



AMBIENT INDOOR AIR QUALITY EVALUATION

EAST BRUNSWICK PUBLIC SCHOOLS

AUGUST 2020

CONDUCTED FOR:

EAST BRUNSWICK BOARD OF EDUCATION

760 ROUTE 18

EAST BRUNSWICK, NEW JERSEY 08816

TOM PRUNO
DIRECTOR OF OPERATIONS

REPORT DATED:
October 9, 2020



EXECUTIVE SUMMARY

Environmental Design Inc. conducted an Ambient Indoor Air Quality Evaluation for the East Brunswick Board of Education (also referred to in this document as the “Client”) in all district schools and facilities from August 21st through August 28th, 2020. The purpose of the evaluation was to document the levels of various indoor air quality parameters to ensure the buildings were ready for occupancy by students and staff for the start of the new school year.

The following types of quantitative sampling, analysis, and data collection were conducted as part of the Ambient Indoor Air Quality Evaluation:

- Airborne mold/fungal spores via Zefon Air-O-Cell® sampling system
- Respirable Dust measured as PM 2.5 via Particle Meter
- Total Dust measured as Total Particulate Mass (TPM) via Particle Meter
- Temperature and relative humidity
- Carbon dioxide and carbon monoxide
- Methane, hydrogen sulfide, and oxygen
- VOC measure via TO-15 Method and direct-read instrumentation

EDI collected samples throughout each building at representative locations. In addition to field measurements and collection of analytical samples, *EDI* conducted a cursory visual assessment in each facility.

Based on the analytical laboratory results, quantitative measurements recorded in the field and information provided by the Client, as well as visual observations made throughout each building, it is the professional opinion of *EDI* that the schools and facilities are suitable for occupancy.

FUNGAL/MOLD TESTING METHODOLOGY

Airborne mold and fungal spores can be found in almost every outdoor and indoor environment; however, their presence indoors does not necessarily indicate a problem with air quality. Samples of indoor air can be analyzed to determine what families of mold and fungal spores are present in the air and at what concentration. While the majority of microorganisms do not cause adverse health effects in humans, knowing what microbes are present in the indoor environment can help diagnosis health symptoms and also assess the effectiveness of mechanical building systems, such as heating and air conditioning systems. When suspect growth is observed on indoor surfaces a physical swab sample can be collected to identify the spores. Determination of the fungal families present in the indoor environment is important for assessing potential health risks to occupants and for developing potential remediation strategies.

Airborne microbial samples are collected utilizing a Zefon Air-O-Cell® sampling system which consists of an Air-O-Cell® sample cassette and a portable, Bio-Pump® sampling pump calibrated at 15 liters per minute. The Air-O-Cell® sampling system is specifically engineered for the collection of airborne mold and fungal spores. The Air-O-Cell® cassette collects both viable and non-viable specimens providing a broad overview of potential airborne contaminants.

The Air-O-Cell® cassette functions on the principle of inertial impaction. Air is accelerated as it is drawn through the tapered inlet and directed towards the collection media. The entrained particles impact on the collection media while the air flow continues through the exit orifice (See Figure 1.). The adhesive nature of the collection media traps the particles in the cassette and eliminates sample loss during transportation and analytical preparation.

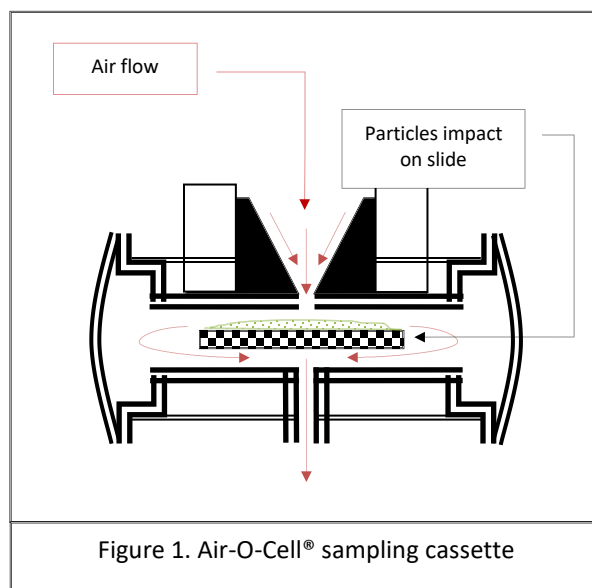


Figure 1. Air-O-Cell® sampling cassette

Airborne samples collected via the Air-O-Cell® sampling system are analyzed according to the ASTM D7391 standard. The method collects and counts both active and dormant spores. The sample media is analyzed using direct microscopic methods. Results are expressed in counts per cubic meter of air (counts/m³). Surface sampling via tape lift media allows for the direct microscopic examination of suspect material to determine the presence or absence of mold spores. The lab results provide confirmatory evidence of mold, or lack thereof, but not a quantifiable measure of the amount of mold present in the area from where the sample was collected. For tape lift sampling, a clear adhesive tape strip is used to collect suspect material which is then affixed to a glass microscope slide and sealed in an individual plastic case for transport. The method collects active and dormant spores.

All samples were analyzed by EMSL Analytical Inc. in Cinnaminson, New Jersey, an independent and fully accredited laboratory. Additional details about all samples can be found in the *Laboratory Reports* section of this report.

AIRBORNE FUNGAL/MOLD TESTING FINDINGS

The results of the airborne mold sampling are presented in the following table expressed as Spore Counts per cubic meter of air (counts/m³):

Facility	Average Count Indoors	Outdoor Spore Count
Admin. Building	334	20,770
Bowne-Munro	1,006	35,910
Central	730	65,630
Chittick	584	34,400
Churchill	986	12,360
EBHS	4,106	13,770
Frost	1,776	14,390
Hammarskjold	334	34,170
Irwin	652	9,710
Lawrence Brook	524	14,210
Memorial	258	18,690
SOP Building	3,816	14,020
Warnsdorfer	812	25,070

Overall, the level of airborne mold spores throughout each facility was lower than the outdoor air. Additionally, the types of spores detected indoors were consistent with the types of spores detected outdoors.

Considering the analytical data as well as visual observations in each facility, it is the professional opinion of *Environmental Design Inc.* that there is not an unusual indoor airborne mold condition in the district buildings.

Mold and fungi are everywhere. Whether people can “smell mold” and whether adverse medical symptoms develop in people exposed to mold depends in large part on the nature of the mold, the exposure level, and the susceptibility of exposed persons. Susceptibility varies with genetic predisposition, age, pre-existing medical conditions (i.e. pulmonary conditions), use of immunosuppressive drugs, and exposure to other allergens. It is for these reasons, and others, that regulatory agencies have not established permissible exposure limits for mold. As a result of there being no quantitative exposure limits, all laboratory results are subject to interpretation and should be viewed in conjunction with other data and observations specific to the site.

Additional details on the laboratory analysis can be found in the *Laboratory Reports* section of this report at Appendix A.

DUST MONITORING

Utilizing a six channel Particle Plus Model 8306 Particle Counter **EDI** measured the concentrations of airborne particles sized at 0.3, 0.5, 1.0, 2.5, 5.0 and 10.0 microns, respectively, as well as the total particle counts for each of these size ranges. **EDI** recorded airborne particle counts and airborne particle concentrations throughout each building and outdoors.

The particle counter instrument uses a laser-diode light source and *collection optics* for particle detection. Particles scatter light from the laser diode. The *collection optic* collects and focuses the light onto a photo diode that converts the bursts of light into electrical pulses. The pulse height is a measure of particle size. Pulses are counted and their amplitude is measured for particle sizing. Results are displayed as particle counts in the corresponding size channel.

Respirable Particulate Matter (RPM) is dust that is small enough to be inhaled deep into the lungs. During construction or renovation activities, the dust created or generated from wood, sheetrock and other building materials is classified by OSHA as Particulates Not Otherwise Regulated (PNOR), also known as Nuisance Dusts. This category includes particulates that have been determined to be mostly irritants, typically causing only minor health effects.

Small dust particles can be hazardous for human health. Airborne particles measuring 100 microns or less can enter the nose and mouth during normal breathing. Particles 10 microns in diameter and less can pass through the nose and throat to reach the lungs, while particles less than 5 microns in diameter can penetrate deep into the alveolar sacs of the lung, the gas exchange region in the lungs.

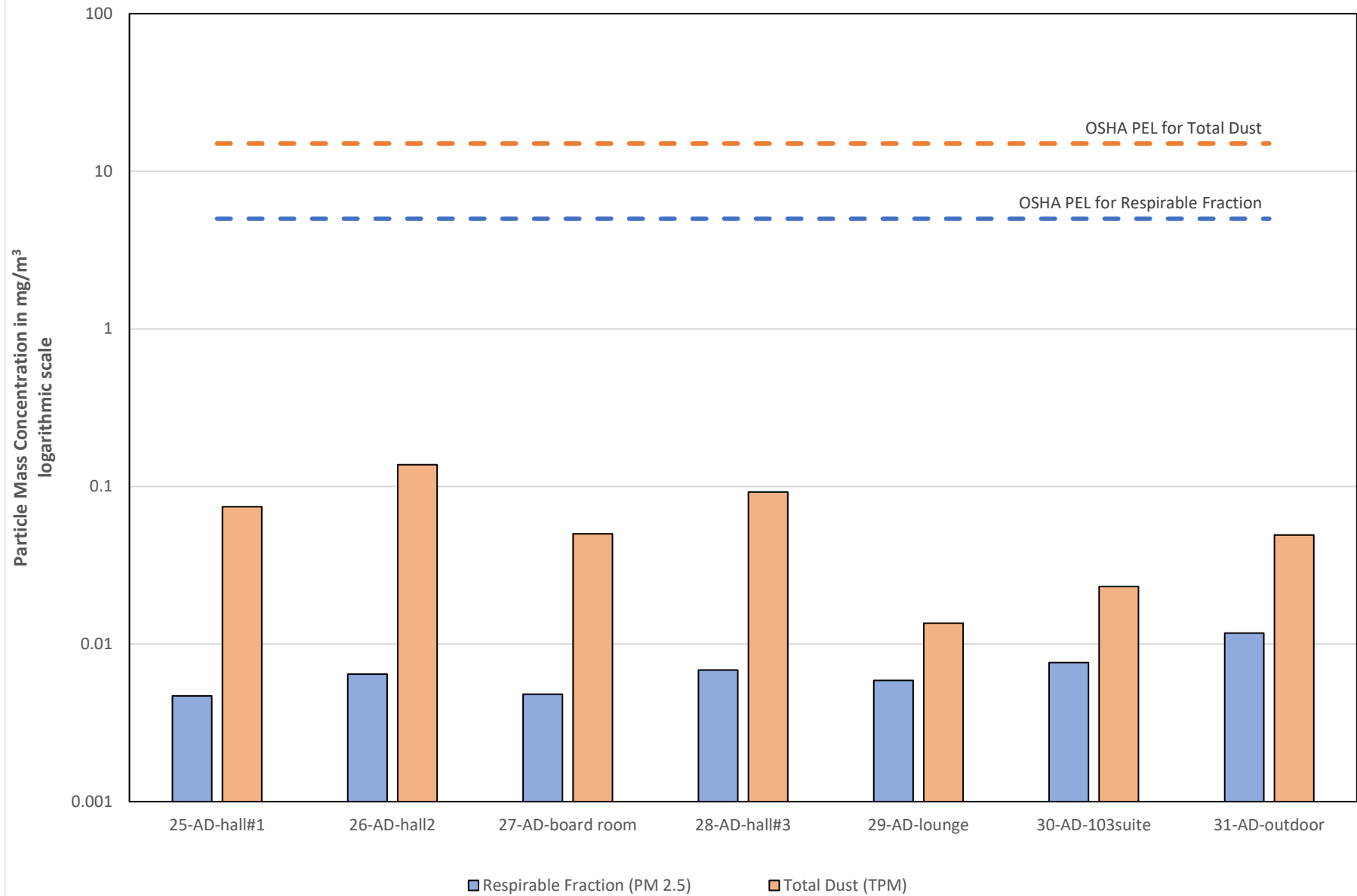
Material	Size (microns)
Hair	50 – 150
Pollen	10 – 100
Dust	0.1 – 100
Bacteria	1 – 10
Virus	0.07

Because of the different potential health effects caused by exposure to different sized particulates, OSHA maintains two separate Permissible Exposure Limits for nuisance dusts measured as Total Dusts and the Respirable Fraction. The current OSHA PEL for Total Dust is 15 milligrams per cubic meter (mg/m³) and 5 mg/m³ for the Respirable Fraction.

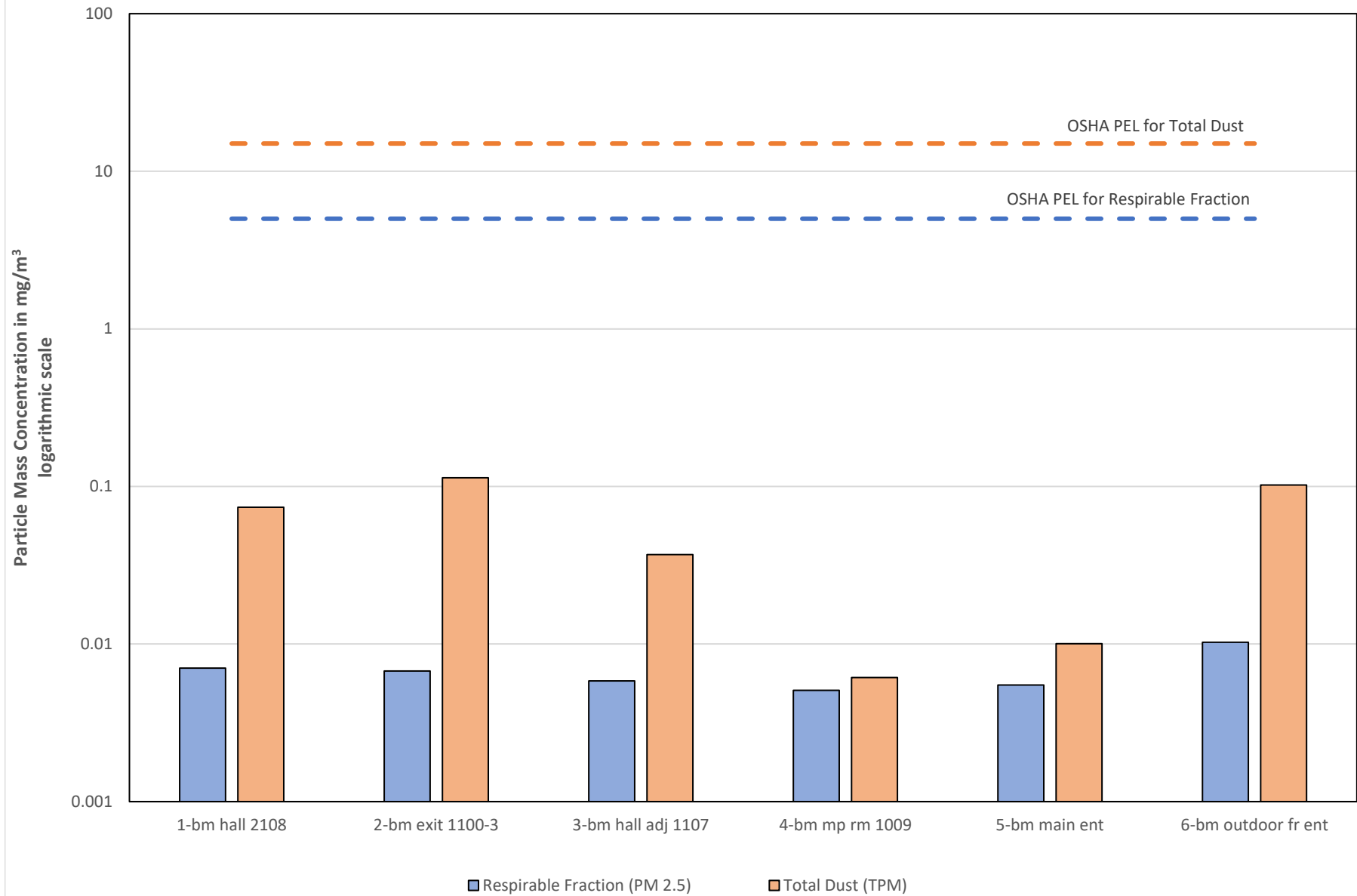
EDI recorded airborne particle concentrations at each facility.

The data is presented graphically on the following pages, with the particle mass concentrations for the Respirable Fraction (PM 2.5) and Total Dust compared to the corresponding OSHA PEL for each of the district facilities. In all cases, the graphs indicate that the airborne levels of particulates are well below the respective OSHA Permissible Exposure Limits.

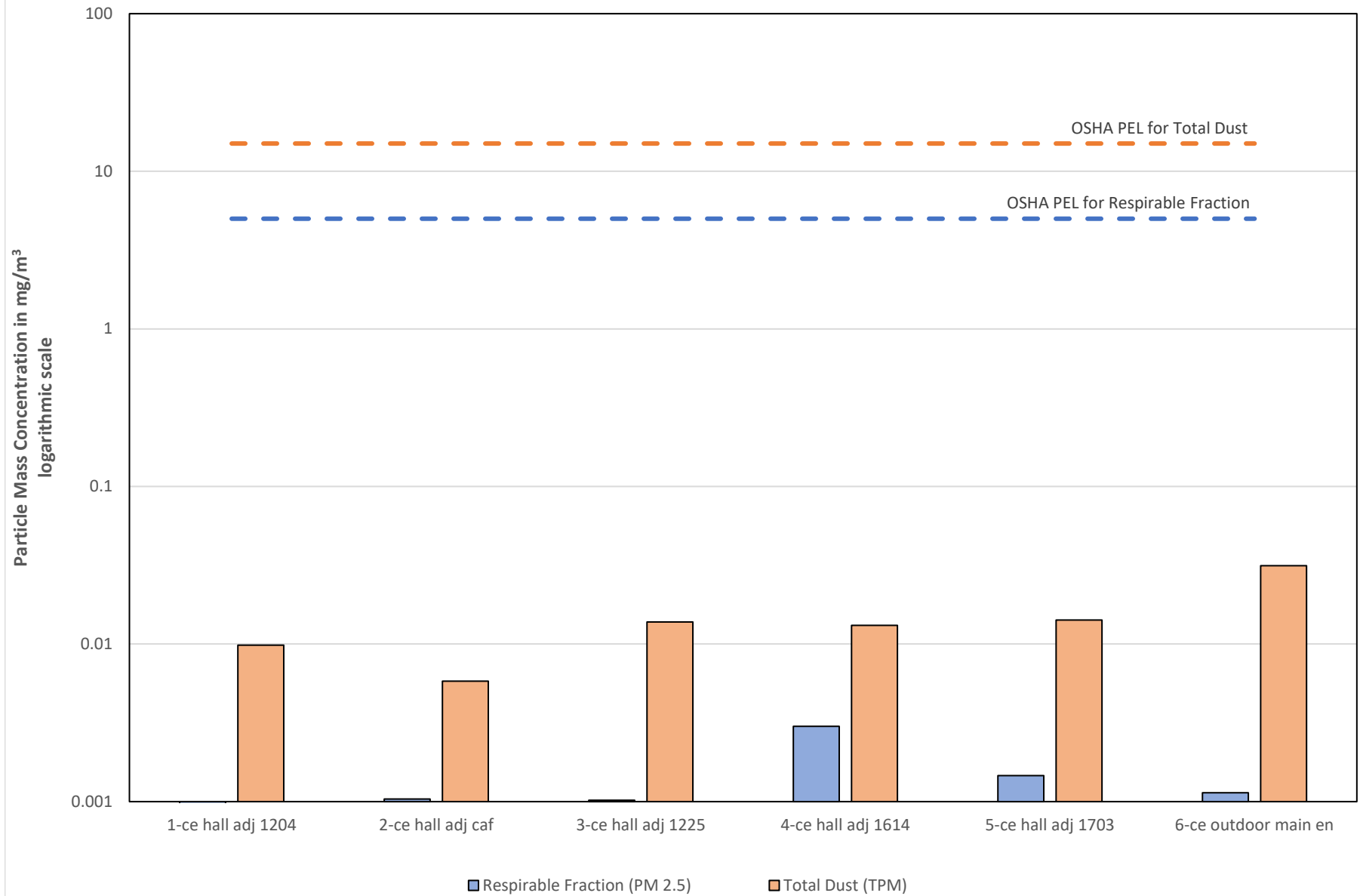
Particle Mass Concentrations at Administration Building
compared to OSHA PEL's for Nuisance Dust



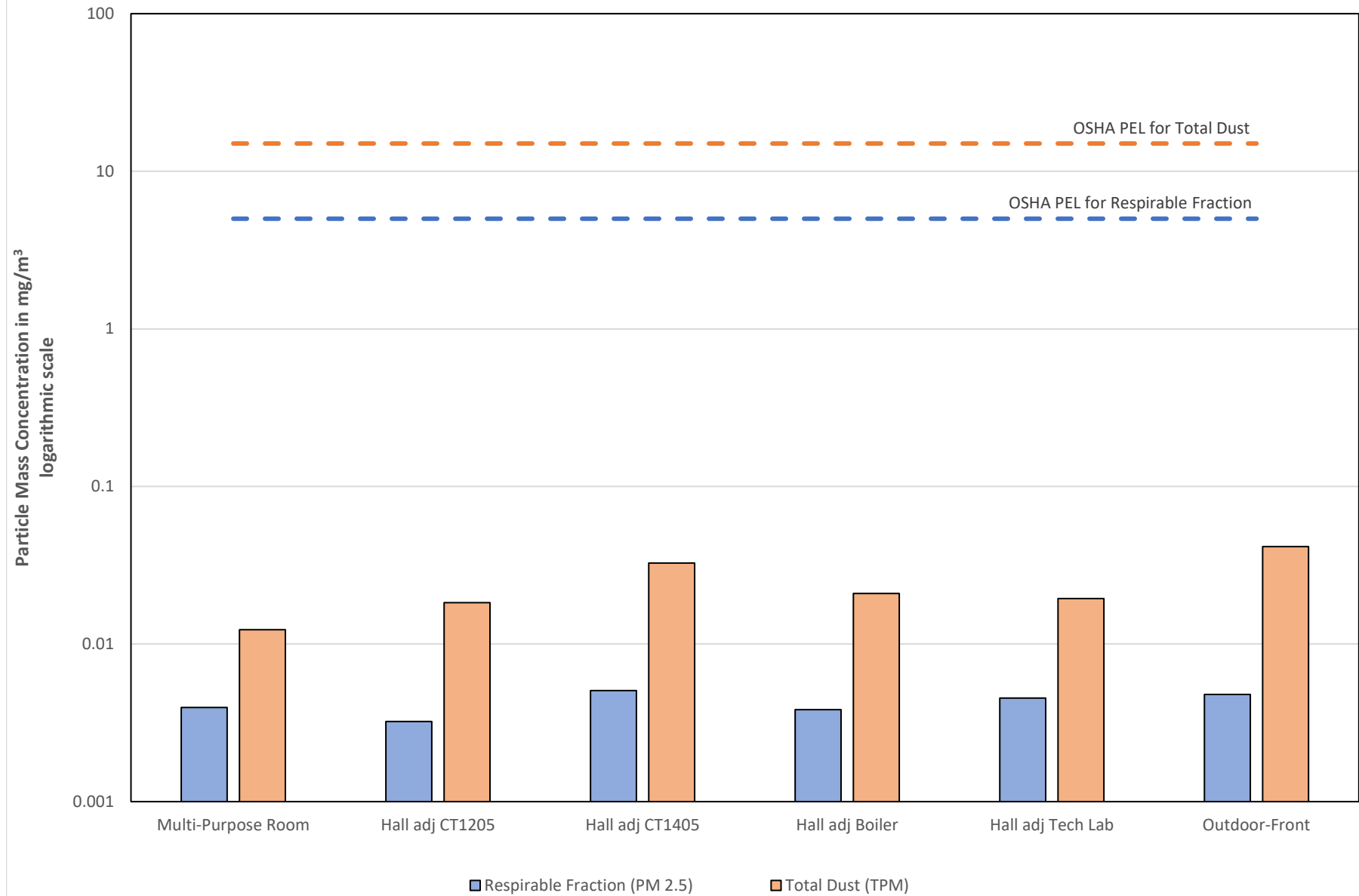
Particle Mass Concentrations at Bowne-Munro
compared to OSHA PEL's for Nuisance Dust



