WATERSTONE ENVIRONMENTAL, INC.

2936 E. CORONADO STREET * ANAHEIM * CA 92806
714-414-1122 * FAX: 714-414-1166

December 3, 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 Castlebay Lane Elementary 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 November 30, 2015.

Sample Collection and Analysis

Sample collection consisted of both a grab sample (over a 15 minute period) in a tedlar bag as well as an 8-hour sample collected in a summa canister in indoor office space at the school. Both 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. The complete laboratory report with analysis results is attached.

The summa canisters were placed in the breathing zone and allowed to sit undisturbed for a period of 8 hours. Samples 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).

Real time air monitoring was conducted in indoor and outdoor spaces using a Micro Flame Ionization Detector (FID) for methane detection, a Jerome J605 for hydrogen sulfide detection.

Analytical and Real Time Monitoring 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 3,300 parts per billion by volume (ppbv); however, no other analytes were detected by method EPA 18. There are no environmental regulatory limits for methane toxicity. Methane was not detected at a concentration that requires a fire contingency plan (8,800,000 ppb) as required by the Los Angeles County Building Code.
- Toluene, ethylbenzene, and xylenes were detected at low concentrations below environmental regulatory limits at Castlebay Lane Elementary School as shown below:

Analyte	**Maximum On-site Detection (ppbv) - CB**	**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 OEHHA Chronic REL
Methane	3,300	None	None
Other Hydrocarbon Speciations by EPA 18	None	1,950 (Hexane)	OEHHA Chronic REL
Benzene	None	8 1 1	OEHHA Acute REL 8-hour and chronic OEHHA RELs Proposition 65 No Significant Risk Level (NSRL)
Toluene	14.37	9,640 80 90	OEHHA Acute REL OEHHA Chronic REL Proposition 65 Maximum Allowable Daily Level (MADL)
Ethyl Benzene	11.37	450	OEHHA Chronic REL
Xylenes	39.89	4,970 160	OEHHA Acute REL OEHHA Chronic REL

The real time monitoring logs are attached and results are summarized as follows:

- Methane was not detected.
- Hydrogen sulfide was not detected.

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.

Regulatory limits also include Proposition 65 No Significant Risk Levels (NSRL) and Maximum Allowable Daily Level (MADL) for potentially carcinogenic compounds. Proposition 65, the Safe Drinking Water and Toxic Enforcement Act of 1986, was enacted as a ballot initiative in November 1986. The Proposition was intended by its authors to protect California citizens and the State's drinking water sources from chemicals known to cause cancer, birth defects or other reproductive harm, and to inform citizens about exposures to such chemicals.

As shown in the table above, the maximum on-site detections are well below the published environmental regulatory limits and no sulfide compounds were detected above laboratory detection limits.

Sincerely,

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

Grace M. Rinck, CIH
Vice-President
Aurora Industrial Hygiene, Inc.

Attachments

Quantum Analytical Services Inc.
www.quantumairlab.com
1210 E. 223rd Street, Suite #314 • Carson, California 90745 • 310/830-2226 • Fax 310/830-2227

CLIENT Waterstone Environmental
CLIENT PROJECT: LAUSD
LAB PROJ NO: 15-912
SAMPLING DATE: November 30, 2015
RECEIVING DATE: November 30, 2015
ANALYSIS DATE: December 1, 2015
REPORT DATE: December 2, 2015

Laboratory Analysis Report

Analysis Method	TO-14				
Detection Limits	3.0 PPBV				
ANALYTE	Sample ID	PR-1 (Bag)	CB-1 (Bag)	PR-Summa-1 (Tk 102)	CB-Summa-1 (Tk 103)
	Sample Time	0930	1110	0700	0715
	Sampling Date	11/30/15	11/30/15	11/30/15	11/30/15
	Lab ID	33415-35	33415-36	33415-37	33415-38
	Units	PPBV	PPBV	PPBV	PPBV
Benzene		<3.0	<3.0	<3.0	<3.0
Toluene		<3.0	14.37	<3.0	<3.0
Ethyl Benzene		<3.0	11.37	<3.0	<3.0
m, p Xylene		<3.0	34.25	<3.0	<3.0
o- Xylene		<3.0	5.64	<3.0	<3.0

