

## **WATERSTONE ENVIRONMENTAL, INC.**

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December 11, 2015

Los Angeles Unified School District  
Office of Environmental Health and Safety  
333 South Beaudry Street, 21st Floor  
Los Angeles, California 90017-5156

**Re: Analytical Results for Castlebay Lane Elementary School in Porter Ranch,  
California**

Please find attached laboratory reports a portion of the samples collected on Wednesday December 9, 2015 and Thursday December 10, 2015. Although I expect to receive additional laboratory reports for sampling conducted during this period this letter is intended to transmit the analytical results completed to date.

***Sample Collection and Analysis***

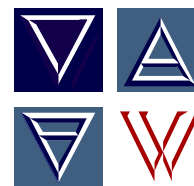
Attached laboratory reports received to date for sample collection on Wednesday December 9, 2015 are results of three grab samples (over a 5 minute period) collected in tedlar bags at various locations inside and outside at the school. Samples were submitted for analysis of sulfur compounds by SCAQMD Method 307-91, hydrocarbon speciation by modified EPA 18, and BTEX by EPA Method TO-14.

Attached laboratory reports received to date are for sample collection on Thursday December 10, 2015 are results of three grab samples (over a 5 minute period) collected in tedlar bags at various locations at the school. The three tedlar bag samples were submitted for analysis of benzene, toluene, ethylbenzene and xylene (BTEX) by EPA Method TO-14/TO-15.

***Analytical and Real Time Monitoring Results***

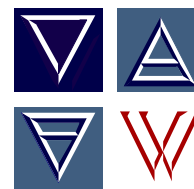
The sample IDs created to refer to Castlebay Lane Elementary School are designated with a "CR" in the sample ID. The analytical results for Castlebay Elementary School presented in the attached laboratory reports are summarized as follows:

- No sulfur compounds were detected at concentrations above laboratory detection limits.
- Methane was detected at a maximum concentration of 87,220 parts per billion by volume (ppbv) and below the environmental screening limits for methane of 500,000 ppbv used by the Department of Toxic Substances Control (DTSC) and 1,000,000 ppbv used by the National Institute for Occupational Safety and Health (NIOSH). Additionally, methane was not detected at a concentration that requires a fire contingency plan (8,800,000 ppbv) as required by the Los Angeles County Building Code.



- Ethane/ethylene was detected at a maximum concentration of 4,920 ppbv and below the level of 1,000,000 ppbv ethane or the level of 2,000,000 ppbv ethylene used by NIOSH for an 8-hour worker exposure.
- Benzene was detected at a maximum concentration of 0.77 ppbv and below the level of 8 ppbv benzene Reference Exposure Level (RELs) developed and published by California's Office of Environmental Health Hazards (OEHHA).
- Toluene was detected at a maximum concentration of 2.7 ppbv and below the level of 9,640 ppbv toluene Reference Exposure Level (RELs) developed and published by California's Office of Environmental Health Hazards (OEHHA).
- Ethylbenzene was detected at a maximum concentration of 0.55 ppbv and below the level of 450 ppbv ethylbenzene Reference Exposure Level (RELs) developed and published by California's Office of Environmental Health Hazards (OEHHA).
- Xylenes were detected at a maximum concentration of 2.5 ppbv and below the level of 4,970 ppbv xylene REL developed and published by OEHHA.

Analyte	Maximum On-site Detection (ppbv)	Environmental Regulatory Limit (ppbv)	Environmental Regulatory Limit Description
Sulfide Compounds	None	30 (Hydrogen Sulfide)  7 (Hydrogen Sulfide)	California Ambient Air – 1 hour and OEHHA Acute REL (42 ug/m <sup>3</sup> )*  OEHHA Chronic REL (10 ug/m <sup>3</sup> )*
Methane	87,220	500,000  1,000,000	DTSC Site-Specific Screening Level (for ambient indoor and outdoor air). <a href="http://www.hawaiiidoh.org/references/CalEPA%202005b.pdf">http://www.hawaiiidoh.org/references/CalEPA%202005b.pdf</a>  NIOSH maximum recommended safe methane concentration for workers during an 8-hour period. <a href="http://www.cdc.gov/niosh/ipcsneng/neng0291.html">http://www.cdc.gov/niosh/ipcsneng/neng0291.html</a>
Ethane, Ethylene	4,920	1,000,000  2,000,000	NIOSH maximum recommended safe ethane concentration for workers during an 8-hour period. <a href="http://www.cdc.gov/niosh/ipcsneng/neng0266.html">http://www.cdc.gov/niosh/ipcsneng/neng0266.html</a>  NIOSH maximum recommended safe ethylene concentration for workers during an 8-hour period. <a href="http://www.cdc.gov/niosh/ipcsneng/neng0475.html">http://www.cdc.gov/niosh/ipcsneng/neng0475.html</a>
Other Hydrocarbon Speciations by EPA 18	None	1,950 (Hexane)	OEHHA Chronic REL (7,000 ug/m <sup>3</sup> )*
Benzene	0.77	8 1	OEHHA Acute REL (27 ug/m <sup>3</sup> )* 8-hour and chronic OEHHA RELs (3 ug/m <sup>3</sup> )*
Toluene	2.7	9,640 80	OEHHA Acute REL (37,000 ug/m <sup>3</sup> )* OEHHA Chronic REL (300 ug/m <sup>3</sup> )*



Analyte	Maximum On-site Detection (ppbv)	Environmental Regulatory Limit (ppbv)	Environmental Regulatory Limit Description
Ethylbenzene	0.55	450	OEHHA Chronic REL (2,000 ug/m <sup>3</sup> )*
Xylenes	2.5	4,970 160	OEHHA Acute REL (22,000 ug/m <sup>3</sup> )* OEHHA Chronic REL (700 ug/m <sup>3</sup> )*

\* OEHHA RELs listed in micrograms per cubic meter (ug/m<sup>3</sup>) have been converted to ppbv using the molecular weight of each specific chemical. <http://oehha.ca.gov/air/allrels.html>

The majority of the regulatory limits we are comparing against are Reference Exposure Levels (RELs) developed and published by California's Office of Environmental Health Hazards (OEHHA). OEHHA is one of six agencies under the umbrella of the California Environmental Protection Agency (Cal/EPA). OEHHA's overall mission is to protect and enhance public health and the environment by scientific evaluation of risks posed by hazardous substances.

OEHHA evaluates health effects of chemicals 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. OEHHA provides health-related assistance to the Air Resources Board, air pollution control districts, local health officers and environmental health officers.

Methane was compared to the DTSC Site-Specific Screening Level for ambient indoor and outdoor air as well as the NIOSH maximum recommended safe methane concentration for workers during an 8-hour period.

As shown in the table above, the maximum on-site detections are well below the published environmental regulatory limits.

Sincerely,

Elizabeth Gonzalez, P.E.  
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Waterstone Environmental, Inc.

Jeffrey V. Dagdigian, PhD  
Managing Principal Environmental Scientist  
Waterstone Environmental, Inc.

Attachments