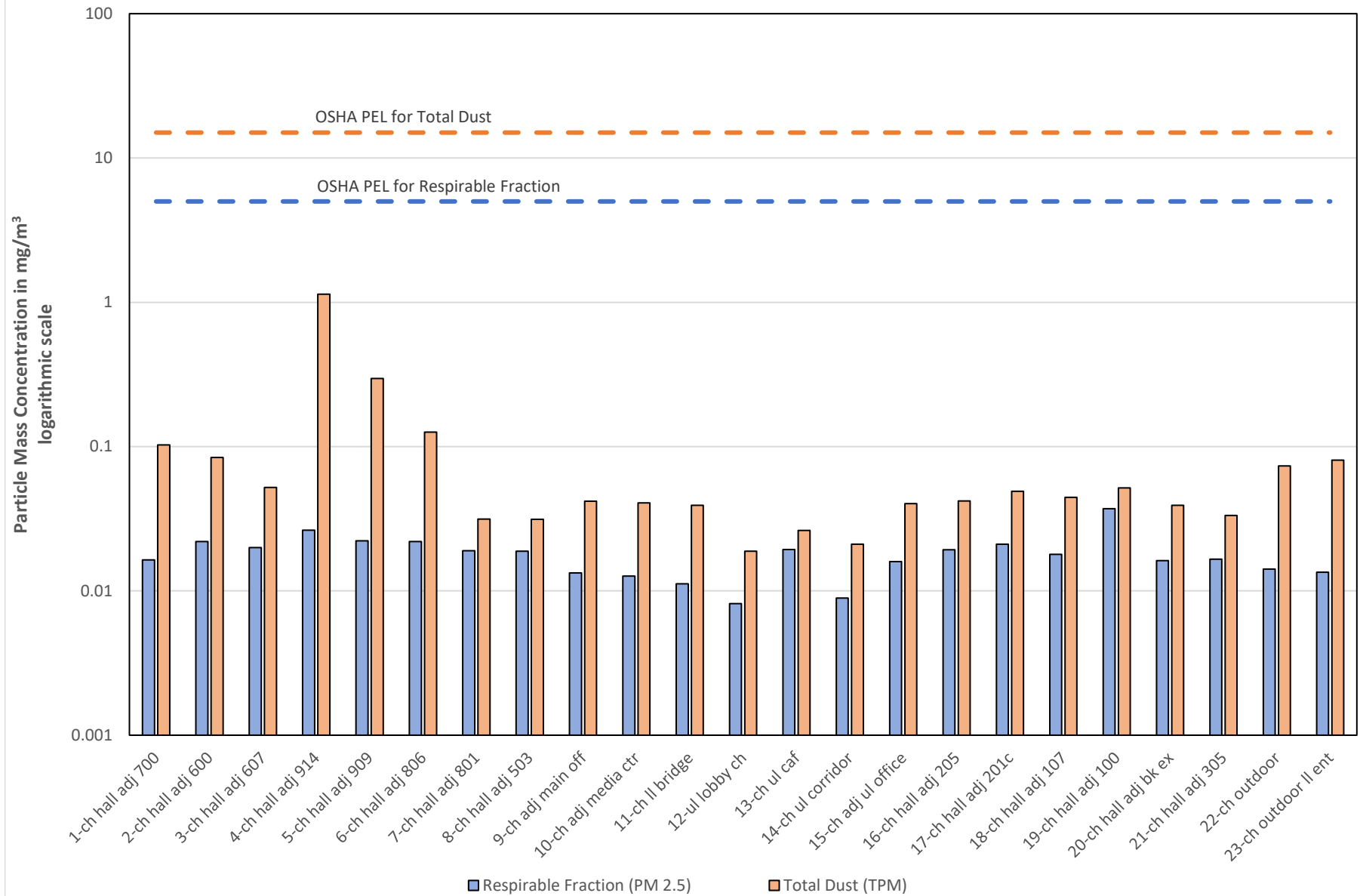
Particle Mass Concentrations at Central
compared to OSHA PEL's for Nuisance Dust



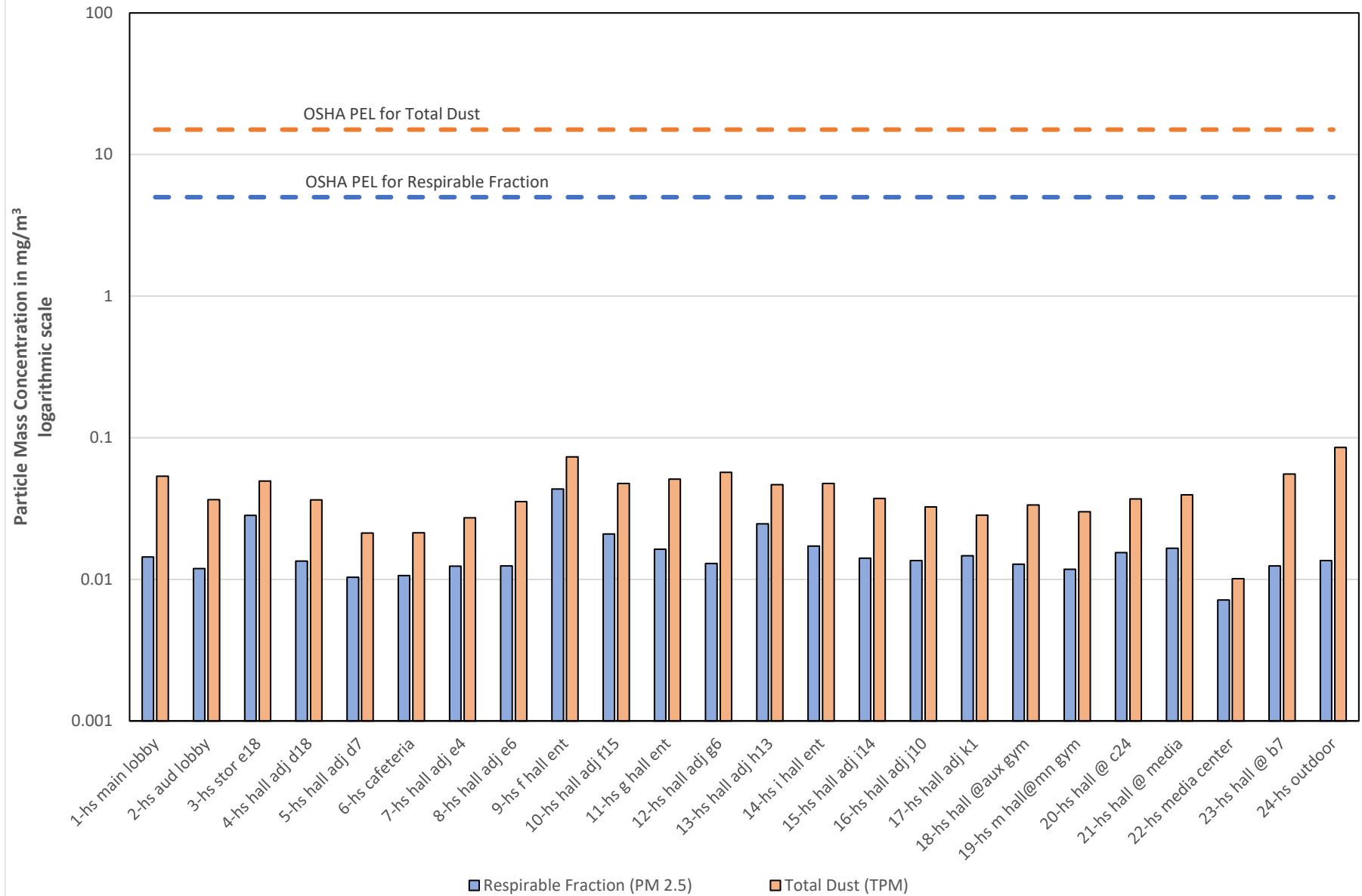
Particle Mass Concentrations at Chittick
compared to OSHA PEL's for Nuisance Dust



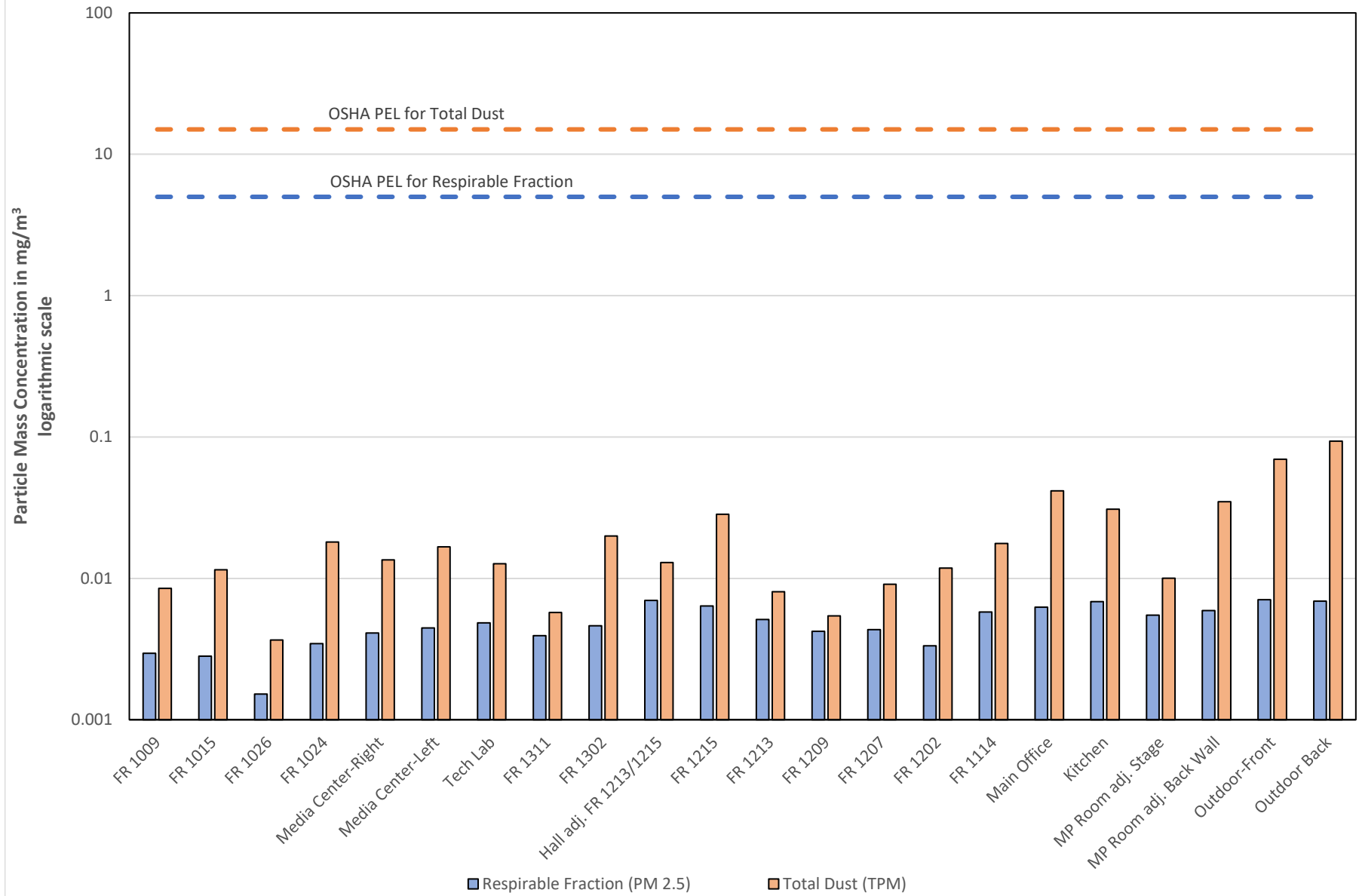
Particle Mass Concentrations at Churchill compared to OSHA PEL's for Nuisance Dust



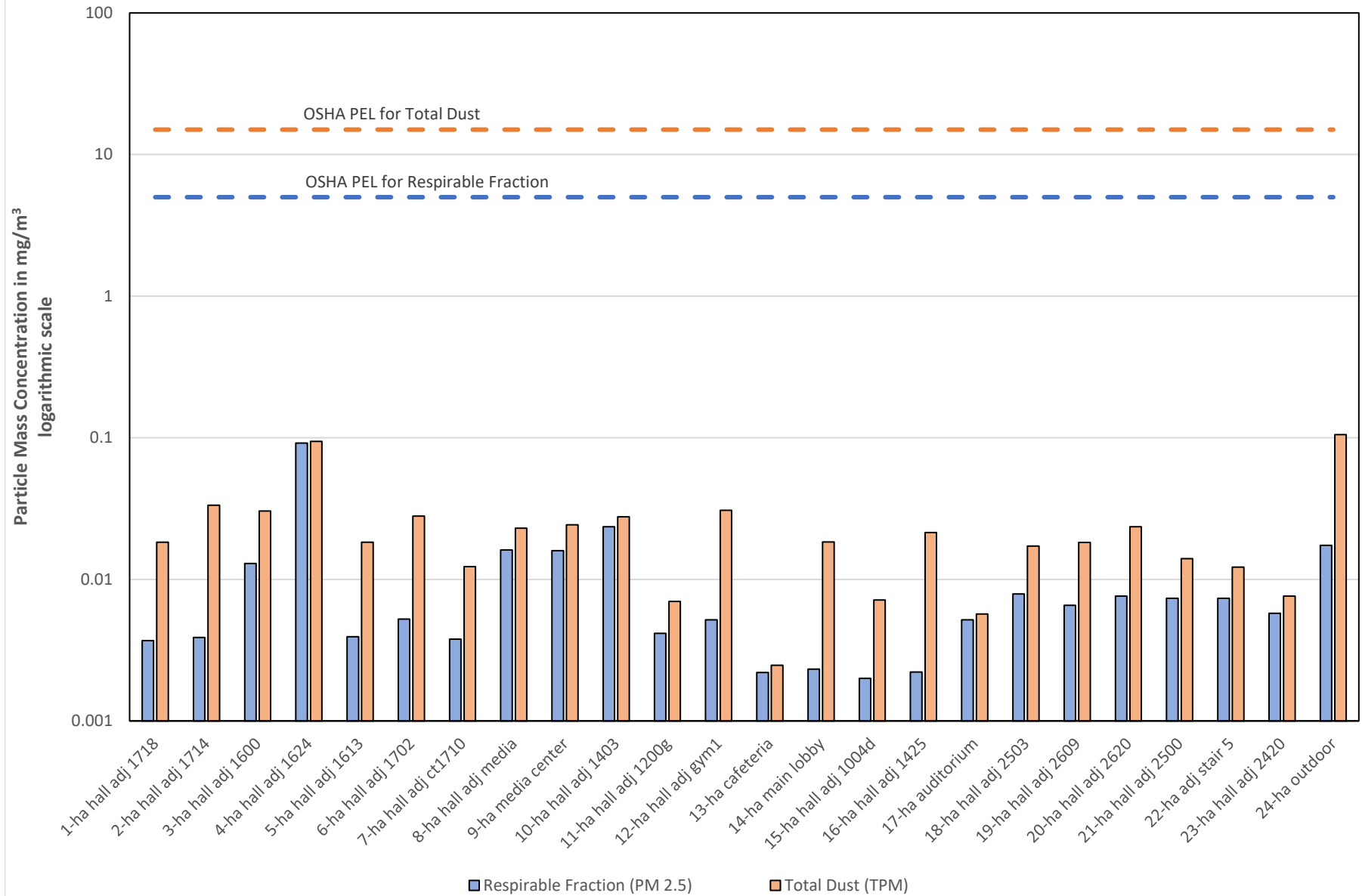
Particle Mass Concentrations at East Brunswick High School compared to OSHA PEL's for Nuisance Dust



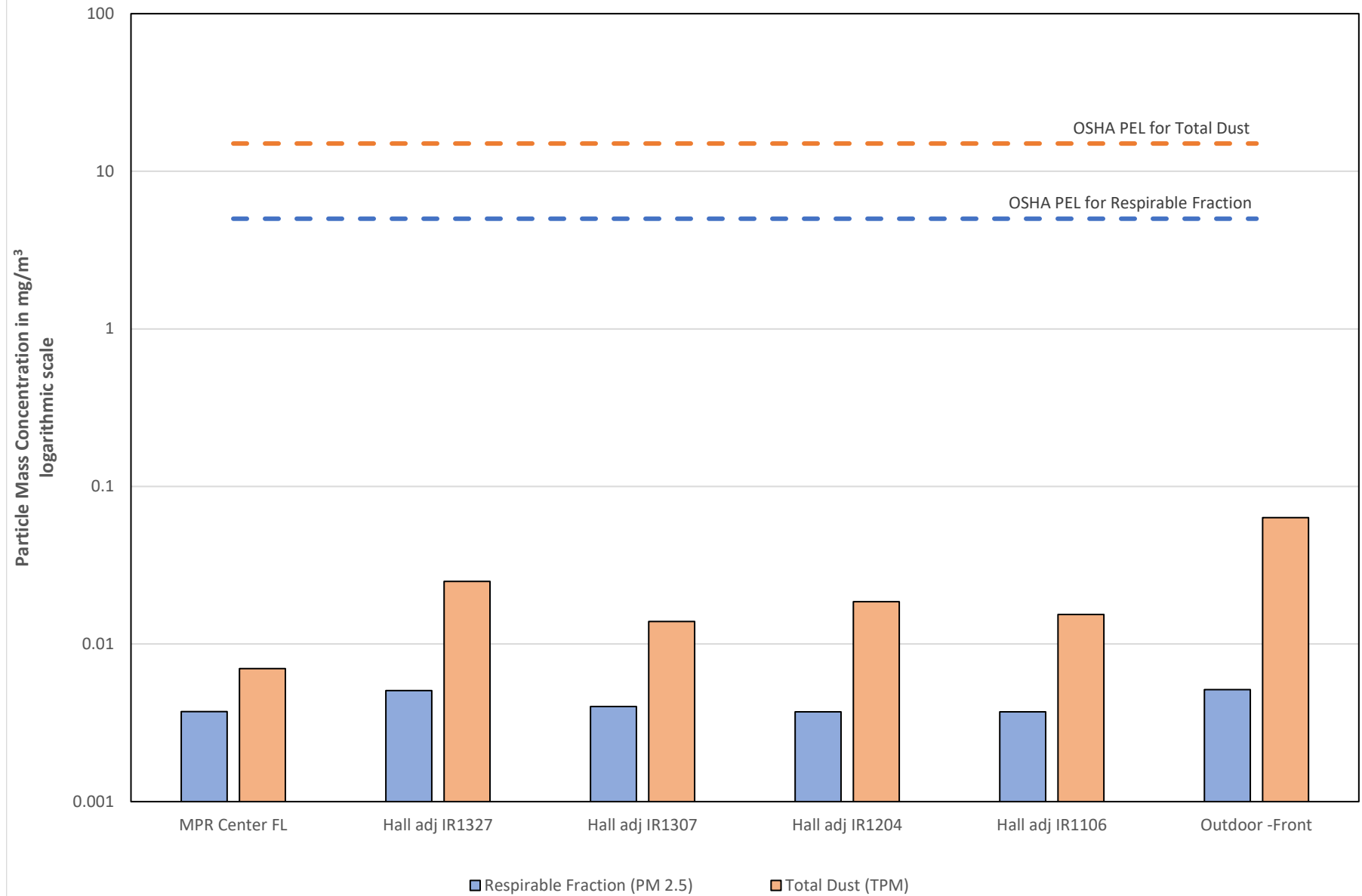
Particle Mass Concentrations at Frost compared to OSHA PEL's for Nuisance Dust



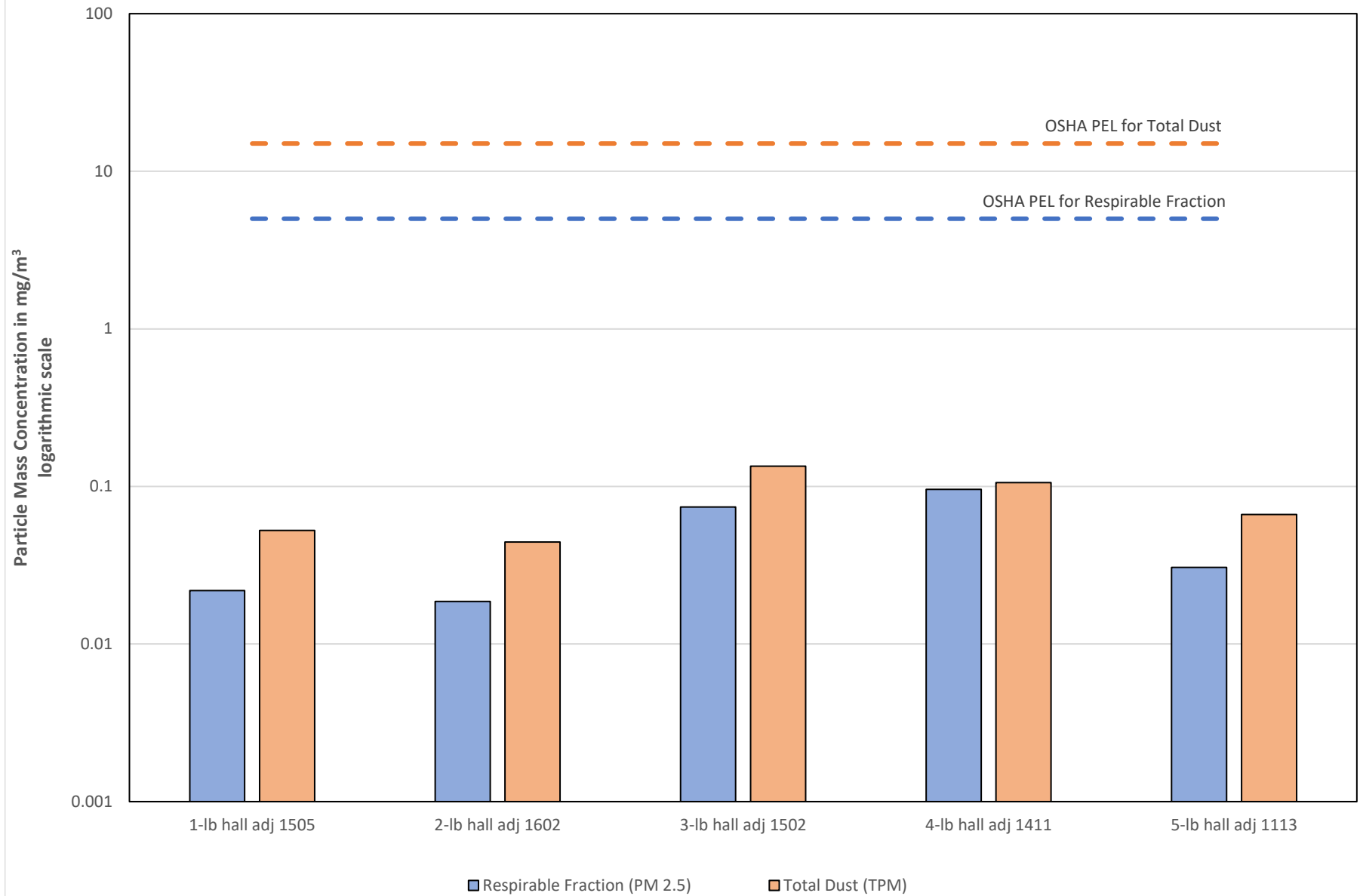
Particle Mass Concentrations at Hammarskjold compared to OSHA PEL's for Nuisance Dust



