

WATERSTONE ENVIRONMENTAL, INC.

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December 17, 2015

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

Re: Air Testing Results for Castlebay Lane Elementary School in Porter Ranch, California

Waterstone Environmental, Inc. (Waterstone) is pleased to submit this letter report detailing the results of recent air testing and sample collection at the Porter Ranch Community School located at 19010 Castlebay Lane, Porter Ranch, California.

Waterstone has collected air samples and conducting real time air monitoring using various handheld monitors. This report summarizes the results of air sample analysis for samples collected on December 11, 2015.

Sample Collection and Analysis

Sample collection consisted of both grab samples (approximately 2 minute sample filling period) in tedlar bags as well as 8-hour samples collected in summa canisters in the indoor plant manager office. The summa canisters were placed in the breathing zone and allowed to sit undisturbed for a period of 8 hours.

One tedlar bag sample and one summa canister sample were delivered to Quantum Analytical Services Inc., a laboratory certified by the South Coast Air Quality Management District (SCAQMD) and the California Air Resources Board (CARB). Both samples were submitted for analysis of sulfur compounds by SCAQMD Method 307-91, and hydrocarbon speciation by modified EPA 18. The complete laboratory report with analysis results is attached.

One tedlar bag sample and one summa canister sample were delivered to Air Technology Laboratories, Inc., a laboratory accredited by the National Environmental Laboratory Accreditation Program (NELAP). Samples were submitted for analysis of BTEX by EPA Method TO-15. The complete laboratory report with analysis results is attached.

Real time air monitoring was conducted in indoor and outdoor spaces using a Micro Flame Ionization Detector (FID) to measure volatile organic compounds (VOCs) as an indicator of the potential presence of methane, a Jerome J631X for hydrogen sulfide detection, a photo ionization detector (PID) to measure VOCs as an indicator of the potential presence of benzene, and dräger tubes for benzene, toluene, ethylbenzene, and xylenes.



Analytical Results

The sample IDs created to refer to Castlebay Lane Elementary School are designated with a "CB" in the sample ID. The analytical results for Castlebay Lane 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 4,460 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 (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.
- ➤ The maximum concentration of benzene detected was 0.38 ppbv and below the environmental screening limits for benzene of 8 ppbv used by OEHHA for a 1-hour acute exposure.
- ➤ The maximum concentration of toluene detected was 2.7 ppbv and below the environmental screening limits for toluene of 9,640 ppbv used by OEHHA for a 1-hour acute exposure.
- ➤ The maximum concentration of ethylbenzene detected was 0.73 ppbv and below the environmental screening limits for ethylbenzene of 450 ppbv used by OEHHA for a chronic (lifetime) exposure.
- ➤ The maximum concentration of xylene detected was 4.7 ppbv and below the environmental screening limits for xylene of 4,970 ppbv used by OEHHA for a 1-hour acute exposure.

	Maximum On-site	Environmental	
Analyte	Detection (ppbv)	Regulatory Limit (ppbv)	Environmental Regulatory Limit Description
Sulfide Compounds	None	30 (Hydrogen Sulfide)	California Ambient Air – 1 hour and OEHHA Acute REL (42 ug/m³)*
		7 (Hydrogen Sulfide)	OEHHA Chronic REL (10 ug/m³)*
Methane	4,460	500,000	DTSC Site-Specific Screening Level (for ambient indoor and outdoor air). http://www.hawaiidoh.org/references/CalEPA%202005b.pdf
		1,000,000	NIOSH maximum recommended safe methane concentration for workers during an 8-hour period. http://www.cdc.gov/niosh/ipcsneng/neng0291.html



Analyte	Maximum On-site Detection (ppbv)	Environmental Regulatory Limit (ppbv)	Environmental Regulatory Limit Description
Ethane, Ethylene	None	1,000,000	NIOSH maximum recommended safe ethane concentration for workers during an 8-hour period. http://www.cdc.gov/niosh/ipcsneng/neng0266.html
		2,000,000	NIOSH maximum recommended safe ethylene concentration for workers during an 8-hour period. http://www.cdc.gov/niosh/ipcsneng/neng0475.html
Other Hydrocarbon Speciations by EPA 18	None	1,950 (Hexane)	OEHHA Chronic REL (7,000 ug/m³)*
Benzene	0.38	8	OEHHA Acute REL (27 ug/m³)* 8-hour and chronic OEHHA RELs (3 ug/m³)*
Toluene	2.7	9,640 80	OEHHA Acute REL (37,000 ug/m³)* OEHHA Chronic REL (300 ug/m³)*
Ethylbenzene	0.73	450	OEHHA Chronic REL (2,000 ug/m³)*
Xylenes	4.7	4,970 160	OEHHA Acute REL (22,000 ug/m³)* OEHHA Chronic REL (700 ug/m³)*

^{*} OEHHA RELs listed in micrograms per cubic meter (ug/m³) have been converted to ppbv using the molecular weight of each specific chemical. http://oehha.ca.gov/air/allrels.html

Real Time Monitoring Results

The real time monitoring logs are attached. Hydrogen sulfide, VOCs, benzene, toluene, ethylbenzene, and xylene compounds were not detected during field monitoring.

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.

Principal Engineer

Waterstone Environmental, Inc.

Attachments

Grace M. Rinck, CIH

Vice-President

Aurora Industrial Hygiene, Inc.