inc., (HSW) of Tampa, Florida. The analytical data were validated in accordance with validation logic given in the *National Functional Guidelines for Organic Superfund Methods Data Review, January 2017* (EPA 540-R-2017-002) and the *National Functional Guidelines for Inorganic Superfund Methods Data Review* (EPA 540-R-2017-001); referred to collectively as the NFG. Reference also was made to the analytical methods referenced in the laboratory reports.

The data validation qualifiers used to qualify sample data, as needed, are defined in the NFG and summarized as follows.

U	The sample was analyzed for the analyte, but the analyte was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.
UJ	The sample was analyzed for the analyte, but the analyte was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are deemed by the validator to be unusable. The sample results are recommended for rejection by the project team, due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
C	The target pesticide or Aroclor analyte identification has been confirmed by gas chromatography/mass spectrometry (GC/MS).
X	The target pesticide or Aroclor analyte identification was not confirmed when GC/MS analysis was performed. *(Note: This qualifier also may be used for other parameter groups in lieu of an R qualifier, to indicate that the result is recommended for exclusion from the dataset.)*

This DVR originally was issued on December 3, 2018. It was revised on March 15, 2019, to amend Section 2.0 such that the sample matrices were correctly identified. No other changes to the DVR were necessary.

2.0 General Information

The following air and wipe samples were submitted for laboratory analysis and the results reported in the referenced analytical data deliverables.

Table 1. Summary of samples, analyses, and validated data

Sampling Dates	Laboratory	Analytical Data Deliverable	Number of Samples[1/]		
			Matrix	Metals[2/]	Hexavalent Chromium
9/26/2018	SGS	L458004	Air	7	
9/25/2017	AETL	94226	Wipe	12	
9/26/2019	AETL	94227	Wipe		12
9/26/2018	AETL	94228	Air		8
TOTAL				19	20
1/ Does not include field-generated blanks.					
2/ SGS and AETL reported data for the same 14 target metals; however, SGS also reported results for vanadium while AETL did not.					

2.1 Sample Delivery and Condition Upon Receipt

The chain-of-custody (COC) forms were reviewed and deemed acceptable. The samples were received in sufficient quantities and in acceptable condition (i.e., temperature-preserved when required), and were logged in for the requested analyses without issue.

Qualification: None required.

2.2 Case Narrative and Completeness

The laboratory data packages were reviewed for completeness, with no discrepancies noted. The cover letters and/or case narratives adequately addressed analytical issues.

Qualification: None required, based on the case narratives or data package completeness.

2.3 Holding Times

The samples were prepared and analyzed for target analytes within specified holding times.

Qualification: None required.

2.4 Field Quality Control (QC) Samples

2.4.1 Field-Generated Blanks

Laboratory and field blanks were submitted with each of the four sample delivery groups. No target analytes were detected in any of these blanks.

Qualification: None required.

2.4.2 Field Replicates

Field replicates were collected at two air sampling locations: 1) Lincoln ES, Room #3 Computer Room/Library and 2) Gaines ES, Room #23. Both of these primary sample-field replicate pairs were analyzed for hexavalent chromium in air. The primary sample-field replicate pair collected at location

Lincoln ES, Room #3 Computer Room/Library also were analyzed for metals in air. With the exception of a trace amount of hexavalent chromium detected in the replicate collected at Gaines ES, Room #23 (0.0000366 ug/m^3), no target metals were detected in any of these samples. These results meet validation acceptance criteria for cumulative precision (in the latter case, as measured by the absolute difference in results).

Qualification: None required.

3.0 Analytical Data

3.1 Data Delivery Group L458004 (Metals in Air by NIOSH 0500 modified)

Seven air samples and three blanks were analyzed for 15 target metals (antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, selenium, thallium, vanadium, and zinc).

Method Blanks

No target metals were detected in the laboratory method blank.

Qualification: None required.

Blank Spike / Blank Spike Duplicate (BS/BSD)

The recoveries of the 15 target metals in the analysis of the BS/BSD met validation acceptance criteria for analytical accuracy, as measured by the percent recoveries (%Rs), and analytical precision, as measured by the relative percent differences (%RPDs).

Qualification: None required.

Initial and Continuing Calibration Blanks

No target metals were detected in any of the calibration blanks.

Qualification: None required.

Initial and Continuing Calibration Verifications

The recoveries of target metals in the analysis of the ICV and all CCVs were within laboratory control limits in all instances.

Qualification: None required.

Additional Information

No issues associated with the reported results were noted. Detections were limited to low levels of barium in two samples and low levels of barium and copper in two other samples. The laboratory analyzed detection limit standards, with all target analytes recovered within laboratory control limits.

Qualification: None required.

3.2 Data Delivery Group 94226 (Metals in Wipe Samples by EPA Method 6010B)

Twelve wipe samples and three wipe blanks were analyzed for 14 target metals (antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, selenium, thallium,

and zinc; vanadium was not reported). The samples were analyzed in one or the other of two analytical batches.

Method Blanks
No target analytes were detected in either of the two laboratory method blanks.

Qualification: None required.

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)
The recoveries of target metals reported for the LCS/LCSD met validation acceptance criteria for analytical accuracy (%Rs) and analytical precision (%RPDs).

Qualification: None required.

Additional Information
No additional information was provided by the laboratory. As noted in the case narrative, no analytical non-conformances were encountered.

Qualification: None required.

3.3 Data Delivery Group 94227 (Hexavalent Chromium in Wipe Samples by EPA Method 7199)

Twelve wipe samples and three wipe blanks were analyzed for hexavalent chromium.

Method Blanks
No hexavalent chromium was detected in the laboratory method blank.

Qualification: None required.

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)
The recoveries of hexavalent chromium reported for the LCS/LCSD (94.9% and 92.4%) met validation acceptance criteria for analytical accuracy (%Rs) and analytical precision (%RPD of 2.7%).

Qualification: None required.

Additional Information
No additional information was provided by the laboratory. As noted in the case narrative, no analytical non-conformances were encountered.

Qualification: None required.

3.4 Data Delivery Group 94228 (Hexavalent Chromium in Air Samples by Method CARB-039)

Eight air samples and three blanks were analyzed for hexavalent chromium.

Method Blanks
No hexavalent chromium was detected in the laboratory method blank.

Qualification: None required.

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)
The recoveries of hexavalent chromium reported for the LCS/LCSD (both 97%) met validation acceptance criteria for analytical accuracy (%Rs) and analytical precision (%RPD).

Qualification: None required.

Additional Information
No additional information was provided by the laboratory. As noted in the case narrative, no analytical non-conformances were encountered.

Qualification: None required.

4.0 Final Validation Qualifiers

No results were qualified as a result of the validation. Qualifiers of J applied by the laboratory to detections that were less than the limits of quantitation (LOQs) should be retained to indicate that the reported values are estimates. These results are otherwise fully usable. As no results were recommended for exclusion or rejection, analytical completeness is 100%.