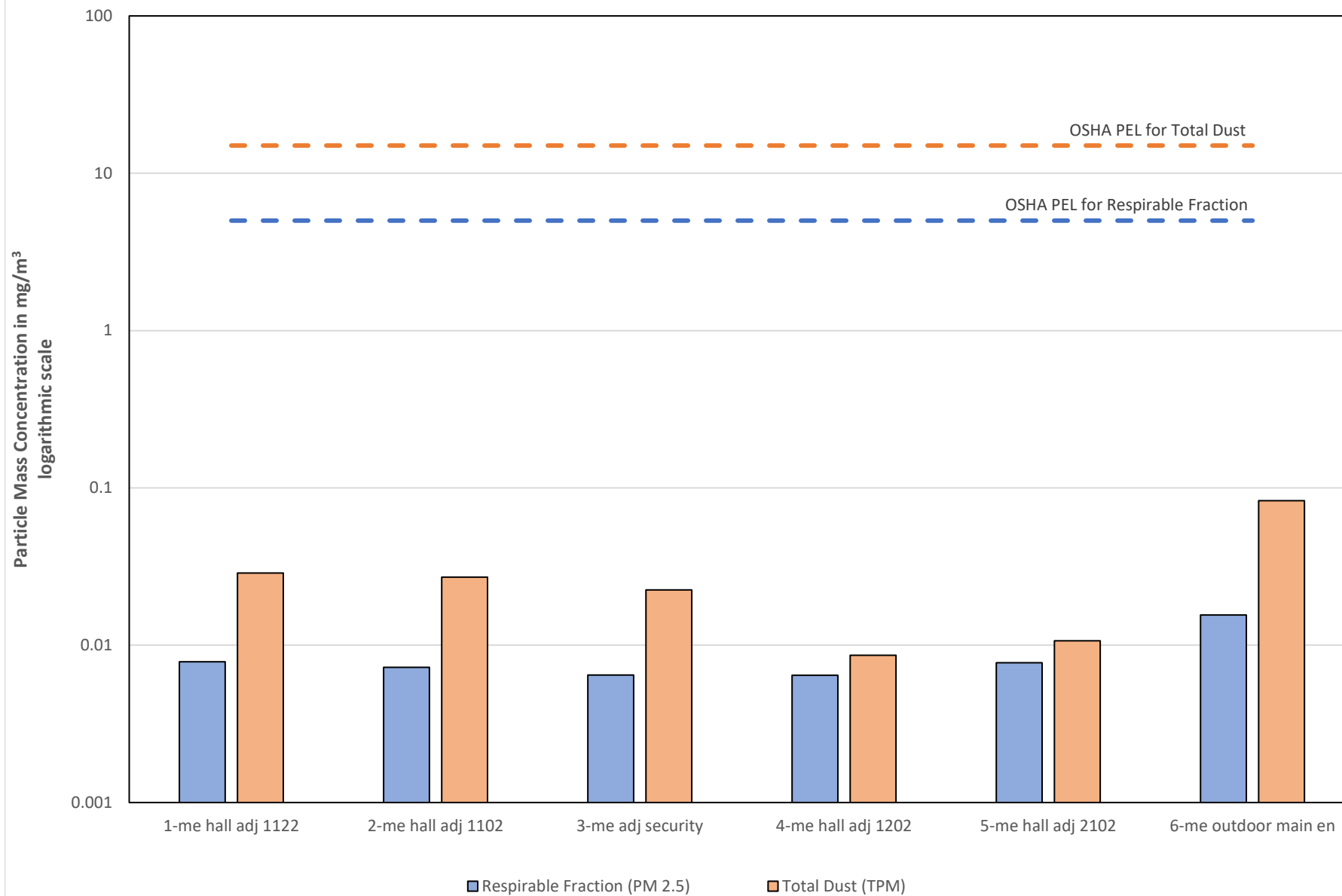
Particle Mass Concentrations at Irwin compared to OSHA PEL's for Nuisance Dust



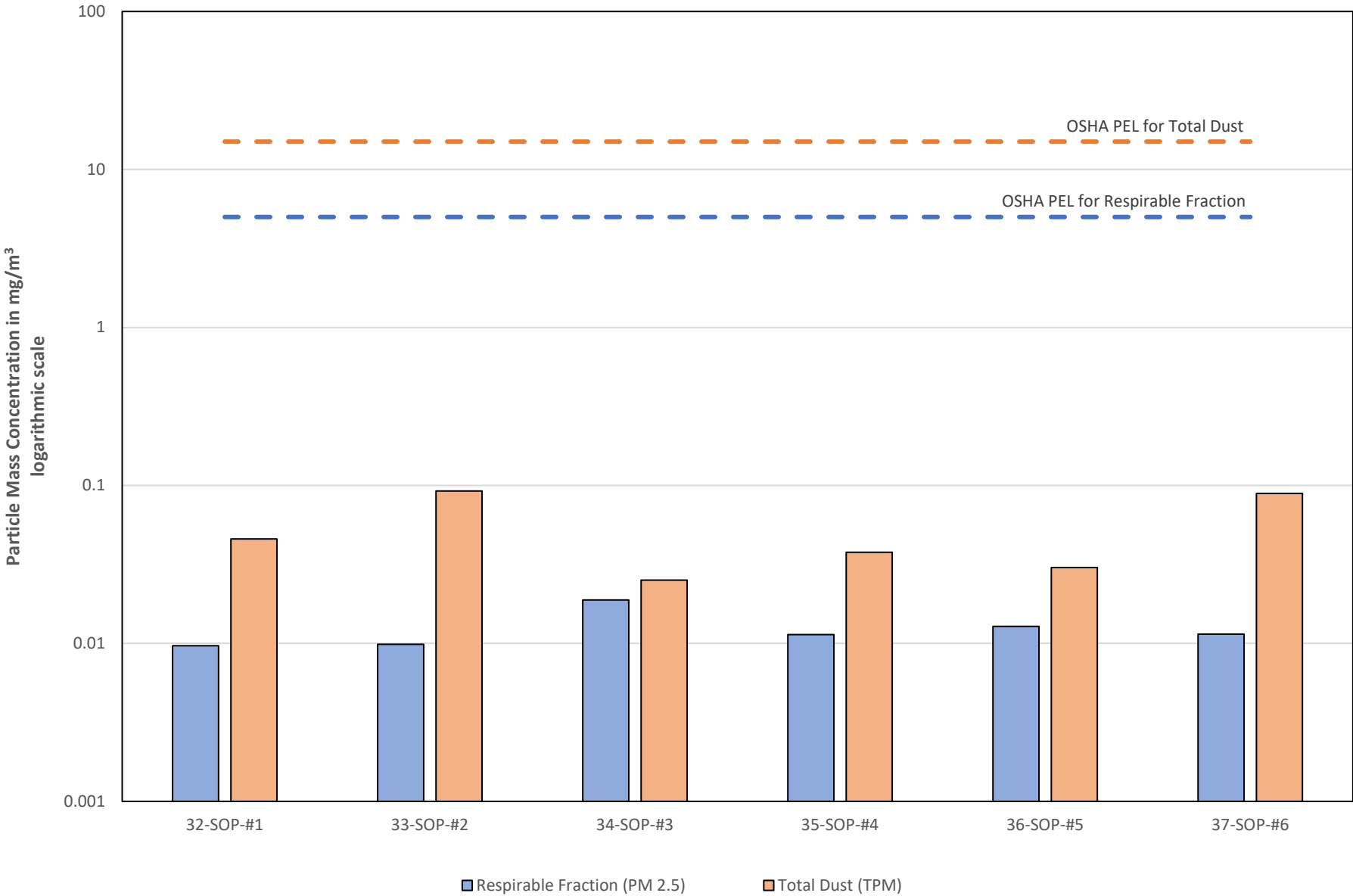
Particle Mass Concentrations at Lawrence Brook
compared to OSHA PEL's for Nuisance Dust



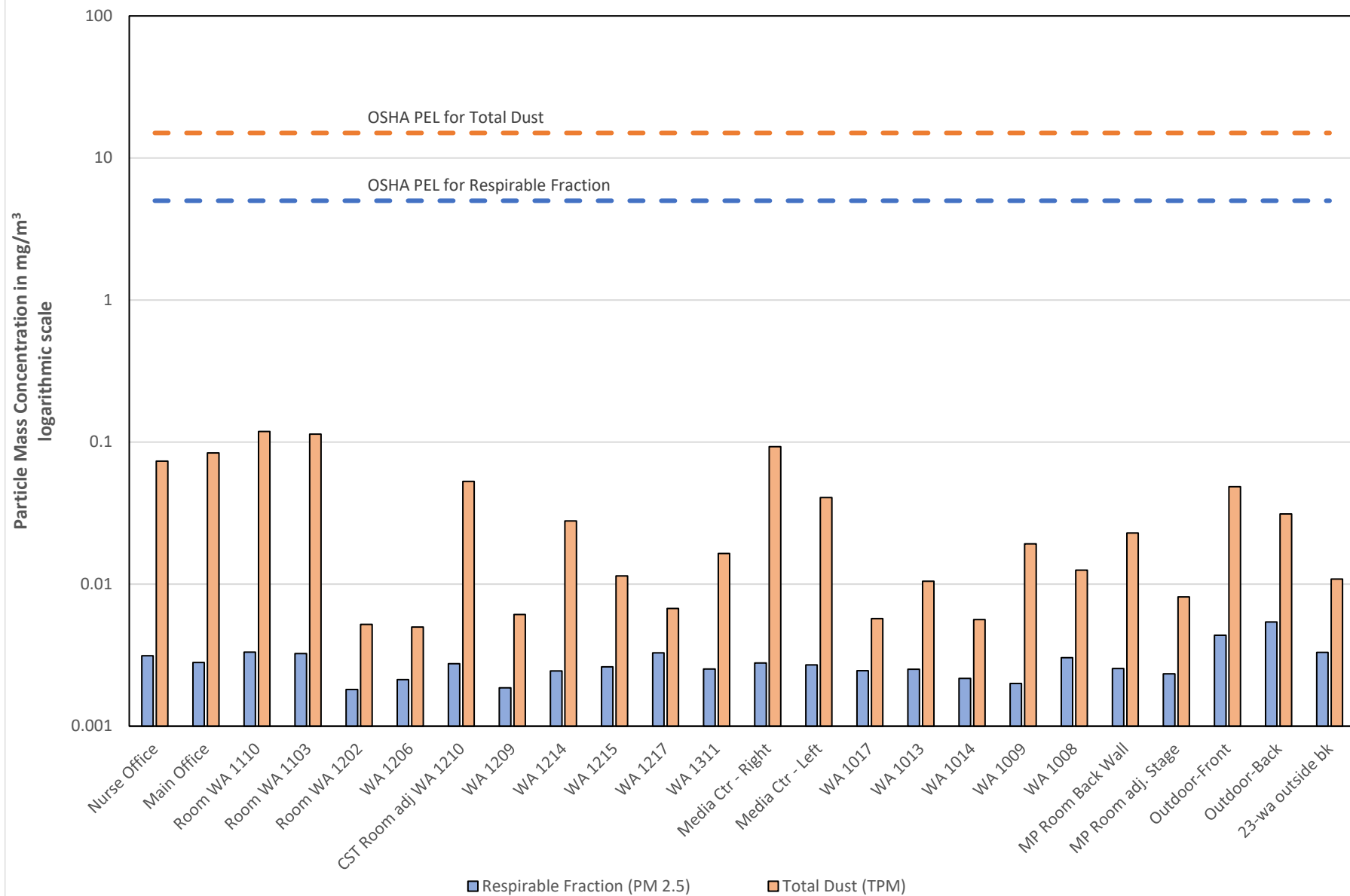
Particle Mass Concentrations at Memorial compared to OSHA PEL's for Nuisance Dust



Particle Mass Concentrations at SOP Building
compared to OSHA PEL's for Nuisance Dust



Particle Mass Concentrations at Warnsdorfer compared to OSHA PEL's for Nuisance Dust



TEMPERATURE AND HUMIDITY MEASUREMENTS

The American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) established an ideal range for indoor temperatures and humidity levels which they consider 80% of the general public will find acceptable. It is called the Comfort Range. The ASHRAE Comfort Range for temperature during the summer months is 73°F to 79°F; for the winter the range is 68°F to 75°F. The ASHRAE Comfort Range for humidity is 30% to 60% for all seasons.

Many industry sources, including the United States Environmental Protection Agency (EPA), suggest that indoor relative humidity levels should not exceed 50% in order to minimize the likelihood of mold growth. In buildings that lack specific humidification controls, however, the interior humidity levels are subject to fluctuations in outdoor conditions.

Utilizing a digital psychrometer *EDI* recorded the temperature and relative humidity at various locations throughout each facility and at an outdoor location at each facility.

The measurements are presented in the tables below.

Temperatures

Facility	Minimum Temperature (°F)	Average Temperature (°F)	Maximum Temperature (°F)	Outdoor Temperature (°F)
Admin. Building	71.6	72.3	73.1	85.8
Bowne-Munro	70.8	72.6	74.2	88.5
Central	71.0	72.2	73.4	77.8
Chittick	71.1	72.7	73.8	72.5
Churchill	70.0	72.6	77.0	79.2
EBHS	72.9	78.1	81.2	83.6
Frost	69.6	73.8	76.3	79.0
Hammar skjold	68.1	71.5	78.4	80.1
Irwin	69.1	71.7	73.6	75.6
Lawrence Brook	73.3	74.7	76.3	79.2
Memorial	63.6	67.6	71.1	76.1
SOP Building	71.2	75.1	78.9	86.7
Warnsdorfer	68.7	73.3	75.7	73.9

Relative Humidity

Facility	Minimum Humidity (%RH)	Average Humidity (%RH)	Maximum Humidity (%RH)	Outdoor Humidity (%RH)
Admin. Building	52.9	61.6	70.1	53.2
Bowne-Munro	60.4	68.4	75.8	56.0
Central	54.0	59.0	70.2	72.4
Chittick	64.9	72.8	88.0	72.6
Churchill	50.5	62.5	82.5	59.9
EBHS	48.2	63.3	68.9	58.6
Frost	54.3	59.2	68.0	59.0
Hammarckjold	48.5	65.0	82.8	56.7
Irwin	58.2	67.6	78.5	71.2
Lawrence Brook	57.1	67.4	80.2	72.9
Memorial	52.5	67.7	81.9	68.5
SOP Building	62.6	68.8	79.3	62.8
Warnsdorfer	50.1	55.6	64.0	61.3



MULTI-GAS DETECTION

As part of the investigation, *EDI* measured the airborne Oxygen, Carbon Monoxide, Methane, Hydrogen Sulfide, and Volatile Organic s (VOCs) at random locations throughout each facility with a portable, direct-read RKI GX-6000 multi-gas meter and TSI Q-Trak 7575 IAQ meter.

Normal levels of oxygen (20.9%) were detected in all areas. No detections of VOCs, carbon monoxide, methane, or hydrogen sulfide were recorded by the devices during the investigation. The carbon dioxide levels ranged between 330 ppm to 550 ppm, which consider normal background levels for an indoor environment.

Oxygen

Normal atmospheric air is comprised of approximately 21% Oxygen (O₂). When O₂ levels drop below 19.5% air is considered oxygen-deficient. At concentrations between 16% and 19.5% there may be physical impairment and a significant reduction in ability to perform strenuous work. Loss of consciousness will occur at Oxygen levels between 8% and 10%. As O₂ levels drop below 6% death occurs within six minutes.

Carbon Monoxide

Carbon Monoxide (CO) is a poisonous, colorless, odorless, and tasteless gas. Carbon Monoxide is a common indoor hazard resulting from the incomplete burning of natural gas and other materials containing carbon such as gasoline, kerosene, oil, propane, coal, or wood.

Carbon Monoxide is harmful because when inhaled it displaces oxygen in the blood, and thus deprives the heart, brain, and other vital organs of oxygen. High levels of CO can cause severe health effects a matter of minutes and without warning—causing loss of consciousness, suffocation, and death. CO poisoning can be reversed if caught in time, but severe, acute exposure may result in permanent damage to the parts of the body that suffered oxygen deprivation, such as the heart and the brain.

The current OSHA Permissible Exposure Limit (PEL) for Carbon Monoxide is 50 parts per million (ppm) of air, based on an 8-hour time-weighted average. There was no detectable level of CO in any of the areas tested.

Hydrogen Sulfide

Hydrogen Sulfide (H₂S) is commonly known as sewer gas. It is a colorless gas with a very strong "rotten egg" odor even at low concentrations. It is extremely flammable and highly toxic. Hydrogen Sulfide is produced in refining industries and other manufacturing process, and is naturally occurring in sewers and well water. The health effects of Hydrogen Sulfide exposure depend on how much H₂S a worker breathes and for how long, however, initial effects can be experienced at concentrations as low as 5 ppm. Health effects range from mild headaches and eye irritation to loss of consciousness and death.

The current OSHA General Industry PEL is a Ceiling Limit of 20 ppm with a Peak Limit (up to 10 minutes) of 50 ppm.

East Brunswick Public Schools
Ambient IAQ Evaluation - August 2020
Direct-read Instrumentation Values



School	Location	CH4	H2S	VOC	O2	CO	CO2	%RH	Temp
Admin. Building	Board Meeting Room	N/A	N/A	N/A	N/A	N/A	N/A	70.1	73.1
Admin. Building	Hallway adj. Room 109	0.0	0.0	0.0	20.9	0.0	487	60.1	72.8
Admin. Building	Hallway adj. Room 110	N/A	N/A	N/A	N/A	N/A	N/A	65.7	71.6
Admin. Building	Room 111 Hallway	0.0	0.0	0.0	20.9	0.0	475	63.1	72.1
Admin. Building	Hallway adj Room 106	0.0	0.0	0.0	20.9	0.0	503	62.7	72.1
Admin. Building	Faculty Dining Room	0.0	0.0	0.1	20.9	0.0	450	59.0	72.2
Admin. Building	Hallway adj Security Desk	0.0	0.0	0.2	20.9	0.0	405	62.7	72.5
Admin. Building	Distirct Registration Office 104	0.0	0.0	0.3	20.9	0.0	498	52.9	72.0
Admin. Building	Hallway adj. Metting Room 1	0.0	0.0	0.4	20.9	0.0	526	58.1	72.4
Admin. Building	Outdoor Control Sample	N/A	N/A	N/A	N/A	N/A	N/A	53.2	85.8
Bowne-Munro	Room BM 2106	0.0	0.0	0.0	20.9	0.0	430	70.7	72.4
Bowne-Munro	Room BM 2114	0.0	0.0	0.0	20.9	0.0	427	67.1	70.8
Bowne-Munro	Hallway adj. Room BM 2108	0.0	0.0	0.0	20.9	0.0	450	63.3	70.9
Bowne-Munro	Room BM 1115	0.0	0.0	0.0	20.9	0.0	395	60.4	72.5
Bowne-Munro	Room BM 1106	0.0	0.0	0.0	20.9	0.0	405	65.3	73.2
Bowne-Munro	Hallway adj. Room BM 1115	0.0	0.0	0.0	20.9	0.0	412	69.1	74.0
Bowne-Munro	Hallway adj. Staff Dining BM 1117	N/A	N/A	N/A	N/A	N/A	N/A	65.8	73.3
Bowne-Munro	Hallway adj. Room BM 1107	N/A	N/A	N/A	N/A	N/A	N/A	67.9	74.2
Bowne-Munro	Hallway adj. Room BM 1102	0.0	0.0	0.0	20.9	0.0	501	67.2	73.4
Bowne-Munro	Multi-Purpose Room	0.0	0.0	0.0	20.9	0.0	406	75.8	72.1
Bowne-Munro	Main Entrance Vestibule	0.0	0.0	0.0	20.9	0.0	416	74.8	72.3
Bowne-Munro	Tech Lab	0.0	0.0	0.0	20.9	0.0	520	72.8	71.5
Bowne-Munro	Outdoor Control - Main Entrance	N/A	N/A	N/A	N/A	N/A	N/A	56.0	88.5
Central	Hallway adj. Room 119 (CE 1203)	0.0	0.0	0.0	20.9	0.0	366	56.4	73.4
Central	Room 119 (CE 1203)	0.0	0.0	0.0	20.9	0.0	361	55.0	72.5
Central	Hallway adj. Cafeteria (CE 1215)	0.0	0.0	0.0	20.9	0.0	344	56.4	72.8
Central	Room 212 (CE 1208)	0.0	0.0	0.0	20.9	0.0	399	65.3	71.2
Central	Kitchen	0.0	0.0	0.0	20.9	0.0	344	54.0	73.0
Central	Hallways adj Storage CE1214	0.0	0.0	0.0	20.9	0.0	345	56.7	72.1
Central	Room CE 1707	0.0	0.0	0.0	20.9	0.0	338	63.3	71.3
Central	Hallway adj. Room CE 1501	0.0	0.0	0.0	20.9	0.0	331	55.2	71.0
Central	Room CE 1502	0.0	0.0	0.0	20.9	0.0	336	58.2	71.0

East Brunswick Public Schools
Ambient IAQ Evaluation - August 2020
Direct-read Instrumentation Values