Dr. Andrew Kitto
President

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LAB PROJ NO:	**15-912**
SAMPLING DATE:	**November 30, 2015**
RECEIVING DATE:	November 30, 2015
ANALYSIS DATE:	December 1, 2015
REPORT DATE:	December 2, 2015

BTEX - Laboratory Analysis Report (QA-QC)

Sample ID: PR-1 (Bag) Sample ID: 33415-35

Analyte	Analysis #1 PPBV	Analysis #2 PPBV	Mean PPBV	% Difference from the Mean*
Benzene	<3.0	<3.0	<3.0	N/A
Toluene	<3.0	<3.0	<3.0	N/A
Ethyl Benzene	<3.0	<3.0	<3.0	N/A
m, p Xylene	<3.0	<3.0	<3.0	N/A
o- Xylene	<3.0	<3.0	<3.0	N/A

N/A: Not Applicable *:Must be ≤10%

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CLIENT	**Waterstone Environmental**
LAB PROJ NO:	**15-912**
SAMPLING DATE:	**November 30, 2015**
RECEIVING DATE:	November 30, 2015
ANALYSIS DATE:	December 1, 2015
REPORT DATE:	December 2, 2015

Quality Control/Quality Assurance Report

I- Blank

Lab ID	Result (PPBV)
Benzene	<5.0
Toluene	<5.0
Ethyl Benzene	<5.0
m, p Xylene	<5.0
o- Xylene	<5.0

II- Initial Calibration Verification Standard (ICV)

Lab ID	Theoretical Value PPBV	Tested Value PPBV	% Recovery*
Benzene	103.0	96.1	93%
Toluene	105.0	95.9	91%
Ethyl Benzene	104.0	101.9	98%
m, p Xylene	206.0	201.8	98%
o- Xylene	99.60	101.5	102%

* Must be ±10%

III- Closing Calibration Verification Standard (CCV)

Lab ID	Theoretical Value PPBV	Tested Value PPBV	% Recovery*
Benzene	51.5	49.37	96%
Toluene	52.5	50.75	97%
Ethyl Benzene	52.0	50.63	97%
m, p Xylene	103.0	103.75	101%
o- Xylene	49.8	50.25	101%

* Must be ±10%

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CLIENT	**Waterstone Environmental**
PROJECT NO:	**LAUSD**
LABORATORY NO:	**15-912**
SAMPLING DATE:	**November 30, 2015**
RECEIVING DATE:	November 30, 2015
ANALYSIS DATE:	December 1, 2015
REPORT DATE:	December 2, 2015

Laboratory Analysis Report

Analysis Method	**SCAQMD 307-91**				
Detection Limits	**5.0 PPBV**				
Analyte	**Client ID**	**PR-1 (Bag)**	**CB-1 (Bag)**	**PR-Summa-1 (Tk 102)**	**CB-Summa-1 (Tk 103)**
	Sampling Time	**0930**	**1110**	**0700**	**0715**
	Sampling Date	**11/30/15**	**11/30/15**	**11/30/15**	**11/30/15**
	Lab ID	**33415-35**	**33415-36**	**33415-37**	**33415-38**
	Units	**PPBV**	**PPBV**	**PPBV**	**PPBV**
Hydrogen Sulfide		<5.0	<5.0	<5.0	<5.0
Carbonyl Sulfide		<5.0	<5.0	<5.0	<5.0
Methyl Mercaptan		<5.0	<5.0	<5.0	<5.0
Ethyl Mercaptan		<5.0	<5.0	<5.0	<5.0
Carbon Disulfide		<5.0	<5.0	<5.0	<5.0
t- Butyle Mercaptan		<5.0	<5.0	<5.0	<5.0
Tetra hydro-thiophene		<5.0	<5.0	<5.0	<5.0
Un-Identified S Compounds		<5.0	<5.0	<5.0	<5.0
TRS as H2S		**<40.0**	**<40.0**	**<40.0**	**<40.0**