School	Location	CH4	H2S	VOC	O2	CO	CO2	%RH	Temp
Central	Hallway adj. Room CE 1705	0.0	0.0	0.0	20.9	0.0	350	54.9	71.3
Central	Room CE 1708	0.0	0.0	0.0	20.9	0.0	353	64.1	71.5
Central	Room CE 1002	0.0	0.0	0.0	20.9	0.0	357	60.2	72.4
Central	Room CE 1004	N/A	N/A	N/A	N/A	N/A	N/A	70.2	73.1
Central	Hallway adj. Room CE 1002	0.0	0.0	0.0	20.9	0.0	363	56.3	73.1
Central	Hallway adj. Room CE 1606	0.0	0.0	0.0	20.9	0.0	348	56.4	72.8
Central	Room CE 1606	0.0	0.0	0.0	20.9	0.0	345	61.4	73.1
Central	Outdoor Control - Main Entrance (8/26)	N/A	N/A	N/A	N/A	N/A	N/A	32.6	85.7
Central	Outdoor Control - Main Entrance (8/28)	N/A	N/A	N/A	N/A	N/A	N/A	72.4	77.8
Chittick	Main Entrance Lobby	0.0	0.0	0.0	20.9	0.0	456	70.0	71.9
Chittick	Room CT 1410	0.0	0.0	0.0	20.9	0.0	407	75.3	72.8
Chittick	Hallway adj CT 1405	0.0	0.0	0.0	20.9	0.0	419	76.9	72.9
Chittick	Room CT 1402	0.0	0.0	0.0	20.9	0.0	405	70.4	72.7
Chittick	Room CT 1311	0.0	0.0	0.0	20.9	0.0	507	70.5	72.8
Chittick	Hall adj. Boiler (CT 1307)	0.0	0.0	0.0	20.9	0.0	400	75.9	73.8
Chittick	Media Center CT 1115	0.0	0.0	0.0	20.9	0.0	425	74.6	73.6
Chittick	Room CT 1128	0.0	0.0	0.0	20.9	0.0	424	69.5	72.8
Chittick	Hallway adj. CT 1124	0.0	0.0	0.0	20.9	0.0	413	73.3	72.0
Chittick	Tech Lab (CT 1117)	0.0	0.0	0.0	20.9	0.0	395	88.0	73.5
Chittick	Hallway adj. CT 1301	0.0	0.0	0.0	20.9	0.0	453	73.5	71.1
Chittick	Room CT 1302	0.0	0.0	0.0	20.9	0.0	438	70.2	73.2
Chittick	Multi-Purpose Room	0.0	0.0	0.0	20.9	0.0	371	76.0	73.4
Chittick	Room 1204	0.0	0.0	0.0	20.9	0.0	430	69.5	71.5
Chittick	Room CT 1212	0.0	0.0	0.0	20.9	0.0	433	71.6	72.2
Chittick	Hallway adj. CT 1103	0.0	0.0	0.0	20.9	0.0	470	68.1	72.7
Chittick	Room CT 1102	0.0	0.0	0.0	20.9	0.0	482	64.9	73.1
Churchill	Adj. CST in Hallway	N/A	N/A	N/A	N/A	N/A	N/A	68.2	77.0
Churchill	Hallway adj. Room 508 (CH 1512)	0.0	0.0	0.0	20.9	0.0	390	58.7	73.6
Churchill	Classroom 504 (CH 1505)	N/A	N/A	N/A	N/A	N/A	N/A	82.5	74.0
Churchill	Hallway adj. Room 800 (CH 1601)	0.0	0.0	0.5	20.9	0.0	404	58.3	70.9
Churchill	Hallway adj. Room 806 (CH 1608)	0.0	0.0	0.6	20.9	0.0	420	66.5	70.7
Churchill	Hallway adj. Rroom 901 (CH 1404)	0.0	0.0	0.4	20.9	0.0	392	68.1	71.7

East Brunswick Public Schools
Ambient IAQ Evaluation - August 2020
Direct-read Instrumentation Values



School	Location	CH4	H2S	VOC	O2	CO	CO2	%RH	Temp
Churchill	Room 902	N/A	N/A	N/A	N/A	N/A	N/A	72.4	74.0
Churchill	Hallway adj. Room 913 (CH 1416)	0.0	0.0	0.3	20.9	0.0	387	65.0	72.4
Churchill	Room 915 (CH 1420)	N/A	N/A	N/A	N/A	N/A	N/A	57.4	74.0
Churchill	Room 700	N/A	N/A	N/A	N/A	N/A	N/A	50.5	73.0
Churchill	Hallway adj. Room 708 (CH 1314)	0.0	0.0	0.3	20.9	0.0	385	65.2	72.8
Churchill	Hallway adj. Room 609 (CH 1218)	0.0	0.0	0.4	20.9	0.0	410	59.4	71.1
Churchill	Hallway adj. Room 600 (CH 1203)	0.0	0.0	0.5	20.9	0.0	431	65.4	70.2
Churchill	Room 600 (CH 1203)	N/A	N/A	N/A	N/A	N/A	N/A	67.4	76.0
Churchill	Hallway adj. Room 700 (CH 1301)	0.0	0.0	0.3	20.9	0.0	392	65.1	72.5
Churchill	Hallway adj. Room 303 (CH 2110)	0.0	0.0	4.5	20.9	0.0	402	64.2	71.6
Churchill	Room 306 (CH 2113)	N/A	N/A	N/A	N/A	N/A	N/A	60.3	72.0
Churchill	Hallway adj. Room 307 (CH 2114)	0.0	0.0	4.7	20.9	0.0	413	64.2	71.7
Churchill	Hallway adj. Room 100 (CH 2311)	0.0	0.0	5.5	20.9	0.0	399	62.2	72.9
Churchill	Hallway adj. Room 204 (CH 2207)	0.0	0.0	5.0	20.9	0.0	428	61.5	73.4
Churchill	Room 206 (CH 2209)	N/A	N/A	N/A	N/A	N/A	N/A	55.0	72.0
Churchill	Room 108 (CH 2203)	N/A	N/A	N/A	N/A	N/A	N/A	54.7	70.0
Churchill	Room 100 (CH 2311)	N/A	N/A	N/A	N/A	N/A	N/A	57.2	72.6
Churchill	Hallway adj. Cafeteria	N/A	N/A	N/A	N/A	N/A	N/A	54.2	71.2
Churchill	Cafeteria	0.0	0.0	0.6	20.9	0.0	382	57.4	72.4
Churchill	Kitchen	0.0	0.0	0.0	20.9	0.0	430	64.6	73.8
Churchill	Outdoor Control - Main Parking Lot	N/A	N/A	N/A	N/A	N/A	N/A		
EBHS	Main Lobby Vestibule	N/A	N/A	N/A	N/A	N/A	N/A	62.6	76.0
EBHS	Hallway C adj. Room C-1	N/A	N/A	N/A	N/A	N/A	N/A	68.9	76.0
EBHS	Hallway D adj. Room D-12	N/A	N/A	N/A	N/A	N/A	N/A	61.2	78.7
EBHS	Hallway E adj. Room E-1	N/A	N/A	N/A	N/A	N/A	N/A	48.2	72.9
EBHS	Hallway F	0.0	0.0	0.0	20.9	0.0	390	65.3	78.4
EBHS	Hallway G adj. Room G-11	N/A	N/A	N/A	N/A	N/A	N/A	59.4	79.6
EBHS	Hallway H	0.0	0.0	0.1	20.9	0.0	391	68.4	79.3
EBHS	Hallway I	0.0	0.0	0.0	20.9	0.0	394	68.2	80.4
EBHS	Hallway J	0.0	0.0	0.0	20.9	0.0	392	68.4	80.7
EBHS	Hallway K	0.0	0.0	0.0	20.9	0.0	367	67.9	81.2
EBHS	Hallway L	0.0	0.0	0.0	20.9	0.0	397	64.9	79.3

East Brunswick Public Schools
Ambient IAQ Evaluation - August 2020
Direct-read Instrumentation Values



School	Location	CH4	H2S	VOC	O2	CO	CO2	%RH	Temp
EBHS	Hallway M adj. Gym	N/A	N/A	N/A	N/A	N/A	N/A	64.3	77.0
EBHS	Media Center	0.0	0.0	0.3	20.9	0.0	353	57.0	75.9
EBHS	Cafeteria	0.0	0.0	0.1	20.9	0.0	385	66.4	78.7
EBHS	Nurse's Office	0.0	0.0	0.2	20.9	0.0	343	58.1	77.1
EBHS	Outdoor Control	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Frost	Main Entrance Vestibule	0.0	0.0	0.0	20.9	0.0	361	59.3	71.9
Frost	Room FR 1009	N/A	N/A	N/A	20.9	N/A	N/A	62.0	74.3
Frost	Hallway adj. Room FR 1014	0.0	0.0	0.0	20.9	0.0	363	57.5	74.5
Frost	Room FR 1014	0.0	0.0	0.0	20.9	0.0	384	57.7	74.7
Frost	Room FR 1015	N/A	N/A	N/A	20.9	N/A	N/A	61.0	75.0
Frost	Hallway adj. Room FR 1019	0.0	0.0	0.1	20.9	0.0	366	54.4	76.0
Frost	Room FR 1026	0.0	0.0	0.1	20.9	0.0	359	54.5	76.3
Frost	Room FR 1024	N/A	N/A	N/A	20.9	N/A	N/A	60.0	75.6
Frost	Media Center (FR 1315) - Right Side	0.0	0.0	0.0	20.9	0.0	343	62.0	70.9
Frost	Media Center (FR 1315) - Left Side	0.0	0.0	0.0	20.9	0.0	343	62.0	70.9
Frost	Room FR 1311	N/A	N/A	N/A	20.9	N/A	N/A	68.0	73.0
Frost	Hallway adj. Tech Lab FR 1313	0.0	0.0	0.0	20.9	0.0	352	58.7	73.2
Frost	Tech Lab FR 1313	N/A	N/A	N/A	20.9	N/A	N/A	67.0	73.4
Frost	Room FR 1307/1305	0.0	0.0	0.0	20.9	0.0	351	55.5	74.9
Frost	Room 1302	N/A	N/A	N/A	20.9	N/A	N/A	64.0	74.1
Frost	Room FR 1215	N/A	N/A	N/A	20.9	N/A	N/A	60.0	74.6
Frost	Hallway adj. Room FR 1213	0.0	0.0	0.0	20.9	0.0	354	54.3	75.3
Frost	Room FR 1213	N/A	N/A	N/A	20.9	N/A	N/A	58.0	73.2
Frost	Room FR 1214	0.0	0.0	0.0	20.9	0.0	426	57.7	74.9
Frost	Room FR 1209	N/A	N/A	N/A	20.9	N/A	N/A	64.0	73.4
Frost	Room FR 1207	N/A	N/A	N/A	20.9	N/A	N/A	65.0	74.5
Frost	Hallway adj. Room FR 1205	0.0	0.0	0.0	20.9	0.0	352	54.4	75.0
Frost	Room FR 1203	0.0	0.0	0.0	20.9	0.0	378	58.7	75.1
Frost	Room FR 1202	N/A	N/A	N/A	20.9	N/A	N/A	57.0	69.6
Frost	Main Office	N/A	N/A	N/A	20.9	N/A	N/A	60.0	71.6
Frost	Hallway adj. Nurse's Office FR 1114	0.0	0.0	0.0	20.9	0.0	363	55.4	75.1
Frost	Multi-Purpose Room adj. Stage	0.0	0.0	0.0	20.9	0.0	358	54.8	73.2

East Brunswick Public Schools
Ambient IAQ Evaluation - August 2020
Direct-read Instrumentation Values



School	Location	CH4	H2S	VOC	O2	CO	CO2	%RH	Temp
Frost	Multi-Purpose Room adj. Back Wall	0.0	0.0	0.0	20.9	0.0	358	54.8	73.2
Frost	Kitchen	0.0	0.0	0.0	20.9	0.0	389	59.0	73.3
Frost	Outdoor Control - Front	N/A	N/A	N/A	20.9	N/A	N/A	59.0	77.5
Frost	Outdoor Control - Back	N/A	N/A	N/A	20.9	N/A	N/A	55.0	80.2
Hammariskjold	Main Entrance Vestibule	0.0	0.0	0.0	20.9	0.0	402	48.5	78.4
Hammariskjold	Hallway near Student Services	N/A	N/A	N/A	N/A	N/A	N/A	51.7	74.9
Hammariskjold	Cafeteria	0.0	0.0	0.0	20.9	0.0	419	73.2	68.5
Hammariskjold	Kitchen	0.0	0.0	0.0	20.9	0.0	401	73.8	68.9
Hammariskjold	Staff Dining Room (HA 1100R)	0.0	0.0	0.0	20.9	0.0	372	82.8	71.0
Hammariskjold	Hallway adj. Room HA 1207	N/A	N/A	N/A	N/A	N/A	N/A	57.2	75.2
Hammariskjold	Hallway adj. Room HA 1200F	0.0	0.0	0.0	20.9	0.0	399	74.1	68.1
Hammariskjold	Room HA 1400	0.0	0.0	0.0	20.9	0.0	414	70.7	68.3
Hammariskjold	Classroom HA 1405	N/A	N/A	N/A	N/A	N/A	N/A	56.4	71.0
Hammariskjold	Hallway adj. Room HA 1407	0.0	0.0	0.0	20.9	0.0	419	69.8	69.1
Hammariskjold	Room HA 1621	N/A	N/A	N/A	N/A	N/A	N/A	58.1	72.3
Hammariskjold	Hallway adj. Room HA 1624	0.0	0.0	0.0	20.9	0.0	432	65.8	70.3
Hammariskjold	Hallway adj. Room HA 1613	0.0	0.0	0.0	20.9	0.0	392	68.9	70.7
Hammariskjold	Classroom 1700	N/A	N/A	N/A	N/A	N/A	N/A	73.1	72.1
Hammariskjold	Hallway adj. Room HA 1704	0.0	0.0	0.0	20.9	0.0	402	72.9	72.3
Hammariskjold	Hallway adj. Room HA 1718	0.0	0.0	0.0	20.9	0.0	399	65.9	72.1
Hammariskjold	Classroom HA 2610	N/A	N/A	N/A	N/A	N/A	N/A	62.5	72.4
Hammariskjold	Hallway adj. Room HA 2627	0.0	0.0	0.1	20.9	0.0	395	64.0	72.1
Hammariskjold	Hallway adj. Room HA 2607	0.0	0.0	0.0	20.9	0.0	392	65.3	72.3
Hammariskjold	Hallway adj. Conf. Room HA 2501B	N/A	N/A	N/A	N/A	N/A	N/A	59.8	71.3
Hammariskjold	Hallway adj. Room HA 2418	0.0	0.0	0.0	20.9	0.0	399	66.5	70.6
Hammariskjold	Room HA 2428	N/A	N/A	N/A	N/A	N/A	N/A	50.0	72.0
Hammariskjold	Outdoor Control - Main Parking Lot	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Irwin	Multi-Purpose Room	0.0	0.0	0.0	20.9	0.0	422	67.3	73.2
Irwin	Hall adj. IR1327 (Room 22)	0.0	0.0	0.0	20.9	0.0	410	67.8	72.0
Irwin	Hall adj. IR1302 (Room 10)	0.0	0.0	0.0	20.9	0.0	357	70.5	72.5
Irwin	Hall adj. IR1204 (Room 28)	0.0	0.0	0.0	20.9	0.0	370	72.0	72.0
Irwin	Hall adj. IR1116 (Room 2)	0.0	0.0	0.0	20.9	0.0	472	69.5	69.5

East Brunswick Public Schools
Ambient IAQ Evaluation - August 2020
Direct-read Instrumentation Values



School	Location	CH4	H2S	VOC	O2	CO	CO2	%RH	Temp
Irwin	Outdoor Control	0.0	0.0	0.0	20.9	0.0	N/A	69.1	69.1
Irwin	IR 1305 (Room 8)	0.0	0.0	0.0	20.9	0.0	377	58.2	71.2
Irwin	IR 1212 (Room 45)	0.0	0.0	0.0	20.9	0.0	410	78.5	73.1
Irwin	Kitchen	0.0	0.0	0.0	20.9	0.0	401	67.4	73.6
Irwin	IR 1331 (Room 25)	0.0	0.0	0.0	20.9	0.0	410	66.8	72.1
Irwin	IR 1316 (Room 15)	0.0	0.0	0.0	20.9	0.0	413	62.4	70.3
Irwin	Hall adj. IR 1102 (Room 6)	0.0	0.0	0.0	20.9	0.0	466	65.3	71.6
Irwin	Media Center	0.0	0.0	0.0	20.9	0.0	366	69.4	72.5
Irwin	Nurse's Office	0.0	0.0	0.0	20.9	0.0	472	63.8	71.1
Lawrence Brook	Hallway adj. Room LB 1505	0.0	0.0	0.0	20.9	0.0	474	70.3	75.8
Lawrence Brook	Classroom Room LB 1510	0.0	0.0	0.0	20.9	0.0	345	76.2	76.0
Lawrence Brook	Classroom Room LB 1515	0.0	0.0	0.0	20.9	0.0	337	57.1	76.3
Lawrence Brook	Hallway adj. Room LB 1602	0.0	0.0	0.0	20.9	0.0	370	58.2	75.3
Lawrence Brook	Room LB 1603	0.0	0.0	0.0	20.9	0.0	362	70.5	74.4
Lawrence Brook	Room LB 1608	0.0	0.0	0.0	20.9	0.0	374	70.0	73.8
Lawrence Brook	Hallway adj. Room LB 1209	0.0	0.0	0.0	20.9	0.0	409	69.6	74.4
Lawrence Brook	Room LB 1208	0.0	0.0	0.0	20.9	0.0	354	61.8	74.1
Lawrence Brook	Room LB 1211	0.0	0.0	0.0	20.9	0.0	390	65.4	74.4
Lawrence Brook	Hallway adj. Room LB 1302	0.0	0.0	0.0	20.9	0.0	363	66.4	74.1
Lawrence Brook	Gym	0.0	0.0	0.0	20.9	0.0	351	57.1	74.0
Lawrence Brook	Hallway adj. Room LB 1104	0.0	0.0	0.0	20.9	0.0	367	65.9	73.6
Lawrence Brook	Media Center	0.0	0.0	0.0	20.9	0.0	364	58.4	73.3
Lawrence Brook	Room LB 1115	0.0	0.0	0.0	20.9	0.0	355	80.2	75.0
Lawrence Brook	Room LB 1112	0.0	0.0	0.0	20.9	0.0	353	68.9	75.0
Lawrence Brook	Hallway adj. Room LB 1116	0.0	0.0	0.0	20.9	0.0	381	68.4	75.1
Lawrence Brook	Room LB 1116	0.0	0.0	0.0	20.9	0.0	374	71.5	75.0
Lawrence Brook	Room LB 1119	0.0	0.0	0.0	20.9	0.0	357	77.6	75.2
Memorial	Hallway adj. Custodial ME 1122	N/A	N/A	N/A	20.9	N/A	N/A	71.0	66.0
Memorial	Hallway adj. Security Desk	N/A	N/A	N/A	20.9	N/A	N/A	61.0	68.5
Memorial	Hallways adj. Room ME 1125	0.0	0.0	0.0	20.9	0.0	381	65.5	68.3
Memorial	Room ME 1116	0.0	0.0	0.0	20.9	0.0	380	60.0	67.5
Memorial	Room ME 1110	0.0	0.0	0.0	20.9	0.0	387	68.9	67.3

East Brunswick Public Schools
Ambient IAQ Evaluation - August 2020
Direct-read Instrumentation Values



School	Location	CH4	H2S	VOC	O2	CO	CO2	%RH	Temp
Memorial	Room ME 1102	0.0	0.0	0.1	20.9	0.0	433	61.9	66.7
Memorial	Hallways adj. Room ME 1101	0.0	0.0	0.1	20.9	0.0	376	71.4	67.3
Memorial	Room ME 1101	0.0	0.0	0.1	20.9	0.0	368	79.5	69.0
Memorial	Main Entrance	0.0	0.0	0.1	20.9	0.0	392	69.1	71.1
Memorial	Main Office ME 1002	0.0	0.0	0.1	20.9	0.0	427	52.5	67.6
Memorial	Media Center ME 1304	0.0	0.0	0.1	20.9	0.0	399	60.3	68.1
Memorial	Music Room ME 1315	0.0	0.0	0.1	20.9	0.0	550	68.1	70.1
Memorial	Cafeteria ME 1312	0.0	0.0	0.1	20.9	0.0	382	61.7	68.7
Memorial	Hallway adj. Room ME 1319	0.0	0.0	0.0	20.9	0.0	389	68.7	69.1
Memorial	Hallway adj Courtyard ME 1004-8	0.0	0.0	0.1	20.9	0.0	371	69.5	69.9
Memorial	Hallway adj. Art Rm. ME 2102	N/A	N/A	N/A	20.9	N/A	N/A	72.0	65.1
Memorial	Hallway adj Room ME 2109	0.0	0.0	0.0	20.9	0.0	363	72.5	66.9
Memorial	Room ME 2116	0.0	0.0	0.1	20.9	0.0	485	56.7	65.5
Memorial	Hallway adj. Storage ME 2122	0.0	0.0	0.0	20.9	0.0	402	73.4	66.1
Memorial	Hallways adj Stairs ME 1103-2	0.0	0.0	0.0	20.9	0.0	366	75.7	63.6
Memorial	Room ME 2102	0.0	0.0	0.0	20.9	0.0	352	81.9	66.8
Memorial	Outdoor-Main Entrance	N/A	N/A	N/A	N/A	N/A	N/A	68.0	76.1
SOP Building	Main Entrance Waitng Area	0.0	0.0	0.0	20.9	0.0	476	67.5	74.4
SOP Building	Office Area adj. SO 1001-I	0.0	0.0	0.0	20.9	0.0	460	62.6	73.9
SOP Building	Training Room SO 1501-A	0.0	0.0	0.0	20.9	0.0	371	65.4	72.4
SOP Building	Faculty Dining Room	0.0	0.0	0.1	20.9	0.0	357	63.8	71.2
SOP Building	Garage adj. SO 1301-F	0.0	0.0	0.1	20.9	0.0	364	79.3	73.5
SOP Building	Garage adj. Snow Plow Storage	0.0	0.0	0.0	20.9	0.0	352	72.9	77.3
SOP Building	Garage adj. SO 1401-4	0.0	0.0	0.0	20.9	0.0	346	69.5	78.8
SOP Building	Garage adj. SO 1501-2	0.0	0.0	0.0	20.9	0.0	368	69.0	78.9
SOP Building	Outdoor Control Sample	N/A	N/A	N/A	N/A	N/A	N/A	62.0	86.7
Warnsdorfer	Main Entrance Hallway	0.0	0.0	0.0	20.9	0.0	362	54.4	70.0
Warnsdorfer	Room WA 1103	N/A	N/A	N/A	20.9	N/A	N/A	61.0	69.6
Warnsdorfer	Hallway adj. Room WA 1009	0.0	0.0	0.0	20.9	0.0	361	56.6	72.4
Warnsdorfer	Room WA 1009	0.0	0.0	0.0	20.9	0.0	351	56.7	72.9
Warnsdorfer	Room WA 1110	N/A	N/A	N/A	20.9	N/A	N/A	55.0	73.4
Warnsdorfer	Room WA 1013	N/A	N/A	N/A	20.9	N/A	N/A	57.0	73.4

East Brunswick Public Schools
Ambient IAQ Evaluation - August 2020
Direct-read Instrumentation Values



School	Location	CH4	H2S	VOC	O2	CO	CO2	%RH	Temp
Warnsdorfer	Room WA 1014	N/A	N/A	N/A	20.9	N/A	N/A	57.0	73.9
Warnsdorfer	Hallway adj. Room WA 1017	0.0	0.0	0.0	20.9	0.0	354	53.8	73.9
Warnsdorfer	Room WA 1017	0.0	0.0	0.0	20.9	0.0	346	54.8	74.1
Warnsdorfer	Hallway adj. Media Center	0.0	0.0	0.0	20.9	0.0	354	53.8	74.1
Warnsdorfer	Media Center WA 1315 - Right	0.0	0.0	0.0	20.9	0.0	346	53.1	73.8
Warnsdorfer	Media Center WA 1315 - Left	0.0	0.0	0.0	20.9	0.0	346	53.1	73.8
Warnsdorfer	Hallway adj. Room WA 1309	0.0	0.0	0.0	20.9	0.0	356	55.6	74.2
Warnsdorfer	Room WA 1309	0.0	0.0	0.0	20.9	0.0	346	54.9	75.2
Warnsdorfer	Room WA 1311	N/A	N/A	N/A	20.9	N/A	N/A	61.0	74.5
Warnsdorfer	Room WA 1202	N/A	N/A	N/A	20.9	N/A	N/A	60.0	72.1
Warnsdorfer	Room WA 1206	N/A	N/A	N/A	20.9	N/A	N/A	60.0	72.1
Warnsdorfer	Room WA 1209	N/A	N/A	N/A	20.9	N/A	N/A	55.0	73.4
Warnsdorfer	Hallway adj. Room WA 1215	0.0	0.0	0.0	20.9	0.0	346	51.5	75.5
Warnsdorfer	Room WA 1215	N/A	N/A	N/A	20.9	N/A	N/A	59.0	74.3
Warnsdorfer	Room WA 1214	0.0	0.0	0.0	20.9	0.0	356.0	53.3	75.6
Warnsdorfer	Room WA 1217	N/A	N/A	N/A	20.9	N/A	N/A	64.0	73.9
Warnsdorfer	Hallway adj. Room WA 1203	0.0	0.0	0.0	20.9	0.0	349	51.2	75.5
Warnsdorfer	Room WA 1203	0.0	0.0	0.0	20.9	0.0	350	54.9	75.7
Warnsdorfer	Hallway adj. Room WA 1103	0.0	0.0	0.0	20.9	0.0	352	50.8	75.7
Warnsdorfer	Multi-Purpose Room WA 1008 - Back Wall	0.0	0.0	0.0	20.9	0.0	362	50.1	72.0
Warnsdorfer	Multi-Purpose Room WA 1008 - adj. Stage	0.0	0.0	0.0	20.9	0.0	362	52.0	74.3
Warnsdorfer	Kitchen	0.0	0.0	0.0	20.9	0.0	395	51.3	72.7
Warnsdorfer	Nurse's Office	N/A	N/A	N/A	20.9	N/A	N/A	61.0	68.7
Warnsdorfer	Main Office	N/A	N/A	N/A	20.9	N/A	N/A	56.0	69.6
Warnsdorfer	Outdoor Control - Front	N/A	N/A	N/A	20.9	N/A	N/A	61.0	73.7
Warnsdorfer	Outdoor Control - Back	N/A	N/A	N/A	20.9	N/A	N/A	61.0	74.3

VOLATILE ORGANIC COMPOUNDS (VOC) ANALYSIS

EDI collected analytical samples to measure Volatile Organic Compounds (VOCs) in the air throughout each facility. The samples were analyzed in accordance with the US EPA Compendium Method TO-15 protocol, which targets 63 regulated VOCs and 23 Lesser VOCs. The TO-15 Method measures concentrations less than 1 part per billion (ppb).

While there were detections of VOCs in each building, just because there is a detection of a chemical does not mean there is an exceedance of a regulatory standard.

All of the detections were below the respective OSHA Permissible Exposure Limit (PEL) for the chemical detected.

EDI also had each sample further analyzed against a non-targeted library search designed to identify other possible airborne constituents. By comparing the sample results to a library of over 250,000 known compounds, the non-targeted library search can provide *tentative* identification of compounds, hence the term Tentatively Identified Compound (TIC). Not all the TIC's have established OSHA Permissible Exposure Limits, but for those with an OSHA PEL the detected levels were below respective the OSHA PEL.

Additional details on the laboratory analysis can be found in the *Laboratory Reports* section of this report at Appendix B.



LIMITATIONS AND SERVICE CONSTRAINTS

Environmental Design Inc. (EDI) has presented professional opinions in this report based on information provided to us by the Client and gathered by *EDI* personnel on site. Conditions described in this report are as found at the time of the survey, unless stated otherwise. The Client selected the date and time of our evaluation.

EDI has done nothing to create or contribute to the presence of any hazardous waste, pollutants, chemicals, or other hazardous materials at the Client's facility. A full and complete determination as to whether a certain property is or is not free from environmental hazards cannot be made with 100% certainty. The Client retained *EDI* for the sole purpose of assisting them in evaluating conditions that might be associated with mold. *EDI* is only responsible for a limited evaluation of specific areas of the facility that the Client's representatives requested *EDI* to assess. Our limited services are described in our proposal for this project. *EDI* will not be held liable for any disclosures, notifications, or reports that may be required to be made to third parties, including the appropriate governmental agencies.

The inspection conducted by *EDI* was a non-destructive inspection (i.e. walls were not broken open, drop ceilings were not removed, etc.) to complete our evaluation of the selected areas. *EDI* did not evaluate nor are we qualified to assess the operational effectiveness of the mechanical systems providing heating and air conditioning to the affected areas covered by our evaluation. Mechanical systems that are not operating properly or that do not adequately provide sufficient fresh air or air exchanges can be a significant contributing factor in any indoor quality problem.

EDI receives no remuneration for any products suggested for use in cleaning or remediation. The tests *EDI* conducted were based on the problem described to us by the Client and site conditions at the time of our evaluation. These tests may not be the only testing methodologies available for this type of evaluation.

APPENDIX A



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-0262

<http://www.EMSL.com> / cinnmicrolab@emsl.com

EMSL Order: 372013952

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.

5434 King Avenue

Suite 101

Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/28/2020

Received Date: 08/28/2020 04:55 PM

Analyzed Date: 09/01/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE) **Administration Building**

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013952-0001 46-0828-10 75 Board Meeting Room			372013952-0002 46-0828-11 75 Hallway Adj. to Room 110			372013952-0003 46-0828-12 75 Faculty Dining Room		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	1	40	7.5	-	-	-	1	40	14.8
Aspergillus/Penicillium	-	-	-	-	-	-	-	-	-
Basidiospores	11	490	92.5	1	40	12.1	3	100	37
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	2	90	27.3	2	90	33.3
Curvularia	-	-	-	2*	30*	9.1	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	1	40	14.8
Pithomyces++	-	-	-	2*	30*	9.1	-	-	-
Rust	-	-	-	1	40	12.1	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Blakeslea/Choanephora	-	-	-	-	-	-	-	-	-
Paecilomyces-like	-	-	-	3	100	30.3	-	-	-
Peronospora	-	-	-	-	-	-	-	-	-
Polythrincium	-	-	-	-	-	-	-	-	-
Pyricularia	-	-	-	-	-	-	-	-	-
Total Fungi	12	530	100	11	330	100	7	270	100
Hyphal Fragment	-	-	-	1	40	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	2	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	3	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/01/2020 05:28 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013952

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.

5434 King Avenue

Suite 101

Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/28/2020

Received Date: 08/28/2020 04:55 PM

Analyzed Date: 09/01/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE)

Administration Building

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013952-0004 46-0828-13 75 Hallway Adj. to Meeting Room 1			372013952-0005 46-0828-14 75 Hallway Adj. to Security Desk			372013952-0006 46-0828-15 75 Outdoor Control Sample		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	2	90	0.4
Ascospores	-	-	-	-	-	-	42	1900	9.1
Aspergillus/Penicillium	-	-	-	-	-	-	-	-	-
Basidiospores	5	200	80	4	200	69	299	13200	63.6
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	2	90	31	92	4100	19.7
Curvularia	1	40	16	-	-	-	2	90	0.4
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	5	200	1
Myxomycetes++	-	-	-	-	-	-	4	200	1
Pithomyces++	1*	10*	4	-	-	-	1	40	0.2
Rust	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	1	40	0.2
Blakeslea/Choanephora	-	-	-	-	-	-	6	300	1.4
Paecilomyces-like	-	-	-	-	-	-	11	490	2.4
Peronospora	-	-	-	-	-	-	1	40	0.2
Polythrincium	-	-	-	-	-	-	1	40	0.2
Pyricularia	-	-	-	-	-	-	1	40	0.2
Total Fungi	7	250	100	6	290	100	468	20770	100
Hyphal Fragment	1	40	-	-	-	-	2	90	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	8	400	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	3	-	-	2	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/01/2020 05:28 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-0262

<http://www.EMSL.com> / cinnmicrolab@emsl.com

EMSL Order: 372013802

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.

5434 King Avenue

Suite 101

Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/26/2020

Received Date: 08/26/2020 04:10 PM

Analyzed Date: 08/31/2020

Project: East Brunswick BOE / Central ES / PR-200819-1584 (East Brunswick BOE)

Central Elementary School

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	372013802-0001			372013802-0002			372013802-0003		
Client Sample ID:	46-0826-01			46-0826-02			46-0826-03		
Volume (L):	75			75			75		
Sample Location:	Hallway: Adj To Room CE1203			Hallway: Adj To Café CE 1215			Hallway: Adj To Storage CE 1214		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	1	40	6.6	-	-	-
Aspergillus/Penicillium	-	-	-	2	80	13.1	1	40	8.9
Basidiospores	2	80	50	12	490	80.3	10	410	91.1
Bipolaris++	1	40	25	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	1	40	25	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Blakeslea/Choanephora	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	-	-	-
Sporidesmium-like	-	-	-	-	-	-	-	-	-
Total Fungi	4	160	100	15	610	100	11	450	100
Hyphal Fragment	1	40	-	1*	10*	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	2*	30*	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	41	-	-	41	-	-	41	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	2	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/31/2020 11:22 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013802

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.

5434 King Avenue

Suite 101

Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/26/2020

Received Date: 08/26/2020 04:10 PM

Analyzed Date: 08/31/2020

Project: East Brunswick BOE / Central ES / PR-200819-1584 (East Brunswick BOE)

Central Elementary School

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013802-0004 46-0826-04 75 Hallway: Adj To Room CE 1501			372013802-0005 46-0826-05 75 Hallway: Adj To Room CE 1705			372013802-0006 46-0826-06 75 Outdoor Control Sample: Main Entrance		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	1	40	0.3
Ascospores	1	40	3.7	2	80	5.1	67	2700	19.3
Aspergillus/Penicillium	3	100	9.3	-	-	-	4	200	1.4
Basidiospores	17	700	64.8	33	1400	89.7	224	9190	65.6
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	6	200	18.5	-	-	-	22	900	6.4
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	1	40	0.3
Ganoderma	1	40	3.7	1	40	2.6	6	200	1.4
Myxomycetes++	-	-	-	1	40	2.6	1	40	0.3
Pithomyces++	-	-	-	-	-	-	1	40	0.3
Rust	-	-	-	-	-	-	2	80	0.6
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Blakeslea/Choanephora	-	-	-	-	-	-	12	490	3.5
Nigrospora	-	-	-	-	-	-	1	40	0.3
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	1	40	0.3
Sporidesmium-like	-	-	-	-	-	-	1*	10*	0.1
Total Fungi	28	1080	100	37	1560	100	344	14010	100
Hyphal Fragment	-	-	-	-	-	-	3	100	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	1	40	-
Analyt. Sensitivity 600x	-	41	-	-	41	-	-	41	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/31/2020 11:22 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013953

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.

5434 King Avenue

Suite 101

Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/28/2020

Received Date: 08/28/2020 04:55 PM

Analyzed Date: 09/01/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE) **Central Elementary School**

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	372013953-0001			372013953-0006			372013953-0009		
Client Sample ID:	46-0828-01			46-0828-06			46-0828-09		
Volume (L):	75			75			75		
Sample Location:	CE1002 - Middle Of Room			CE1004 - Middle Of Room			Outside Control Sample		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	1*	10*	0
Ascospores	-	-	-	-	-	-	118	5210	7.9
Aspergillus/Penicillium	12	530	68.8	-	-	-	34	1500	2.3
Basidiospores	5	200	26	10	440	91.7	1230	54400	82.9
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	1	40	5.2	-	-	-	76	3400	5.2
Curvularia	-	-	-	-	-	-	1*	10*	0
Epicoccum	-	-	-	-	-	-	1	40	0.1
Ganoderma	-	-	-	-	-	-	10	440	0.7
Myxomycetes++	-	-	-	-	-	-	5	200	0.3
Pithomyces++	-	-	-	1	40	8.3	1	40	0.1
Rust	-	-	-	-	-	-	1	40	0.1
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	2	90	0.1
Cercospora++	-	-	-	-	-	-	1	40	0.1
Coelomycetes	-	-	-	-	-	-	1	40	0.1
Nigrospora	-	-	-	-	-	-	1*	10*	0
Peronospora	-	-	-	-	-	-	1	40	0.1
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	1	40	0.1
Pyricularia	-	-	-	-	-	-	1	40	0.1
Zygophiala/Schizothyrium	-	-	-	-	-	-	1	40	0.1
Total Fungi	18	770	100	11	480	100	1487	65630	100
Hyphal Fragment	1	40	-	-	-	-	1	40	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/01/2020 07:04 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013491

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/24/2020

Received Date: 08/24/2020 05:05 PM

Analyzed Date: 08/26/2020 - 08/27/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE) **Chittick Elementary School**

Test Report: Air-O-Cell(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013491-0001 46-0824-01 75 Multi-Purpose Room			372013491-0002 46-0824-02 75 Hall Adj. Storage CT1205			372013491-0003 46-0824-03 75 Hall Adj. CT1405 (Room 7)		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	-	-	-	1	40	9.1	2	90	9
Basidiospores	11	480	92.3	6	300	68.2	19	830	83
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	2	90	20.5	1	40	4
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	1	40	7.7	1*	10*	2.3	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	1	40	4
Total Fungi	12	520	100	10	440	100	23	1000	100
Hyphal Fragment	1	40	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	1	40	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	2	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/27/2020 10:04 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013491

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/24/2020

Received Date: 08/24/2020 05:05 PM

Analyzed Date: 08/26/2020 - 08/27/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE)

Chittick Elementary School

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013491-0004 46-0824-04 75 Hall Across From Boiler			372013491-0005 46-0824-05 75 Hall Adj. Tech Lab			372013491-0006 46-0824-06 75 Outdoor Control		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	39	1700	4.9
Aspergillus/Penicillium	1	40	9.1	-	-	-	5	200	0.6
Basidiospores	6	300	68.2	11	480	92.3	710	31000	90.1
Bipolaris++	-	-	-	-	-	-	1	40	0.1
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	3	100	22.7	1	40	7.7	22	960	2.8
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	6	300	0.9
Myxomycetes++	-	-	-	-	-	-	2	90	0.3
Pithomyces++	-	-	-	-	-	-	1	40	0.1
Rust	-	-	-	-	-	-	2*	30*	0.1
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	1	40	0.1
Zygomycetes	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	-	-	-
Total Fungi	10	440	100	12	520	100	789	34400	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	1	40	-
Pollen	-	-	-	-	-	-	2	90	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/27/2020 10:04 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com / cinmicrolab@emsl.com>

EMSL Order: 372013491

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.

5434 King Avenue

Suite 101

Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/24/2020

Received Date: 08/24/2020 05:05 PM

Analyzed Date: 08/26/2020 - 08/27/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE)

Chittick Elementary School

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	372013491-0008				
Client Sample ID:	46-0824-08				
Volume (L):					
Sample Location:	Blank				
Spore Types	Raw Count	Count/M ³	% of Total		
Alternaria (Ulocladium)	-	-	-		
Ascospores	-	-	-		
Aspergillus/Penicillium	-	-	-		
Basidiospores	-	-	-		
Bipolaris++	-	-	-		
Chaetomium	-	-	-		
Cladosporium	-	-	-		
Curvularia	-	-	-		
Epicoccum	-	-	-		
Fusarium	-	-	-		
Ganoderma	-	-	-		
Myxomycetes++	-	-	-		
Pithomyces++	-	-	-		
Rust	-	-	-		
Scopulariopsis/Microascus	-	-	-		
Stachybotrys/Memnoniella	-	-	-		
Unidentifiable Spores	-	-	-		
Zygomycetes	-	-	-		
Pestalotia/Pestalotiopsis	-	-	-		
Total Fungi	-	No Trace	-		
Hyphal Fragment	-	-	-		
Insect Fragment	-	-	-		
Pollen	-	-	-		
Analyt. Sensitivity 600x	-	0	-		
Analyt. Sensitivity 300x	-	0*	-		
Skin Fragments (1-4)	-	-	-		
Fibrous Particulate (1-4)	-	-	-		
Background (1-5)	-	-	-		

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/27/2020 10:04 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com / cinmicrolab@emsl.com>

EMSL Order: 372013997

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/27/2020

Received Date: 08/29/2020 12:20 PM

Analyzed Date: 09/02/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE) **Churchill Junior High School**

Test Report: Air-O-Cell(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013997-0001 30-0827-01 75 Near CST Room In Corridor			372013997-0002 30-0827-02 75 Inside Room 600			372013997-0003 30-0827-03 75 Inside Room 915		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	3	100	3.1	-	-	-	-	-	-
Aspergillus/Penicillium	2	90	2.8	2	90	9	1	40	4.6
Basidiospores	61	2700	84.9	20	870	87	17	740	85.1
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	5	200	6.3	1	40	4	2	90	10.3
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	2	90	2.8	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Total Fungi	73	3180	100	23	1000	100	20	870	100
Hyphal Fragment	1	40	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	1	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/02/2020 04:27 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com / cinmicrolab@emsl.com>

EMSL Order: 372013997

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/27/2020

Received Date: 08/29/2020 12:20 PM

Analyzed Date: 09/02/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE) **Churchill Junior High School**

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013997-0004 30-0827-04 75 Inside Room 703			372013997-0005 30-0827-05 75 Inside Room 902			372013997-0006 30-0827-06 75 Inside Room 504		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	1	40	2.5	-	-	-
Aspergillus/Penicillium	-	-	-	-	-	-	4	200	10
Basidiospores	16	700	70	34	1500	94.9	38	1700	85
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	7	300	30	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	3	100	5
Pithomyces++	-	-	-	1	40	2.5	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Total Fungi	23	1000	100	36	1580	100	45	2000	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	1*	10*	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	2	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	2	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/02/2020 04:27 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com / cinmicrolab@emsl.com>

EMSL Order: 372013997

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/27/2020

Received Date: 08/29/2020 12:20 PM

Analyzed Date: 09/02/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE)

Churchill Junior High School

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013997-0007 30-0827-07 75 Corridor Near Cafeteria			372013997-0008 30-0827-08 75 Inside Room 206			372013997-0009 30-0827-09 75 Inside Room 306		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	1	40	14.3	-	-	-	-	-	-
Aspergillus/Penicillium	-	-	-	1	40	30.8	-	-	-
Basidiospores	5	200	71.4	2	90	69.2	5	200	83.3
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	1	40	14.3	-	-	-	1	40	16.7
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Total Fungi	7	280	100	3	130	100	6	240	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	1*	10*	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/02/2020 04:27 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com / cinmicrolab@emsl.com>

EMSL Order: 372013997

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/27/2020

Received Date: 08/29/2020 12:20 PM

Analyzed Date: 09/02/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE)

Churchill Junior High School

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013997-0010 30-0827-10 75 Inside Room 100			372013997-0011 30-0827-11 75 Inside Room 108			372013997-0012 30-0827-12 75 Main Parking Lot		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	9	400	3.2
Aspergillus/Penicillium	-	-	-	-	-	-	7	300	2.4
Basidiospores	2	90	31	5	200	71.4	189	8250	66.7
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	4	200	69	1	40	14.3	66	2900	23.5
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	1	40	14.3	4	200	1.6
Myxomycetes++	-	-	-	-	-	-	5	200	1.6
Pithomyces++	-	-	-	-	-	-	2*	30*	0.2
Rust	-	-	-	-	-	-	1	40	0.3
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	3*	40*	0.3
Total Fungi	6	290	100	7	280	100	286	12360	100
Hyphal Fragment	-	-	-	-	-	-	3	100	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	2	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/02/2020 04:27 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-0262

<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013998

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.

5434 King Avenue

Suite 101

Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/27/2020

Received Date: 08/29/2020 12:20 PM

Analyzed Date: 09/02/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1594 (East Brunswick BOE) **East Brunswick High School**

Test Report: Air-O-CellTM Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	372013998-0001			372013998-0002			372013998-0003		
Client Sample ID:	30-0827-13			30-0827-14			30-0827-15		
Volume (L):	75			75			75		
Sample Location:	Main Entrance Lobby			C-Hall Near Room C-1			M-Hall Near Gym		
Spore Types	Raw Count	Count/M ³	% of Total	Raw Count	Count/M ³	% of Total	Raw Count	Count/M ³	% of Total
Alternaria (Ulocladium)	1	40	0.6	4	200	2.5	-	-	-
Ascospores	6	300	4.5	3	100	1.2	4	200	7
Aspergillus/Penicillium	1	40	0.6	13	570	7.1	7	300	10.5
Basidiospores	111	4840	71.8	94	4100	51.2	37	1600	56.1
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	23	1000	14.8	43	1900	23.7	16	700	24.6
Curvularia	-	-	-	1	40	0.5	-	-	-
Epicoccum	-	-	-	2	90	1.1	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	3	100	1.5	-	-	-	1	40	1.4
Myxomycetes++	-	-	-	18	790	9.9	-	-	-
Pithomyces++	1	40	0.6	1	40	0.5	-	-	-
Rust	-	-	-	1	40	0.5	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	1*	10*	0.4
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Cercospora++	1	40	0.6	1*	10*	0.1	-	-	-
Paecilomyces-like	7	300	4.5	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	1	40	0.5	-	-	-
Polythrincium	-	-	-	-	-	-	-	-	-
Torula-like	1	40	0.6	-	-	-	-	-	-
Zygophiala/Schizothyrium	-	-	-	2	90	1.1	-	-	-
Total Fungi	155	6740	100	184	8010	100	66	2850	100
Hyphal Fragment	1	40	-	1	40	-	-	-	-
Insect Fragment	-	-	-	-	-	-	1	40	-
Pollen	-	-	-	2	90	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	2	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/02/2020 04:17 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-0262

<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013998

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.

5434 King Avenue

Suite 101

Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/27/2020

Received Date: 08/29/2020 12:20 PM

Analyzed Date: 09/02/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1594 (East Brunswick BOE)

East Brunswick High School

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013998-0004 30-0827-16 75 K-Hall Near Room K-2			372013998-0005 30-0827-17 75 I-Hall Near Room I-15			372013998-0006 30-0827-18 75 H-Hall Near Room H-17		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	3	100	2.1	1	40	2	1	40	1.6
Aspergillus/Penicillium	4	200	4.2	1	40	2	2	90	3.6
Basidiospores	56	2400	50.7	41	1800	90.9	44	1900	75.4
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	43	1900	40.2	3	100	5.1	9	400	15.9
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	1	40	0.8	-	-	-	-	-	-
Myxomycetes++	1	40	0.8	-	-	-	2	90	3.6
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Cercospora++	1	40	0.8	-	-	-	-	-	-
Paecilomyces-like	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	-	-	-
Polythrincium	1*	10*	0.2	-	-	-	-	-	-
Torula-like	-	-	-	-	-	-	-	-	-
Zygophiala/Schizothyrium	-	-	-	-	-	-	-	-	-
Total Fungi	110	4730	100	46	1980	100	58	2520	100
Hyphal Fragment	-	-	-	-	-	-	1*	10*	-
Insect Fragment	1	40	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	1	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	2	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/02/2020 04:17 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-0262

<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013998

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.