TRS: Total Reduced Sulfur as Hydrogen Sulfide

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CLIENT PROJECT:	**LAUSD**
LAB PROJ NO:	**15-912**
SAMPLING DATE:	**November 30, 2015**
RECEIVING DATE:	November 30, 2015
ANALYSIS DATE:	December 1, 2015
REPORT DATE:	December 2, 2015

Quality Assurance Report

Duplicate Analysis

SAMPLE ID: PR-1 (Bag) LAB ID: 33415-35

Analysis Method		**SCAQMD 307-91**		
Detection Limit		**5.0 PPBV**		
Analyte	**Aver. Conc. PPBV**	**Dil. Factor Ambient Air**	**DF*A/CF PPBV**	**% Sample Recovery**
Hydrogen Sulfide	<5.0	1	<5.0	N/A
Carbonyl Sulfide	<5.0	1	<5.0	N/A
Methyl Mercaptan	<5.0	1	<5.0	N/A
Ethyl Mercaptan	<5.0	1	<5.0	N/A
Carbon Disulfide	<5.0	1	<5.0	N/A
t- Butyle Mercaptan	<5.0	1	<5.0	N/A
Tetra hydro-thiophene	<5.0	1	<5.0	N/A
Unidentified S Compounds	<5.0	1	<5.0	N/A
Total Sulfur as H2S	**<40.0**	**1**	**<40.0**	**N/A**

N/A: Not Applicable

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ANALYSIS DATE:	December 1, 2015
REPORT DATE:	December 2, 2015

Laboratory Analysis Report (1 of 4)

Analysis Method	EPA 18			
Detection Limits	**0.2 PPMV**			
ANALYTE / **Sample ID**	**PR-1 (Bag)**	**CB-1 (Bag)**	**PR-Summa-1 (Tk 102)**	**CB-Summa-1 (Tk 103)**
Sample Time	**0930**	**1110**	**0700**	**0715**
Sampling Date	**11/30/15**	**11/30/15**	**11/30/15**	**11/30/15**
Lab ID	**33415-35**	**33415-36**	**33415-37**	**33415-38**
Units	**PPMV**	**PPMV**	**PPMV**	**PPMV**
C1 - Methane	3.32	3.30	3.46	3.16
C2 - Ethane, Ethylene	<0.2	<0.2	<0.2	<0.2
C3 - Propane	<0.2	<0.2	<0.2	<0.2
Iso Butane	<0.2	<0.2	<0.2	<0.2
n- Butane	<0.2	<0.2	<0.2	<0.2
Iso-Pentane	<0.2	<0.2	<0.2	<0.2
n-Pentane	<0.2	<0.2	<0.2	<0.2
C6 - Hexanes	<0.2	<0.2	<0.2	<0.2
C6+	<0.2	<0.2	<0.2	<0.2
TNMHC	<1.0	<1.0	<1.0	<1.0

TNMHC - Total Non-Methane HydroCarbon

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LAB PROJ NO:	**15-912**
SAMPLING DATE:	**November 30, 2015**
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ANALYSIS DATE:	December 1, 2015
REPORT DATE:	December 2, 2015

EPA 18 - Laboratory Analysis Report (QA-QC)