5434 King Avenue

Suite 101

Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/27/2020

Received Date: 08/29/2020 12:20 PM

Analyzed Date: 09/02/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1594 (East Brunswick BOE) **East Brunswick High School**

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013998-0007 30-0827-19 75 F-Hall Near Room F-17			372013998-0008 30-0827-20 75 G-Hall Near Room G-11			372013998-0009 30-0827-21 75 Cafeteria		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	1	40	1.2
Ascospores	2	90	10.2	1	40	9.5	-	-	-
Aspergillus/Penicillium	-	-	-	-	-	-	-	-	-
Basidiospores	16	700	79.5	3	100	23.8	49	2100	61.6
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	2	90	10.2	4	200	47.6	25	1100	32.3
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	2	90	2.6
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	1	40	1.2
Rust	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	1	40	9.5	-	-	-
Cercospora++	-	-	-	1	40	9.5	1	40	1.2
Paecilomyces-like	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	-	-	-
Polythrincium	-	-	-	-	-	-	-	-	-
Torula-like	-	-	-	-	-	-	-	-	-
Zygophiala/Schizothyrium	-	-	-	-	-	-	-	-	-
Total Fungi	20	880	100	10	420	100	79	3410	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	2	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/02/2020 04:17 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013998

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/27/2020

Received Date: 08/29/2020 12:20 PM

Analyzed Date: 09/02/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1594 (East Brunswick BOE) **East Brunswick High School**

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013998-0010 30-0827-22 75 D-Hall Near D-12			372013998-0011 30-0827-23 75 E-Hall Near Room E-1			372013998-0012 30-0827-24 75 Main Parking Lot		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	2	90	0.8	4	200	1.5
Ascospores	3	100	5.2	11	480	4.1	7	300	2.2
Aspergillus/Penicillium	-	-	-	20	870	7.4	8	300	2.2
Basidiospores	36	1600	82.5	193	8420	72	218	9510	69.1
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	4	200	10.3	38	1700	14.5	74	3200	23.2
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	2	90	0.8	3	100	0.7
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	1	40	0.3
Rust	-	-	-	-	-	-	1	40	0.3
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	1	40	0.3	-	-	-
Cercospora++	-	-	-	-	-	-	1	40	0.3
Paecilomyces-like	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	1	40	2.1	-	-	-	-	-	-
Polythrincium	-	-	-	-	-	-	-	-	-
Torula-like	-	-	-	-	-	-	1	40	0.3
Zygophiala/Schizothyrium	-	-	-	-	-	-	-	-	-
Total Fungi	44	1940	100	267	11690	100	318	13770	100
Hyphal Fragment	-	-	-	-	-	-	2	90	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	1	40	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/02/2020 04:17 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013409

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/24/2020 - 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR 200819-1584 (East Brunswick BOE) **Frost Elementary School**

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	372013409-0001			372013409-0002			372013409-0003		
Client Sample ID:	58-0821-01			58-0821-02			58-0821-03		
Volume (L):	75			75			75		
Sample Location:	Room 20 (FR1009)			Room 26 (FR1015)			Room 27 (FR1026)		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	1	40	9.1	-	-	-	-	-	-
Ascospores	1	40	9.1	9	400	19.5	-	-	-
Aspergillus/Penicillium	2	80	18.2	1	40	2	18	740	23.5
Basidiospores	6	200	45.5	37	1500	73.2	36	1500	47.6
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	1	40	9.1	2	80	3.9	20	820	26
Curvularia	-	-	-	1*	10*	0.5	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	1*	10*	0.5	1	40	1.3
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	1*	10*	0.5	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	1	40	9.1	-	-	-	1*	10*	0.3
Blakeslea/Choanephora	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Coelomycetes	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Oidium	-	-	-	-	-	-	-	-	-
Paecilomyces-like	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	1	40	1.3
Sporidesmium-like	-	-	-	-	-	-	-	-	-
Torula-like	-	-	-	-	-	-	-	-	-
Zygophiala/Schizothyrium	-	-	-	-	-	-	-	-	-
Total Fungi	12	440	100	52	2050	100	77	3150	100
Hyphal Fragment	-	-	-	2	80	-	4	200	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	1	40	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
 or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 11:29 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com / cinmicrolab@emsl.com>

EMSL Order: 372013409

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/24/2020 - 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR 200819-1584 (East Brunswick BOE) **Frost Elementary School**

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	372013409-0001			372013409-0002			372013409-0003		
Client Sample ID:	58-0821-01			58-0821-02			58-0821-03		
Volume (L):	75			75			75		
Sample Location:	Room 20 (FR1009)			Room 26 (FR1015)			Room 27 (FR1026)		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Analyt. Sensitivity 600x	-	41	-	-	41	-	-	41	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	2	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
 or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 11:29 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013409

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/24/2020 - 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR 200819-1584 (East Brunswick BOE) **Frost Elementary School**

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013409-0004 58-0821-04 75 Room 25 (FR1024)			372013409-0005 58-0821-05 75 Media Center - Right (FR1315)			372013409-0006 58-0821-06 75 Media Center - Left (FR1315)		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	4	200	10.1	-	-	-	1	40	3.7
Aspergillus/Penicillium	1	40	2	2	80	28.6	2	80	7.5
Basidiospores	42	1700	85.9	5	200	71.4	18	740	69.2
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	1	40	2	-	-	-	4	200	18.7
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Blakeslea/Choanephora	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Coelomycetes	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Oidium	-	-	-	-	-	-	-	-	-
Paecilomyces-like	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	-	-	-
Sporidesmium-like	-	-	-	-	-	-	-	-	-
Torula-like	-	-	-	-	-	-	1*	10*	0.9
Zygophiala/Schizothyrium	-	-	-	-	-	-	-	-	-
Total Fungi	48	1980	100	7	280	100	26	1070	100
Hyphal Fragment	1	40	-	-	-	-	1	40	-
Insect Fragment	1*	10*	-	-	-	-	1*	10*	-
Pollen	-	-	-	-	-	-	-	-	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 11:29 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com / cinmicrolab@emsl.com>

EMSL Order: 372013409

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/24/2020 - 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR 200819-1584 (East Brunswick BOE)

Frost Elementary School

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	372013409-0004			372013409-0005			372013409-0006		
Client Sample ID:	58-0821-04			58-0821-05			58-0821-06		
Volume (L):	75			75			75		
Sample Location:	Room 25 (FR1024)			Media Center - Right (FR1315)			Media Center - Left (FR1315)		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Analyt. Sensitivity 600x	-	41	-	-	41	-	-	41	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
 or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 11:29 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com / cinmicrolab@emsl.com>

EMSL Order: 372013409
 Customer ID: EDI50
 Customer PO:
 Project ID: East Brunswick BOE

Attention: Tom Pruno
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/24/2020 - 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR 200819-1584 (East Brunswick BOE)

Frost Elementary School

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013409-0007 58-0821-07 75 Room 29 (FR1311)			372013409-0008 58-0821-08 75 Room 32 (FR1302)			372013409-0009 58-0821-09 75 Hallway Corner By Rooms 1 & 3		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	2	80	4.8	1	40	4.9
Aspergillus/Penicillium	-	-	-	1	40	2.4	1	40	4.9
Basidiospores	9	400	90.9	33	1400	83.3	18	740	90.2
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	1	40	9.1	2	80	4.8	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	1	40	2.4	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	1	40	2.4	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Blakeslea/Choanephora	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Coelomycetes	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Oidium	-	-	-	-	-	-	-	-	-
Paecilomyces-like	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	-	-	-
Sporidesmium-like	-	-	-	-	-	-	-	-	-
Torula-like	-	-	-	-	-	-	-	-	-
Zygophiala/Schizothyrium	-	-	-	-	-	-	-	-	-
Total Fungi	10	440	100	40	1680	100	20	820	100
Hyphal Fragment	-	-	-	1	40	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 11:29 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com / cinmicrolab@emsl.com>

EMSL Order: 372013409

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/24/2020 - 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR 200819-1584 (East Brunswick BOE)

Frost Elementary School

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	372013409-0007			372013409-0008			372013409-0009		
Client Sample ID:	58-0821-07			58-0821-08			58-0821-09		
Volume (L):	75			75			75		
Sample Location:	Room 29 (FR1311)			Room 32 (FR1302)			Hallway Corner By Rooms 1 & 3		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Analyt. Sensitivity 600x	-	41	-	-	41	-	-	41	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
 or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 11:29 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013409

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/24/2020 - 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR 200819-1584 (East Brunswick BOE)

Frost Elementary School

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013409-0010 58-0821-10 75 Room 1 (FR1215)			372013409-0011 58-0821-11 75 Room 3 (FR1213)			372013409-0012 58-0821-12 75 Room 7 (FR1209)		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	1	40	1.3	1	40	2.7	-	-	-
Aspergillus/Penicillium	2	90	3	1	40	2.7	-	-	-
Basidiospores	30	1300	43.2	27	1200	82.2	12	530	86.9
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	33	1500	49.8	3	100	6.8	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Ganoderma	1	40	1.3	1	40	2.7	1	40	6.6
Myxomycetes++	1	40	1.3	1	40	2.7	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Blakeslea/Choanephora	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Coelomycetes	-	-	-	-	-	-	1	40	6.6
Nigrospora	-	-	-	-	-	-	-	-	-
Oidium	-	-	-	-	-	-	-	-	-
Paecilomyces-like	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	-	-	-
Sporidesmium-like	-	-	-	-	-	-	-	-	-
Torula-like	-	-	-	-	-	-	-	-	-
Zygophiala/Schizothyrium	-	-	-	-	-	-	-	-	-
Total Fungi	68	3010	100	34	1460	100	14	610	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 11:29 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com / cinmicrolab@emsl.com>

EMSL Order: 372013409

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/24/2020 - 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR 200819-1584 (East Brunswick BOE)

Frost Elementary School

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	372013409-0010			372013409-0011			372013409-0012		
Client Sample ID:	58-0821-10			58-0821-11			58-0821-12		
Volume (L):	75			75			75		
Sample Location:	Room 1 (FR1215)			Room 3 (FR1213)			Room 7 (FR1209)		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
 or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 11:29 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013409

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/24/2020 - 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR 200819-1584 (East Brunswick BOE)

Frost Elementary School

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013409-0013 58-0821-13 75 Room 9 (FR1207)			372013409-0014 58-0821-14 75 Room 10 (FR1202)			372013409-0015 58-0821-15 75 Nurse's Office (FR1114)		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	1	40	5.6	1	40	2.4
Aspergillus/Penicillium	-	-	-	15	660	93	-	-	-
Basidiospores	28	1200	82.8	-	-	-	34	1500	89.8
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	2	90	6.2	-	-	-	2	90	5.4
Curvularia	-	-	-	1*	10*	1.4	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Ganoderma	1	40	2.8	-	-	-	-	-	-
Myxomycetes++	1	40	2.8	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	1	40	2.8	-	-	-	-	-	-
Blakeslea/Choanephora	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Coelomycetes	-	-	-	-	-	-	1	40	2.4
Nigrospora	-	-	-	-	-	-	-	-	-
Oidium	-	-	-	-	-	-	-	-	-
Paecilomyces-like	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	1	40	2.8	-	-	-	-	-	-
Sporidesmium-like	-	-	-	-	-	-	-	-	-
Torula-like	-	-	-	-	-	-	-	-	-
Zygophiala/Schizothyrium	-	-	-	-	-	-	-	-	-
Total Fungi	34	1450	100	17	710	100	38	1670	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 11:29 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com / cinmicrolab@emsl.com>

EMSL Order: 372013409
 Customer ID: EDI50
 Customer PO:
 Project ID: East Brunswick BOE

Attention: Tom Pruno
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/24/2020 - 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR 200819-1584 (East Brunswick BOE) **Frost Elementary School**

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	372013409-0013			372013409-0014			372013409-0015		
Client Sample ID:	58-0821-13			58-0821-14			58-0821-15		
Volume (L):	75			75			75		
Sample Location:	Room 9 (FR1207)			Room 10 (FR1202)			Nurse's Office (FR1114)		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
 or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 11:29 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013409

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/24/2020 - 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR 200819-1584 (East Brunswick BOE) **Frost Elementary School**

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013409-0016 58-0821-16 75 Main Office			372013409-0017 58-0821-17 75 Kitchen (FR1008A)			372013409-0018 58-0821-18 75 Multi-Purpose Room By Stage		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	3	100	2.9	2	90	1.3	4	200	10.7
Aspergillus/Penicillium	3	100	2.9	-	-	-	2	90	4.8
Basidiospores	65	2900	83.3	138	6100	89.8	29	1300	69.5
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	7	300	8.6	7	300	4.4	5	200	10.7
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	3	100	1.5	-	-	-
Myxomycetes++	-	-	-	1	40	0.6	1	40	2.1
Pithomyces++	-	-	-	1	40	0.6	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Blakeslea/Choanephora	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	1	40	0.6	-	-	-
Coelomycetes	1	40	1.1	1	40	0.6	1	40	2.1
Nigrospora	-	-	-	-	-	-	-	-	-
Oidium	-	-	-	-	-	-	-	-	-
Paecilomyces-like	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	1	40	0.6	-	-	-
Sporidesmium-like	1	40	1.1	-	-	-	-	-	-
Torula-like	-	-	-	-	-	-	-	-	-
Zygophiala/Schizothyrium	-	-	-	-	-	-	-	-	-
Total Fungi	80	3480	100	155	6790	100	42	1870	100
Hyphal Fragment	1	40	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 11:29 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com / cinmicrolab@emsl.com>

EMSL Order: 372013409

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/24/2020 - 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR 200819-1584 (East Brunswick BOE) **Frost Elementary School**

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013409-0016 58-0821-16 75 Main Office			372013409-0017 58-0821-17 75 Kitchen (FR1008A)			372013409-0018 58-0821-18 75 Multi-Purpose Room By Stage					
	Spore Types			Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
	Analyt. Sensitivity 600x			-	44	-	-	44	-	-	44	-
	Analyt. Sensitivity 300x			-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)			-	1	-	-	1	-	-	1	-	
Fibrous Particulate (1-4)			-	1	-	-	1	-	-	1	-	
Background (1-5)			-	1	-	-	1	-	-	1	-	

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
 or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 11:29 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013409

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/24/2020 - 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR 200819-1584 (East Brunswick BOE)

Frost Elementary School

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013409-0019 58-0821-19 75 Multi-Purpose Room By Back Wall			372013409-0020 58-0821-20 75 Outside Control - Front			372013409-0021 58-0821-21 75 Outside Control - Back		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	1*	10*	0.1	1	40	0.3
Ascospores	1	40	3.1	16	710	4.9	13	570	4.2
Aspergillus/Penicillium	-	-	-	1	40	0.3	1	40	0.3
Basidiospores	21	930	73.2	283	12500	86.9	255	11300	83.8
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	6	300	23.6	12	530	3.7	14	620	4.6
Curvularia	-	-	-	1*	10*	0.1	1*	10*	0.1
Epicoccum	-	-	-	1*	10*	0.1	-	-	-
Ganoderma	-	-	-	2	90	0.6	4	200	1.5
Myxomycetes++	-	-	-	3	100	0.7	3	100	0.7
Pithomyces++	-	-	-	2	90	0.6	1	40	0.3
Rust	-	-	-	-	-	-	2	90	0.7
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	1	40	0.3
Blakeslea/Choanephora	-	-	-	3	100	0.7	-	-	-
Cercospora++	-	-	-	1	40	0.3	-	-	-
Coelomycetes	-	-	-	1	40	0.3	3	100	0.7
Nigrospora	-	-	-	-	-	-	1	40	0.3
Oidium	-	-	-	1	40	0.3	-	-	-
Paecilomyces-like	-	-	-	-	-	-	6	300	2.2
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	-	-	-
Sporidesmium-like	-	-	-	1*	10*	0.1	-	-	-
Torula-like	-	-	-	2*	30*	0.2	-	-	-
Zygophiala/Schizothyrium	-	-	-	1	40	0.3	-	-	-
Total Fungi	28	1270	100	332	14390	100	306	13490	100
Hyphal Fragment	-	-	-	-	-	-	1	40	-
Insect Fragment	-	-	-	2	90	-	-	-	-
Pollen	-	-	-	1	40	-	1	40	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 11:29 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com / cinmicrolab@emsl.com>

EMSL Order: 372013409

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/24/2020 - 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR 200819-1584 (East Brunswick BOE) **Frost Elementary School**

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013409-0019 58-0821-19 75			372013409-0020 58-0821-20 75			372013409-0021 58-0821-21 75					
	Multi-Purpose Room By Back Wall			Outside Control - Front			Outside Control - Back					
	Spore Types			Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
	Analyt. Sensitivity 600x			-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x			-	13*	-	-	13*	-	-	13*	-	
Skin Fragments (1-4)			-	1	-	-	1	-	-	1	-	
Fibrous Particulate (1-4)			-	1	-	-	1	-	-	1	-	
Background (1-5)			-	1	-	-	1	-	-	1	-	

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
 or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 11:29 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013409

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/24/2020 - 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR 200819-1584 (East Brunswick BOE) **Frost Elementary School**

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	372013409-0022	372013409-0028	
Client Sample ID:	58-0821-27	58-0821-28	
Volume (L):	75		
Sample Location:	Technology Lab	Blank	
Spore Types	Raw Count	Count/M ³	% of Total
Alternaria (Ulocladium)	-	-	-
Ascospores	-	-	-
Aspergillus/Penicillium	1	40	3.1
Basidiospores	26	1100	85.9
Chaetomium	-	-	-
Cladosporium	3	100	7.8
Curvularia	-	-	-
Epicoccum	-	-	-
Ganoderma	-	-	-
Myxomycetes++	1	40	3.1
Pithomyces++	-	-	-
Rust	-	-	-
Stachybotrys/Memnoniella	-	-	-
Unidentifiable Spores	-	-	-
Blakeslea/Choanephora	-	-	-
Cercospora++	-	-	-
Coelomycetes	-	-	-
Nigrospora	-	-	-
Oidium	-	-	-
Paecilomyces-like	-	-	-
Pestalotia/Pestalotiopsis	-	-	-
Sporidesmium-like	-	-	-
Torula-like	-	-	-
Zygophiala/Schizothyrium	-	-	-
Total Fungi	31	1280	100
Hyphal Fragment	1	40	-
Insect Fragment	-	-	-
Pollen	-	-	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
 or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 11:29 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com / cinmicrolab@emsl.com>

EMSL Order: 372013409

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/24/2020 - 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR 200819-1584 (East Brunswick BOE) **Frost Elementary School**

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	372013409-0022			372013409-0028			
Client Sample ID:	58-0821-27			58-0821-28			
Volume (L):	75						
Sample Location:	Technology Lab			Blank			
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	
Analyt. Sensitivity 600x	-	44	-	-	0	-	-
Analyt. Sensitivity 300x	-	13*	-	-	0*	-	-
Skin Fragments (1-4)	-	1	-	-	-	-	-
Fibrous Particulate (1-4)	-	1	-	-	-	-	-
Background (1-5)	-	1	-	-	-	-	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 11:29 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-0262

<http://www.EMSL.com> / cinnmicrolab@emsl.com

EMSL Order: 372013986

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.

5434 King Avenue

Suite 101

Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/27/2020

Received Date: 08/31/2020 12:45 PM

Analyzed Date: 09/03/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE)

Hammarskjold

Test Report: Air-O-CellTM Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	372013986-0001			372013986-0002			372013986-0003		
Client Sample ID:	30-0827-25			30-0827-26			30-0827-27		
Volume (L):	75			75			75		
Sample Location:	Lobby Area			Corridor Near Student Services			Corridor Near 1207		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	1	40	5.6	-	-	-	-	-	-
Aspergillus/Penicillium	-	-	-	-	-	-	2	90	7.6
Basidiospores	2	90	12.5	7	300	69.8	22	970	81.5
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	6	300	41.7	2	90	20.9	2	90	7.6
Curvularia	-	-	-	1	40	9.3	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	1	40	3.4
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	1	40	5.6	-	-	-	-	-	-
Coelomycetes	-	-	-	-	-	-	-	-	-
Nigrospora	1*	10*	1.4	-	-	-	-	-	-
Paecilomyces-like	4	200	27.8	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	1	40	5.6	-	-	-	-	-	-
Total Fungi	16	720	100	10	430	100	27	1190	100
Hyphal Fragment	1	40	-	-	-	-	-	-	-
Insect Fragment	1	40	-	-	-	-	1	40	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/03/2020 08:18 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-0262

<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013986

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.

5434 King Avenue

Suite 101

Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/27/2020

Received Date: 08/31/2020 12:45 PM

Analyzed Date: 09/03/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE)

Hammaraskjold

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013986-0004 30-0827-28 75 Inside Room 1405			372013986-0005 30-0827-29 75 Inside Room 1621			372013986-0006 30-0827-30 75 Inside Room 1700		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	1	40	10.8
Aspergillus/Penicillium	-	-	-	-	-	-	3	100	27
Basidiospores	5	200	100	1	40	100	5	200	54.1
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	2*	30*	8.1
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Coelomycetes	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Paecilomyces-like	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	-	-	-
Total Fungi	5	200	100	1	40	100	11	370	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/03/2020 08:18 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013986

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.

5434 King Avenue

Suite 101

Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/27/2020

Received Date: 08/31/2020 12:45 PM

Analyzed Date: 09/03/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE)

Hammaraskjold

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013986-0007 30-0827-31 75 Inside Room 2610			372013986-0008 30-0827-32 75 Corridor Near Conference Room 2501B			372013986-0009 30-0827-33 75 Corridor Near Room 2918		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	1	40	28.6
Aspergillus/Penicillium	-	-	-	-	-	-	-	-	-
Basidiospores	1	40	50	2	90	69.2	3	100	71.4
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	1	40	50	1	40	30.8	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Coelomycetes	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Paecilomyces-like	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	-	-	-
Total Fungi	2	80	100	3	130	100	4	140	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/03/2020 08:18 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013986

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/27/2020

Received Date: 08/31/2020 12:45 PM

Analyzed Date: 09/03/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE)

Hammar skjold

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	372013986-0010	372013986-0011	
Client Sample ID:	30-0827-34	30-0827-35	
Volume (L):	75	75	
Sample Location:	Inside Room 2428	Outdoor In Front Of Building	
Spore Types	Raw Count	Count/M ³	% of Total
Alternaria (Ulocladium)	-	-	-
Ascospores	-	-	-
Aspergillus/Penicillium	-	-	-
Basidiospores	1	40	100
Bipolaris++	-	-	-
Chaetomium	-	-	-
Cladosporium	-	-	-
Curvularia	-	-	-
Epicoccum	-	-	-
Fusarium	-	-	-
Ganoderma	-	-	-
Myxomycetes++	-	-	-
Pithomyces++	-	-	-
Rust	-	-	-
Scopulariopsis/Microascus	-	-	-
Stachybotrys/Memnoniella	-	-	-
Unidentifiable Spores	-	-	-
Coelomycetes	-	-	-
Nigrospora	-	-	-
Paecilomyces-like	-	-	-
Pestalotia/Pestalotiopsis	-	-	-
Total Fungi	1	40	100
Hyphal Fragment	-	-	-
Insect Fragment	-	-	-
Pollen	-	-	-
Analyt. Sensitivity 600x	-	44	-
Analyt. Sensitivity 300x	-	13*	-
Skin Fragments (1-4)	-	1	-
Fibrous Particulate (1-4)	-	1	-
Background (1-5)	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
 or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/03/2020 08:18 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com / cinmicrolab@emsl.com>

EMSL Order: 372013488

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/24/2020

Received Date: 08/24/2020 05:10 PM

Analyzed Date: 08/26/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE) **Irwin Elementary School**

Test Report: Air-O-Cell(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013488-0001 46-0824-10 75 MP Room			372013488-0002 46-0824-11 75 Hall Adj. IR1327 (Room 22)			372013488-0003 46-0824-12 75 Hall Adj. IR1302 (Room 10)		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	1	40	6.3
Aspergillus/Penicillium	1	40	5.4	-	-	-	2	90	14.3
Basidiospores	14	620	83.8	4	200	71.4	7	300	47.6
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	1	40	5.4	1	40	14.3	5	200	31.7
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	1	40	5.4	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	1	40	14.3	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Blakeslea/Choanephora	-	-	-	-	-	-	-	-	-
Coelomycetes	-	-	-	-	-	-	-	-	-
Paecilomyces-like	-	-	-	-	-	-	-	-	-
Polythrincium	-	-	-	-	-	-	-	-	-
Zygophiala/Schizothyrium	-	-	-	-	-	-	-	-	-
Total Fungi	17	740	100	6	280	100	15	630	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/27/2020 08:44 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013488

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/24/2020

Received Date: 08/24/2020 05:10 PM

Analyzed Date: 08/26/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE) **Irwin Elementary School**

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013488-0004 46-0824-13 75 Hall Adj. IR1204 (Room 28)			372013488-0005 46-0824-14 75 Hall Adj. IR1116 (Room 2)			372013488-0006 46-0824-15 75 Outdoor Control Main Ent.		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	2	90	0.9
Ascospores	1	40	6.9	-	-	-	37	1600	16.5
Aspergillus/Penicillium	8	400	69	16	710	68.9	6	300	3.1
Basidiospores	3	100	17.2	1	40	3.9	123	5440	56
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	1	40	6.9	1	40	3.9	35	1500	15.4
Curvularia	-	-	-	-	-	-	1*	10*	0.1
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	3	100	1
Myxomycetes++	-	-	-	-	-	-	1	40	0.4
Pithomyces++	-	-	-	-	-	-	1	40	0.4
Rust	-	-	-	1	40	3.9	1	40	0.4
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Blakeslea/Choanephora	-	-	-	-	-	-	3	100	1
Coelomycetes	-	-	-	-	-	-	3	100	1
Paecilomyces-like	-	-	-	4	200	19.4	6	300	3.1
Polythrincium	-	-	-	-	-	-	1*	10*	0.1
Zygophiala/Schizothyrium	-	-	-	-	-	-	1	40	0.4
Total Fungi	13	580	100	23	1030	100	224	9710	100
Hyphal Fragment	-	-	-	-	-	-	1	40	-
Insect Fragment	-	-	-	-	-	-	1	40	-
Pollen	-	-	-	-	-	-	1	40	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/27/2020 08:44 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013488

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/24/2020

Received Date: 08/24/2020 05:10 PM

Analyzed Date: 08/26/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE)

Irwin Elementary School

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	372013488-0008				
Client Sample ID:	46-0824-17				
Volume (L):					
Sample Location:	Blank				
Spore Types	Raw Count	Count/M ³	% of Total		
Alternaria (Ulocladium)	-	-	-		
Ascospores	-	-	-		
Aspergillus/Penicillium	-	-	-		
Basidiospores	-	-	-		
Bipolaris++	-	-	-		
Chaetomium	-	-	-		
Cladosporium	-	-	-		
Curvularia	-	-	-		
Epicoccum	-	-	-		
Fusarium	-	-	-		
Ganoderma	-	-	-		
Myxomycetes++	-	-	-		
Pithomyces++	-	-	-		
Rust	-	-	-		
Scopulariopsis/Microascus	-	-	-		
Stachybotrys/Memnoniella	-	-	-		
Blakeslea/Choanephora	-	-	-		
Coelomycetes	-	-	-		
Paecilomyces-like	-	-	-		
Polythrincium	-	-	-		
Zygophiala/Schizothyrium	-	-	-		
Total Fungi	-	No Trace	-		
Hyphal Fragment	-	-	-		
Insect Fragment	-	-	-		
Pollen	-	-	-		
Analyt. Sensitivity 600x	-	0	-		
Analyt. Sensitivity 300x	-	0*	-		
Skin Fragments (1-4)	-	-	-		
Fibrous Particulate (1-4)	-	-	-		
Background (1-5)	-	-	-		

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/27/2020 08:44 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-0262

<http://www.EMSL.com> / cinnmicrolab@emsl.com

EMSL Order: 372013619

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.

5434 King Avenue

Suite 101

Pennsauken, NJ 08109

Project: PR200819-1584 / Lawrence Brook (East Brunswick BOE)

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/25/2020

Received Date: 08/26/2020 09:50 AM

Analyzed Date: 08/29/2020

Lawrence Brook

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013619-0001 46-0825-01 75 Hallway Adj To LB1505			372013619-0002 46-0825-02 75 Hallway Adj To LB1602			372013619-0003 46-0825-03 75 Hallway Adj To LB1502		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	2	90	13.2	-	-	-	-	-	-
Aspergillus/Penicillium	2	90	13.2	3	100	12	3	100	16.9
Basidiospores	6	300	44.1	8	400	48.2	8	400	67.8
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	5	200	29.4	3	100	12	1	40	6.8
Epicoccum	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	1	40	4.8	1	40	6.8
Myxomycetes++	-	-	-	1*	10*	1.2	-	-	-
Pithomyces++	-	-	-	1	40	4.8	1*	10*	1.7
Rust	-	-	-	3*	40*	4.8	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Blakeslea/Choanephora	-	-	-	3	100	12	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Oidium	-	-	-	-	-	-	-	-	-
Paecilomyces-like	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	-	-	-
Sporormiella	-	-	-	-	-	-	-	-	-
Total Fungi	15	680	100	23	830	100	14	590	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	2	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/31/2020 08:31 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013619

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.

5434 King Avenue

Suite 101

Pennsauken, NJ 08109

Project: PR200819-1584 / Lawrence Brook (East Brunswick BOE)

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/25/2020

Received Date: 08/26/2020 09:50 AM

Analyzed Date: 08/29/2020

Lawrence Brook

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013619-0004 46-0825-04 75 Hallway Adj To LB1411			372013619-0005 46-0825-05 75 Hallway Adj To LB1113			372013619-0006 46-0825-06 75 Outdoor Control Sample Main Entrance		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	2	90	0.6
Ascospores	-	-	-	-	-	-	27	1200	8.4
Aspergillus/Penicillium	-	-	-	1	40	10.5	13	570	4
Basidiospores	1	40	28.6	4	200	52.6	147	6500	45.7
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	3	100	71.4	2	90	23.7	97	4300	30.3
Epicoccum	-	-	-	-	-	-	1*	10*	0.1
Ganoderma	-	-	-	-	-	-	7	300	2.1
Myxomycetes++	-	-	-	1*	10*	2.6	1	40	0.3
Pithomyces++	-	-	-	1	40	10.5	3	100	0.7
Rust	-	-	-	-	-	-	1	40	0.3
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	1	40	0.3
Blakeslea/Choanephora	-	-	-	-	-	-	3	100	0.7
Cercospora++	-	-	-	-	-	-	5	200	1.4
Nigrospora	-	-	-	-	-	-	2	90	0.6
Oidium	-	-	-	-	-	-	2	90	0.6
Paecilomyces-like	-	-	-	-	-	-	7	300	2.1
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	1	40	0.3
Sporormiella	-	-	-	-	-	-	4	200	1.4
Total Fungi	4	140	100	9	380	100	324	14210	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	1	40	-	1	40	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	2	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/31/2020 08:31 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-0262

<http://www.EMSL.com> / cinnmicrolab@emsl.com

EMSL Order: 372013620

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.

5434 King Avenue

Suite 101

Pennsauken, NJ 08109

Project: PR-200819-1584 / Memorial ES (East Brunswick BOE)

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/25/2020

Received Date: 08/26/2020 09:50 AM

Analyzed Date: 08/29/2020

Memorial Elementary School

Test Report: Air-O-Cell(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013620-0001 46-0825-10 75 Hallway: Adj To Custodial Closet ME1122			372013620-0002 46-0825-11 75 Hallway: Adj To Room ME1101			372013620-0003 46-0825-12 75 Hallway: Adj To Security Desk		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	6	300	63.8	-	-	-	1	40	9.8
Basidiospores	2	90	19.1	1	40	36.4	5	200	48.8
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	1	40	36.4	12*	160*	39
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	1	40	8.5	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	1	40	8.5	2*	30*	27.3	1*	10*	2.4
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Paecilomyces-like	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	-	-	-
Torula-like	-	-	-	-	-	-	-	-	-
Total Fungi	10	470	100	4	110	100	19	410	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	1*	10*	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	2	-	-	3	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/31/2020 08:33 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-0262

<http://www.EMSL.com> / cinnmicrolab@emsl.com

EMSL Order: 372013620

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.

5434 King Avenue

Suite 101

Pennsauken, NJ 08109

Project: PR-200819-1584 / Memorial ES (East Brunswick BOE)

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/25/2020

Received Date: 08/26/2020 09:50 AM

Analyzed Date: 08/29/2020

Memorial Elementary School

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013620-0004 46-0825-13 75 Hallway: Adj To Art Room ME2102			372013620-0005 46-0825-14 75 Hallway: Adj To Room ME2109			372013620-0006 46-0825-15 75 Outside Control: Main Entrance		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	1	40	0.2
Ascospores	-	-	-	-	-	-	10	440	2.4
Aspergillus/Penicillium	-	-	-	1	40	100	3	100	0.5
Basidiospores	-	-	-	-	-	-	286	12600	67.4
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	88	3900	20.9
Curvularia	-	-	-	-	-	-	4	200	1.1
Epicoccum	-	-	-	-	-	-	2	90	0.5
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	7	300	1.6
Myxomycetes++	-	-	-	-	-	-	4	200	1.1
Pithomyces++	-	-	-	-	-	-	2*	30*	0.2
Rust	-	-	-	-	-	-	8*	100*	0.5
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	1	40	0.2
Paecilomyces-like	-	-	-	-	-	-	13	570	3
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	1	40	0.2
Torula-like	-	-	-	-	-	-	1	40	0.2
Total Fungi	-	None Detect	-	1	40	100	431	18690	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	1	40	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	3	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/31/2020 08:33 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013951

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.

5434 King Avenue

Suite 101

Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/28/2020

Received Date: 08/28/2020 04:55 PM

Analyzed Date: 09/01/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE) **SOP Building**

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013951-0001 46-0828-20 75 Main Entrance - Seating Area			372013951-0002 46-0828-21 75 Office Area Adj. To S0-1001-I			372013951-0003 46-0828-22 75 Training Room S0-1000-A		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	1	40	4.4	2	90	6.8	2	90	10
Aspergillus/Penicillium	-	-	-	-	-	-	-	-	-
Basidiospores	18	800	88.9	25	1100	83.3	13	570	63.3
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	2	90	6.8	5	200	22.2
Curvularia	1*	10*	1.1	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Ganoderma	1	40	4.4	-	-	-	1	40	4.4
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	1	40	3	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Blakeslea/Choanephora	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Coelomycetes	-	-	-	-	-	-	-	-	-
Mucor	-	-	-	-	-	-	-	-	-
Paecilomyces-like	-	-	-	-	-	-	-	-	-
Peronospora	1*	10*	1.1	-	-	-	-	-	-
Total Fungi	22	900	100	30	1320	100	21	900	100
Hyphal Fragment	1	40	-	-	-	-	1	40	-
Insect Fragment	-	-	-	-	-	-	1	40	-
Pollen	-	-	-	-	-	-	1	40	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	2	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/01/2020 07:06 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013951

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.

5434 King Avenue

Suite 101

Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/28/2020

Received Date: 08/28/2020 04:55 PM

Analyzed Date: 09/01/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE)

SOP Building

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013951-0004 46-0828-23 75 Faculty Dining Room			372013951-0005 46-0828-24 75 Garage: Adj. to S0-1301-F			372013951-0006 46-0828-25 75 Outdoor Control Sample		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	1*	10*	0.1
Ascospores	12	530	3.9	6	300	12.7	37	1600	11.4
Aspergillus/Penicillium	4	200	1.5	1	40	1.7	6	300	2.1
Basidiospores	278	12300	90.4	35	1500	63.6	174	7690	54.9
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	12	530	3.9	6	300	12.7	71	3100	22.1
Curvularia	-	-	-	-	-	-	2	90	0.6
Epicoccum	-	-	-	-	-	-	1	40	0.3
Ganoderma	1	40	0.3	1	40	1.7	7	300	2.1
Myxomycetes++	-	-	-	-	-	-	2	90	0.6
Pithomyces++	-	-	-	1*	10*	0.4	1	40	0.3
Rust	-	-	-	-	-	-	1	40	0.3
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	1	40	1.7	1	40	0.3
Blakeslea/Choanephora	-	-	-	-	-	-	3	100	0.7
Cercospora++	-	-	-	-	-	-	2	90	0.6
Coelomycetes	-	-	-	1	40	1.7	-	-	-
Mucor	-	-	-	-	-	-	9	400	2.9
Paecilomyces-like	-	-	-	2	90	3.8	-	-	-
Peronospora	-	-	-	-	-	-	2	90	0.6
Total Fungi	307	13600	100	54	2360	100	320	14020	100
Hyphal Fragment	-	-	-	-	-	-	1	40	-
Insect Fragment	1	40	-	-	-	-	1	40	-
Pollen	-	-	-	1	40	-	4	200	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	2	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/01/2020 07:06 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013408

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (856) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE) **Warnsdorfer**

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013408-0001 46-0821-01 75 Nurse Office (WA1112)			372013408-0002 46-0821-02 75 Main Office			372013408-0003 46-0821-03 75 Room 32 (WA1110)		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	1	40	5.1	1	40	11.8	-	-	-
Basidiospores	17	740	94.9	6	300	88.2	16	700	94.6
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	1	40	5.4
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Zygophiala/Schizothyrium	-	-	-	-	-	-	-	-	-
Total Fungi	18	780	100	7	340	100	17	740	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	2	-	-	2	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 02:54 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013408

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE) **Warnsdorfer**

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013408-0004 46-0821-04 75 Room 33 (WA1103)			372013408-0005 46-0821-05 75 Room 3 (WA1202)			372013408-0006 46-0821-06 75 Room 5 (WA1206)		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	-	-	-	-	-	-	-	-	-
Basidiospores	14	610	85.9	10	440	100	5	200	83.3
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	2	90	12.7	-	-	-	1	40	16.7
Curvularia	1*	10*	1.4	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Zygophiala/Schizothyrium	-	-	-	-	-	-	-	-	-
Total Fungi	17	710	100	10	440	100	6	240	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 02:54 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013408

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.

5434 King Avenue

Suite 101

Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE)

Warnsdorfer

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013408-0007 46-0821-07 75 Child Study Room Adj. 5			372013408-0008 46-0821-08 75 Room 6 (WA1209)			372013408-0009 46-0821-09 75 Room 11 (WA1214)		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	1	40	2.7	-	-	-	-	-	-
Aspergillus/Penicillium	-	-	-	-	-	-	1	40	7.7
Basidiospores	29	1300	89	12	520	92.9	11	480	92.3
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	3	100	6.8	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	1*	10*	0.7	1	40	7.1	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	1*	10*	0.7	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Zygophiala/Schizothyrium	-	-	-	-	-	-	-	-	-
Total Fungi	35	1460	100	13	560	100	12	520	100
Hyphal Fragment	2	90	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	1*	10*	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 02:54 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013408

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE)

Warnsdorfer

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013408-0010 46-0821-10 75 Room 12 (WA1215)			372013408-0011 46-0821-11 75 Room 14 (WA1217)			372013408-0012 46-0821-12 75 Room 17 (WA1311)		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	2	90	3	1	40	1.1	-	-	-
Aspergillus/Penicillium	1	40	1.3	2	90	2.5	-	-	-
Basidiospores	54	2400	79.7	78	3400	95.2	19	830	73.5
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	11	480	15.9	1	40	1.1	7	300	26.5
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Zygophiala/Schizothyrium	-	-	-	-	-	-	-	-	-
Total Fungi	68	3010	100	82	3570	100	26	1130	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 02:54 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013408

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE)

Warnsdorfer

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013408-0013 46-0821-13 75 Media Room Right (WA1315)			372013408-0014 46-0821-14 75 Media Room Left (WA1315)			372013408-0015 46-0821-15 75 Room 22 (WA1017)		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	1	40	4.8	1	40	4.2	-	-	-
Basidiospores	16	700	84.3	20	870	91.6	9	400	100
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	2	90	10.8	1	40	4.2	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Zygophiala/Schizothyrium	-	-	-	-	-	-	-	-	-
Total Fungi	19	830	100	22	950	100	9	400	100
Hyphal Fragment	1	40	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 02:54 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013408

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.

5434 King Avenue

Suite 101

Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE)

Warnsdorfer

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013408-0016 46-0821-16 75 Room 26 (WA1013)			372013408-0017 46-0821-17 75 Room 27 (WA1014)			372013408-0018 46-0821-18 75 Room 30 (WA1009)		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	1	40	17.4
Aspergillus/Penicillium	-	-	-	-	-	-	2	90	39.1
Basidiospores	5	200	100	9	400	100	3	100	43.5
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Zygophiala/Schizothyrium	-	-	-	-	-	-	-	-	-
Total Fungi	5	200	100	9	400	100	6	230	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	2	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 02:54 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013408

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.

5434 King Avenue

Suite 101

Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE)

Warnsdorfer

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013408-0019 46-0821-19 75 Kitchen (WA1008)			372013408-0020 46-0821-20 75 MP Room Back Wall			372013408-0021 46-0821-21 75 MP Room By Stage		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	1	40	33.3	-	-	-	-	-	-
Basidiospores	1	40	33.3	7	300	100	6	300	100
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	1	40	33.3	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Zygophiala/Schizothyrium	-	-	-	-	-	-	-	-	-
Total Fungi	3	120	100	7	300	100	6	300	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 02:54 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com/cinnmicrolab@emsl.com>

EMSL Order: 372013408

Customer ID: EDI50

Customer PO:

Project ID: East Brunswick BOE

Attention: Tom Pruno

Environmental Design, Inc.

5434 King Avenue

Suite 101

Pennsauken, NJ 08109

Phone: (856) 616-9516

Fax: (586) 616-9517

Collected Date: 08/21/2020

Received Date: 08/21/2020 04:55 PM

Analyzed Date: 08/25/2020

Project: Client: East Brunswick BOE / Project #: PR-200819-1584 (East Brunswick BOE)

Warnsdorfer

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372013408-0022 46-0821-22 75 Outside Control - Front			372013408-0023 46-0821-23 75 Outside Control - Back			372013408-0032 46-0821-32 Blank		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	3	100	0.5	-	-	-
Ascospores	12	520	2.1	13	570	2.9	-	-	-
Aspergillus/Penicillium	2	90	0.4	5	200	1	-	-	-
Basidiospores	532	23200	92.5	396	17300	88.7	-	-	-
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	21	920	3.7	17	740	3.8	-	-	-
Curvularia	1*	10*	0	1	40	0.2	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	5	200	0.8	4	200	1	-	-	-
Myxomycetes++	1	40	0.2	2	90	0.5	-	-	-
Pithomyces++	1*	10*	0	3	100	0.5	-	-	-
Rust	3*	40*	0.2	1	40	0.2	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	1	40	0.2	-	-	-
Nigrospora	1	40	0.2	-	-	-	-	-	-
Zygophiala/Schizothyrium	-	-	-	2	90	0.5	-	-	-
Total Fungi	579	25070	100	448	19510	100	-	None Detect	-
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	0	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	0*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	-	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	-	-
Background (1-5)	-	2	-	-	1	-	-	-	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 08/25/2020 02:54 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com

APPENDIX B

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000568
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000568-0001
CUSTOMER SAMPLE ID: 13-0828-01

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: East Brunswick IAQ
Administration Building

Phone: 856-616-9516
Email: tg@editesting.com

Collected: 08/28/2020 09:26
Received: 08/28/2020 16:55
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	KW	y00630.D	E15640	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.70	0.50		1.4	1.0	
n-Butane	106-97-8	58.12	0.81	0.50		1.9	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	650	0.50	E	1200	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	120	0.50	E	280	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	11	0.50		27	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	0.76	0.50		2.3	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	1.4	0.50		4.9	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	0.68	0.50		2.0	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	0.99	0.50		3.6	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	0.77	0.50		2.7	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	21	0.50		100	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	3.4	0.50		14	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000568
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000568-0001
CUSTOMER SAMPLE ID: 13-0828-01

Customer PO:
EMSL Project ID:
Project Name: East Brunswick IAQ
Administration Building

Collected: 08/28/2020 09:26
Received: 08/28/2020 16:55
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	KW	y00630.D	E15640	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	ND	0.50		ND	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	ND	1.0		ND	4.3	
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	ND	0.50		ND	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.50		ND	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	11	0.50		67	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			820	ppbv		1700	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

9.7

Spike

10

Recovery

97%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000556
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000556-0001
CUSTOMER SAMPLE ID: 58-0825-01

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Bowne-Munro ES: Hall Outside MP Room

Collected: 08/25/2020 08:42
Received: 08/26/2020 09:30
Analyzed: See Results
Reported: 9/2/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/02/2020	TP	J9645.D	E0398	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	0.59	0.50		2.9	2.5	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.61	0.50		1.3	1.0	
n-Butane	106-97-8	58.12	0.90	0.50		2.1	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	84	0.50	E	160	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	22	0.50		55	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	8.2	0.50		20	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	0.58	0.50		1.0	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	0.75	0.50		2.2	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	ND	0.50		ND	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000556
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000556-0001
CUSTOMER SAMPLE ID: 58-0825-01

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Bowne-Munro ES: Hall Outside MP Room

Collected: 08/25/2020 08:42
Received: 08/26/2020 09:30
Analyzed: See Results
Reported: 9/2/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/02/2020	TP	J9645.D	E0398	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	ND	0.50		ND	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	ND	1.0		ND	4.3	
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	ND	0.50		ND	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.50		ND	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			120	ppbv		240	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000556**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000556-0001

CUSTOMER SAMPLE ID: 58-0825-01

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
 Bowne-Munro ES: Hall Outside MP Room

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/25/2020 08:42
Received: 08/26/2020 09:30
Analyzed: See Results
Reported: 9/2/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/02/2020	TP	J9645.D	E0398	250 cc	1

Tentatively Identified Compound Results Summary

[illegible]

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000556
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000556-0002
CUSTOMER SAMPLE ID: 58-0825-02

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Bowne-Munro ES: Hall Outside Art Room

Collected: 08/25/2020 08:48
Received: 08/26/2020 09:30
Analyzed: See Results
Reported: 9/2/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/02/2020	TP	J9647.D	E12292	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.64	0.50		1.3	1.0	
n-Butane	106-97-8	58.12	1.8	0.50		4.2	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	140	0.50	E	260	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	16	0.50		39	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	6.2	0.50		15	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	ND	0.50		ND	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	ND	0.50		ND	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000556
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000556-0002
CUSTOMER SAMPLE ID: 58-0825-02