Sample ID: PR-1 (Bag) Sample ID: 33415-35

Analyte	Analysis #1 PPMV	Analysis #2 PPMV	Mean PPMV	% Difference from the Mean*
C1 - Methane	3.32	3.41	3.37	1.3
C2 - Ethane, Ethylene	<0.2	1.22	<0.2	N/A
C3 - Propane	<0.2	<0.2	<0.2	N/A
iso-Butane	<0.2	<0.2	<0.2	N/A
n-Butane	<0.2	<0.2	<0.2	N/A
iso- Pentane	<0.2	<0.2	<0.2	N/A
n-Pentane	<0.2	<0.2	<0.2	N/A
C6 - Hexanes	<0.2	<0.2	<0.2	N/A
C6+	<0.2	<0.2	<0.2	N/A

N/A: Not Applicable *:Must be ≤10%

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Quality Control/Quality Assurance Report

I- Blank

Lab ID	Results PPMV
C1 - Methane	<0.2
C2 - Ethane	<0.2
C3 - Propane	<0.2
C4 - Butane	<0.2
C5 - Pentane	<0.2
C6 - Hexane	<0.2

II- Initial Calibration Verification Standard (ICV)

Lab ID	Theoretical Value PPMV	Tested Value PPMV	% Recovery*
C1 - Methane	14.99	15.28	102%
C2 - Ethane	15.12	15.03	99%
C3 - Propane	15.27	15.04	98%
C4 - Butane	15.04	15.00	100%
C5 - Pentane	15.04	15.05	100%
C6 - Hexane	14.95	14.63	98%

* Must be ±10%

III- Closing Calibration Verification Standard (CCV)

Lab ID	Theoretical Value PPMV	Tested Value PPMV	% Recovery*
C1 - Methane	3.00	3.05	102%
C2 - Ethane	3.02	3.05	101%
C3 - Propane	3.05	3.05	100%
C4 - Butane	3.01	3.08	102%
C5 - Pentane	3.01	3.02	100%
C6 - Hexane	2.99	3.09	103%

* Must be ±10%

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15-912 № 7898

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CHAIN OF CUSTODY

Page: 1 of: 1

Client: Waterstone Environmental

Contact Person: Elizabeth Gonzalez
tel: 714 414 1122
fax:

Project No.: 15-202
Project Name: LAUSD
Project Manager: Elizabeth
P.O. Number:

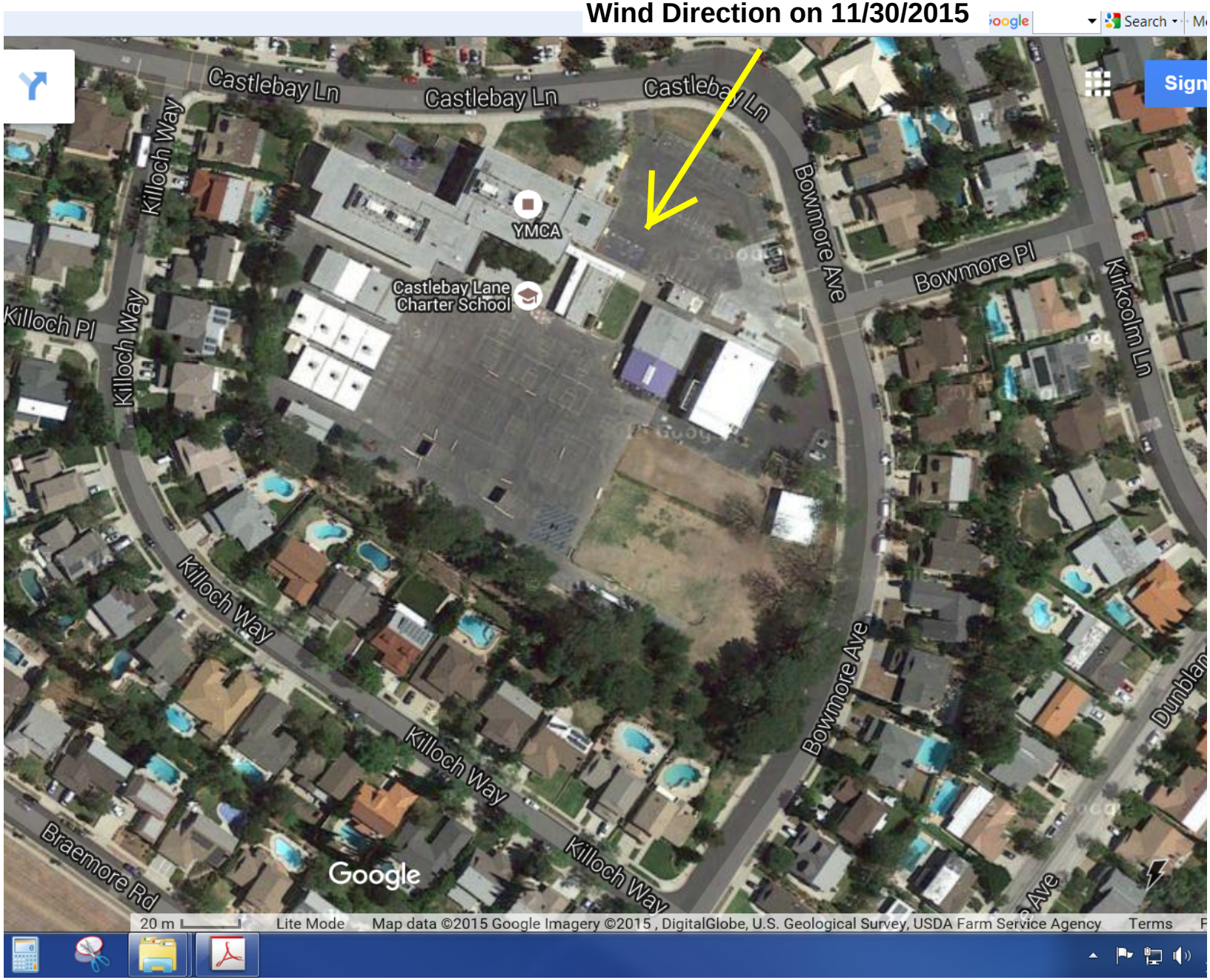
Analysis: SCAQMD Method 307-91; Hydrocarbon Speciation EPA 18; BTEX TO-14

Turnaround Time:
- ☐ Same Day
- ☐ 24 Hours
- ☒ 48 Hours
- ☐ Normal

Client Sample ID	Tag #	Date	Time	Lab ID Number							Remarks
PR-1		11/30/15	9:30	33415-35	X	X	X				Tedlar Bag
CB-1			11:10	-36	X	X	X				Tedlar Bag
PR-SummA-1	102		7:00	-37	X	X	X				
CB-SummA-1	103	↓	7:15	-38	X	X	X				

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/time
[signature]	11/30/15 16:54	[signature]	11/30/15 16:55
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/time

Wind Direction on 11/30/2015



NORTH

Castlebay Elementary School

AIR MONITORING LOG

CLIENT: **LAUSD** DATE: 11/30/15

ADDRESS: Castle bay LANE Elementary PROJECT 15-702

SUBSTANCE / AGENT: Factory Calibration CALIBRATION READING: - - ppmv

INSTRUMENT and ID# Jerome 631-x (H_2S) + PID (CH_4) CALIBRATION GAS/VALUE: - - / ppmv

TIME	CH4 CONCENTRATION	H2S CONCENTRATION	ACTIVITY/ LOCATION	INITIALS
755	0.0 ppm	0.000 ppm	Playground / Blacktop (See map)	Travis Dunlap
1030	0.0	0.000	Classrooms / Hallways	
1100	0.0	0.000	Classrooms / Hallways	
1215	0.0	0.000	same as above	
Lunch				
1325	0.0	0.000	" "	
1425	0.0	0.000	" "	

Weather Conditions: 31. cloudy Wind Speed: 10-15 mph Wind Dir: S-SW Temp: 60° F

Comments: Constant Breeze of about 10-15 mph all day -> constant wind direction mostly South South west