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Bowne-Munro ES: Hall Outside Art Room

Collected: 08/25/2020 08:48
Received: 08/26/2020 09:30
Analyzed: See Results
Reported: 9/2/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/02/2020	TP	J9647.D	E12292	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	0.61	0.50		2.3	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	ND	1.0		ND	4.3	
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	ND	0.50		ND	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.50		ND	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			170	ppbv		320	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000556**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000556-0002

CUSTOMER SAMPLE ID: 58-0825-02

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Bowne-Munro ES: Hall Outside Art Room

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/25/2020 08:48
Received: 08/26/2020 09:30
Analyzed: See Results
Reported: 9/2/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/02/2020	TP	J9647.D	E12292	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Propane	000074-98-6	44	1.7	JN	3.0	4.907	
Butane, 2-methyl-	000078-78-4	72	2.9	JN	8.5	7.18	
Pentane	000109-66-0	72	10	JN	31	8.01	
Isoprene	000078-79-5	68	1.1	JN	3.2	9.08	
Total TIC Concentrations:			16	ppbv	46	ug/m3	

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000559
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000559-0005
CUSTOMER SAMPLE ID: 58-0826-05

Customer PO:
EMSL Project ID:
Project Name: EB BOE-IAQ Test
Central ES: Hall Outside Room CE-1203

Collected: 08/26/2020 14:11
Received: 08/26/2020 18:35
Analyzed: See Results
Reported: 9/3/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9665.D	E0422	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.60	0.50		1.2	1.0	
n-Butane	106-97-8	58.12	0.93	0.50		2.2	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	120	0.50	E	230	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	1.8	0.50		4.5	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	3.5	0.50		8.2	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	ND	0.50		ND	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	ND	0.50		ND	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000559
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000559-0005
CUSTOMER SAMPLE ID: 58-0826-05

Customer PO:
EMSL Project ID:
Project Name: EB BOE-IAQ Test
Central ES: Hall Outside CE-1203

Collected: 08/26/2020 14:11
Received: 08/26/2020 18:35
Analyzed: See Results
Reported: 9/3/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9665.D	E0422	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	ND	0.50		ND	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	ND	1.0		ND	4.3	
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	ND	0.50		ND	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.50		ND	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			130	ppbv		250	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000559**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000559-0005

CUSTOMER SAMPLE ID: 58-0826-05

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE-IAQ Test
Central ES: Hall Outside Room CE-1203

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/26/2020 14:11
Received: 08/26/2020 18:35
Analyzed: See Results
Reported: 9/3/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9665.D	E0422	250 cc	1

Tentatively Identified Compound Results Summary

[illegible]

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000559
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000559-0006
CUSTOMER SAMPLE ID: 58-0826-06

Customer PO:
EMSL Project ID:
Project Name: EB BOE-IAQ Test
Central ES: Hall in Grade 4 Corridor

Collected: 08/26/2020 14:15
Received: 08/26/2020 18:35
Analyzed: See Results
Reported: 9/3/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9666.D	E0641	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.53	0.50		1.1	1.0	
n-Butane	106-97-8	58.12	ND	0.50		ND	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	1.4	0.50		2.5	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	ND	0.50		ND	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	2.4	0.50		5.6	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	ND	0.50		ND	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	ND	0.50		ND	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000559
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000559-0006
CUSTOMER SAMPLE ID: 58-0826-06

Customer PO:
EMSL Project ID:
Project Name: EB BOE-IAQ Test
Central ES: Hall in Grade 4 Corridor

Collected: 08/26/2020 14:15
Received: 08/26/2020 18:35
Analyzed: See Results
Reported: 9/3/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9666.D	E0641	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	ND	0.50		ND	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	ND	1.0		ND	4.3	
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	ND	0.50		ND	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.50		ND	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	

Total Target Compound Concentrations:

4.3	ppbv	9.2	ug/m3
------------	-------------	------------	--------------

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000559**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000559-0006

CUSTOMER SAMPLE ID: 58-0826-06

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE-IAQ Test
 Central ES: Hall in Grade 4 Corridor

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/26/2020 14:15
Received: 08/26/2020 18:35
Analyzed: See Results
Reported: 9/3/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9666.D	E0641	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Pentane	000109-66-0	72	1.3	JN	3.9	8.014	
Total TIC Concentrations:			1.3	ppbv	3.9	ug/m3	

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0006
CUSTOMER SAMPLE ID: 58-0827-06

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Churchill MS: Hall Outside Room HA-1304

Collected: 08/27/2020 11:39
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9679.D	E0605	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.65	0.50		1.4	1.0	
n-Butane	106-97-8	58.12	3.0	0.50		7.2	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	33	0.50		62	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	3.3	0.50		18	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	1.9	0.50		4.6	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	8.7	0.50		21	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	1.8	0.50		5.4	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	ND	0.50		ND	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0006
CUSTOMER SAMPLE ID: 58-0827-06

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Churchill MS: Hall Outside Hall CH-1304

Collected: 08/27/2020 11:39
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9679.D	E0605	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	0.85	0.50		3.5	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	0.59	0.50		2.2	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	1.1	0.50		4.8	2.2	
Xylene (p,m)	1330-20-7	106.2	4.6	1.0		20	4.3	
Xylene (Ortho)	95-47-6	106.2	1.3	0.50		5.8	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	5.3	0.50		26	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	1.6	0.50		7.8	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	5.2	0.50		26	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			73	ppbv		220	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000565**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000565-0006

CUSTOMER SAMPLE ID: 58-0827-06

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Churchill MS: Hall Outside Room CH-1304

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/27/2020 11:39
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9679.D	E0605	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Propane	000074-98-6	44	1.5	JN	2.7	4.872	
Butane, 2-methyl-	000078-78-4	72	3.4	JN	10	7.16	
unknown		92	1.1	JN	4.2	9.05	
unknown hydrocarbon		92	1.5	JN	5.6	23.44	
unknown hydrocarbon		92	1.4	JN	5.1	23.68	
Nonane	000111-84-2	128	2.9	JN	15	24.38	
unknown hydrocarbon		92	1.0	JN	3.9	25.17	
unknown		92	1.8	JN	6.6	25.34	
unknown		92	3.4	JN	13	25.87	
Decane	000124-18-5	142	4.5	JN	26	26.70	
unknown		92	1.3	JN	4.7	26.94	
Benzene, propyl-	000103-65-1	120	2.4	JN	12	27.04	
unknown substituted benzene		92	1.8	JN	6.9	27.77	
unknown		92	1.1	JN	4.0	28.14	
Undecane	001120-21-4	156	2.3	JN	14	28.76	
unknown substituted benzene		92	1.3	JN	4.9	28.85	
unknown		92	1.4	JN	5.2	29.06	
unknown substituted benzene		92	1.2	JN	4.5	29.19	
Total TIC Concentrations:			35 ppbv		150 ug/m3		

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0007
CUSTOMER SAMPLE ID: 58-0827-07

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Churchill MS: Hall Outside Media Center

Collected: 08/27/2020 11:45
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9680.D	E15548	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.61	0.50		1.3	1.0	
n-Butane	106-97-8	58.12	9.6	0.50		23	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	49	0.50	E	93	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	3.3	0.50		18	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	1.4	0.50		3.4	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	15	0.50		36	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	0.56	0.50		1.6	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	ND	0.50		ND	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0007
CUSTOMER SAMPLE ID: 58-0827-07

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Churchill MS: Hall Outside Media Center

Collected: 08/27/2020 11:45
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9680.D	E15548	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	ND	0.50		ND	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	ND	1.0		ND	4.3	
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	2.9	0.50		14	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	0.84	0.50		4.1	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	2.8	0.50		14	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			86	ppbv		210	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000565**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000565-0007

CUSTOMER SAMPLE ID: 58-0827-07

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Churchill MS: Hall Outside Media Center

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/27/2020 11:45
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9680.D	E15548	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Propane	000074-98-6	44	3.3	JN	5.9	4.895	
Butane, 2-methyl-	000078-78-4	72	1.8	JN	5.4	7.18	
unknown		92	1.1	JN	4.3	9.08	
unknown hydrocarbon		92	1.2	JN	4.5	23.44	
Nonane	000111-84-2	128	2.0	JN	10	24.38	
unknown		92	1.5	JN	5.5	25.87	
Decane	000124-18-5	142	2.9	JN	17	26.70	
Benzene, propyl-	000103-65-1	120	1.3	JN	6.2	27.04	
unknown substituted benzene		92	1.1	JN	4.2	27.77	
Undecane	001120-21-4	156	1.6	JN	10	28.75	
Total TIC Concentrations:			18 ppbv		73 ug/m3		

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0008
CUSTOMER SAMPLE ID: 58-0827-08

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Churchill MS: Hall Outside Music Room CH-2102

Collected: 08/27/2020 11:53
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9681.D	E0608	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.69	0.50		1.4	1.0	
n-Butane	106-97-8	58.12	7.1	0.50		17	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	23	0.50		44	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	14	0.50		81	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	2.1	0.50		5.1	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	7.6	0.50		18	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	1.4	0.50		4.9	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	0.88	0.50		2.6	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	ND	0.50		ND	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	2.4	0.50		7.2	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	0.68	0.50		2.8	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0008
CUSTOMER SAMPLE ID: 58-0827-08

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Churchill MS: Hall Outside Music Room CH-2102

Collected: 08/27/2020 11:53
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9681.D	E0608	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	1.2	0.50		4.7	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	1.2	1.0		5.3	4.3	
Xylene (Ortho)	95-47-6	106.2	0.91	0.50		4.0	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	6.6	0.50		32	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	2.5	0.50		13	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	7.4	0.50		36	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			80	ppbv		280	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E = Estimated concentration exceeding upper calibration range.

D = Result reported from diluted analysis.

J = Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000565**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000565-0008

CUSTOMER SAMPLE ID: 58-0827-08

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Churchill MS: Hall Outside Music Room CH-2102

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/27/2020 11:53
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9681.D	E0608	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Propane	000074-98-6	44	2.0	JN	3.6	4.895	
Isobutane	000075-28-5	58	1.4	JN	3.2	5.33	
Butane, 2-methyl-	000078-78-4	72	32	JN	95	7.18	
unknown		92	1.6	JN	6.1	9.07	
Pentane, 2-methyl-	000107-83-5	86	2.2	JN	7.6	11.35	
unknown hydrocarbon		92	1.7	JN	6.3	23.44	
unknown hydrocarbon		92	1.3	JN	5.0	23.68	
Nonane	000111-84-2	128	4.8	JN	25	24.38	
unknown		92	4.3	JN	16	25.87	
unknown hydrocarbon		92	1.5	JN	5.8	26.08	
Decane	000124-18-5	142	8.9	JN	52	26.70	
Benzene, propyl-	000103-65-1	120	3.2	JN	16	27.04	
unknown substituted benzene		92	2.6	JN	9.9	27.77	
unknown substituted cyclohexane		92	1.4	JN	5.4	28.14	
Undecane	001120-21-4	156	5.2	JN	33	28.76	
unknown substituted benzene		92	1.6	JN	6.1	28.85	
unknown substituted benzene		92	1.9	JN	7.1	29.06	
unknown substituted benzene		92	1.6	JN	5.9	29.19	
unknown		92	1.4	JN	5.2	30.62	
unknown		92	2.0	JN	7.6	32.54	
Total TIC Concentrations:			83	ppbv	320	ug/m3	

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0009
CUSTOMER SAMPLE ID: 58-0827-09

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Churchill MS: Hall Outside Exit CH-1400-2

Collected: 08/27/2020 11:58
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9682.D	E0429	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.65	0.50		1.3	1.0	
n-Butane	106-97-8	58.12	2.9	0.50		6.8	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	24	0.50		45	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	5.7	0.50		32	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	1.9	0.50		4.6	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	8.7	0.50		21	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	0.57	0.50		2.0	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	1.4	0.50		4.2	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	ND	0.50		ND	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0009
CUSTOMER SAMPLE ID: 58-0827-09

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Churchill MS: Hall Outside Exit CH-1400-2

Collected: 08/27/2020 11:58
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9682.D	E0429	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	0.71	0.50		2.7	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	0.74	0.50		3.2	2.2	
Xylene (p,m)	1330-20-7	106.2	3.1	1.0		13	4.3	
Xylene (Ortho)	95-47-6	106.2	0.98	0.50		4.3	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	4.0	0.50		20	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	1.4	0.50		7.1	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	4.2	0.50		21	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			61	ppbv		190	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000565**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000565-0009

CUSTOMER SAMPLE ID: 58-0827-09

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Churchill MS: Hall Outside Exit CH-1400-2

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/27/2020 11:58
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9682.D	E0429	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Propane	000074-98-6	44	1.2	JN	2.1	4.859	
Butane, 2-methyl-	000078-78-4	72	5.1	JN	15	7.15	
1,1-Dichloro-1-fluoroethane	001717-00-6	116	1.4	JN	6.6	8.89	
unknown		92	1.0	JN	3.9	9.05	
unknown		92	1.3	JN	4.8	23.43	
Heptyl isobutyl carbonate	959068-08-7	216	1.1	JN	10	23.68	
Nonane	000111-84-2	128	2.7	JN	14	24.38	
unknown		92	1.4	JN	5.1	25.35	
unknown substituted cyclohexane		92	3.8	JN	14	25.87	
Decane	000124-18-5	142	5.0	JN	29	26.70	
unknown		92	1.3	JN	4.9	26.94	
Benzene, propyl-	000103-65-1	120	2.3	JN	11	27.04	
unknown substituted benzene		92	1.6	JN	5.9	27.77	
Undecane	001120-21-4	156	3.3	JN	21	28.75	
unknown substituted benzene		92	1.2	JN	4.5	28.85	
unknown substituted benzene		92	1.4	JN	5.3	29.06	
unknown substituted benzene		92	1.1	JN	4.1	29.19	
Tridecane	000629-50-5	184	1.2	JN	8.7	32.54	
Total TIC Concentrations:			37	ppbv	170	ug/m3	

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0010
CUSTOMER SAMPLE ID: 58-0827-10

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
EBHS: Hall Outside Room E-10

Collected: 08/27/2020 14:48
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9683.D	E31312	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.60	0.50		1.2	1.0	
n-Butane	106-97-8	58.12	0.86	0.50		2.0	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	45	0.50	E	85	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	14	0.50		34	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	6.3	0.50		15	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	0.54	0.50		1.6	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	ND	0.50		ND	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0010
CUSTOMER SAMPLE ID: 58-0827-10

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
EBHS: Hall Outside Room E-10

Collected: 08/27/2020 14:48
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9683.D	E31312	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	ND	0.50		ND	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	ND	1.0		ND	4.3	
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	1.2	0.50		5.9	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	1.4	0.50		6.7	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			70	ppbv		150	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000565**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000565-0010

CUSTOMER SAMPLE ID: 58-0827-10

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
 EBHS: Hall Outside Room E-10

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/27/2020 14:48
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9683.D	E31312	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Butane, 2-methyl-	000078-78-4	72	1.0	JN	3.1	7.172	
Pentane	000109-66-0	72	4.1	JN	12	8.00	
unknown		92	1.7	JN	6.2	9.07	
Nonane	000111-84-2	128	1.1	JN	5.5	24.38	
unknown		92	1.0	JN	3.8	25.87	
Decane	000124-18-5	142	1.6	JN	9.4	26.70	
Undecane	001120-21-4	156	1.2	JN	7.7	28.75	
Total TIC Concentrations:			12	ppbv	48	ug/m3	

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0011
CUSTOMER SAMPLE ID: 58-0827-11

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
EBHS: Hall Outside Room M-7

Collected: 08/27/2020 14:54
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9684.D	E0341	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.57	0.50		1.2	1.0	
n-Butane	106-97-8	58.12	ND	0.50		ND	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	40	0.50		74	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	11	0.50		27	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	4.8	0.50		11	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	0.53	0.50		1.6	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	ND	0.50		ND	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0011
CUSTOMER SAMPLE ID: 58-0827-11

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
EBHS: Hall Outside Room M-7

Collected: 08/27/2020 14:54
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9684.D	E0341	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	ND	0.50		ND	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	ND	1.0		ND	4.3	
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	1.6	0.50		8.1	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	0.60	0.50		2.9	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	1.8	0.50		9.1	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			61	ppbv		130	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000565**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000565-0011

CUSTOMER SAMPLE ID: 58-0827-11

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
 EBHS: Hall Outside Room M-7

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/27/2020 14:54
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9684.D	E0341	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Butane, 2-methyl-	000078-78-4	72	1.4	JN	4.1	7.148	
Pentane	000109-66-0	72	3.9	JN	11	7.97	
unknown		92	1.7	JN	6.4	9.05	
Nonane	000111-84-2	128	1.3	JN	6.7	24.38	
Decane	000124-18-5	142	1.9	JN	11	26.70	
Total TIC Concentrations:			10 ppbv		39 ug/m3		

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0012
CUSTOMER SAMPLE ID: 58-0827-12

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
EBHS: Auditorium Lobby

Collected: 08/27/2020 14:59
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9685.D	E0425	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.61	0.50		1.3	1.0	
n-Butane	106-97-8	58.12	0.67	0.50		1.6	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	51	0.50	E	100	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	9.0	0.50		22	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	6.0	0.50		14	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	0.52	0.50		1.5	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	ND	0.50		ND	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0012
CUSTOMER SAMPLE ID: 58-0827-12

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
EBHS: Auditorium Lobby

Collected: 08/27/2020 14:59
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9685.D	E0425	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	ND	0.50		ND	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	1.1	1.0		4.9	4.3	
Xylene (Ortho)	95-47-6	106.2	0.67	0.50		2.9	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	2.4	0.50		12	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	0.92	0.50		4.5	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	2.8	0.50		14	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			76	ppbv		180	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000565**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000565-0012

CUSTOMER SAMPLE ID: 58-0827-12

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
EBHS: Auditorium Lobby

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/27/2020 14:59
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9685.D	E0425	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Ethane, 1-chloro-1,1-difluoro-	000075-68-3	100	1.3	JN	5.2	5.358	
Pentane	000109-66-0	72	3.4	JN	10	8.01	
1,1-Dichloro-1-fluoroethane	001717-00-6	116	1.3	JN	6.0	8.93	
unknown		92	1.6	JN	6.2	9.08	
Nonane	000111-84-2	128	2.0	JN	10	24.38	
unknown hydrocarbon		92	1.5	JN	5.5	25.87	
Decane	000124-18-5	142	3.0	JN	17	26.70	
Benzene, propyl-	000103-65-1	120	1.2	JN	5.9	27.04	
unknown substituted benzene		92	1.2	JN	4.4	27.77	
Undecane	001120-21-4	156	2.1	JN	13	28.76	
Total TIC Concentrations:			19 ppbv		83 ug/m3		

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0013
CUSTOMER SAMPLE ID: 58-0827-13

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
EBHS: Hall Outside Room B-25

Collected: 08/27/2020 15:04
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9686.D	E0645	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.62	0.50		1.3	1.0	
n-Butane	106-97-8	58.12	ND	0.50		ND	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	44	0.50	E	83	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	5.4	0.50		13	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	5.7	0.50		13	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	0.56	0.50		1.6	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	ND	0.50		ND	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0013
CUSTOMER SAMPLE ID: 58-0827-13

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
EBHS: Hall Outside Room B-25

Collected: 08/27/2020 15:04
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9686.D	E0645	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	ND	0.50		ND	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	2.0	1.0		8.5	4.3	
Xylene (Ortho)	95-47-6	106.2	1.3	0.50		5.5	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	4.9	0.50		24	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	1.8	0.50		9.0	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	5.6	0.50		27	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			72	ppbv		190	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000565**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000565-0013

CUSTOMER SAMPLE ID: 58-0827-13

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
EBHS: Hall Outside Room B-25

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/27/2020 15:04
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9686.D	E0645	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Ethane, 1-chloro-1,1-difluoro-	000075-68-3	100	1.8	JN	7.2	5.346	
1,1-Dichloro-1-fluoroethane	001717-00-6	116	3.8	JN	18	8.92	
unknown		92	1.5	JN	5.6	9.07	
unknown hydrocarbon		92	1.2	JN	4.4	23.43	
Nonane	000111-84-2	128	3.5	JN	18	24.38	
unknown hydrocarbon		92	3.0	JN	11	25.87	
Decane	000124-18-5	142	4.5	JN	26	26.70	
Benzene, propyl-	000103-65-1	120	2.5	JN	12	27.04	
unknown substituted benzene		92	2.2	JN	8.3	27.77	
Undecane	001120-21-4	156	1.6	JN	10	28.75	
unknown substituted benzene		92	1.5	JN	5.7	28.85	
unknown substituted benzene		92	1.6	JN	6.1	29.06	
unknown substituted benzene		92	1.5	JN	5.5	29.19	
Total TIC Concentrations:			30 ppbv		140 ug/m3		

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000559
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000559-0001
CUSTOMER SAMPLE ID: 58-0826-01

Customer PO:
EMSL Project ID:
Project Name: EB BOE-IAQ Test
Frost ES: Hall Outside MP Room

Collected: 08/26/2020 09:45
Received: 08/26/2020 18:35
Analyzed: See Results
Reported: 9/3/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9661.D	E0507	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.55	0.50		1.1	1.0	
n-Butane	106-97-8	58.12	0.72	0.50		1.7	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	260	0.50	E	490	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	0.64	0.50		3.6	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	1.9	0.50		4.7	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	4.3	0.50		10	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	ND	0.50		ND	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	ND	0.50		ND	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000559
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000559-0001
CUSTOMER SAMPLE ID: 58-0826-01

Customer PO:
EMSL Project ID:
Project Name: EB BOE-IAQ Test
Frost ES: Hall Outside MP Room

Collected: 08/26/2020 09:45
Received: 08/26/2020 18:35
Analyzed: See Results
Reported: 9/3/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9661.D	E0507	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	ND	0.50		ND	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	ND	1.0		ND	4.3	
Xylene (Ortho)	95-47-6	106.2	0.52	0.50		2.3	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	3.8	0.50		19	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	1.4	0.50		7.0	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	3.9	0.50		19	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	1.4	0.50		8.5	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			280	ppbv		570	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000559**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000559-0001

CUSTOMER SAMPLE ID: 58-0826-01

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE-IAQ Test
Frost ES: Hall Outside MP Room

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/26/2020 09:45
Received: 08/26/2020 18:35
Analyzed: See Results
Reported: 9/3/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9661.D	E0507	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Silanol, trimethyl-	001066-40-6	90	1.3	JN	4.9	12.947	
Nonane	000111-84-2	128	1.1	JN	5.5	24.38	
unknown		92	1.1	JN	4.3	25.87	
Decane	000124-18-5	142	2.2	JN	12	26.70	
Benzene, propyl-	000103-65-1	120	1.8	JN	8.7	27.04	
unknown substituted benzene		92	1.8	JN	6.6	27.77	
Undecane	001120-21-4	156	1.4	JN	8.6	28.75	
Total TIC Concentrations:			11 ppbv		51 ug/m3		

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000559

EMSL CUSTOMER ID: EDI50

EMSL SAMPLE ID: 492000559-0002

CUSTOMER SAMPLE ID: 58-0826-02

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE-IAQ Test
Frost ES: Hall Outside Room FR-1213

Phone: 856-616-9516
Email: tg@editesting.com

Collected: 08/26/2020 09:50
Received: 08/26/2020 18:35
Analyzed: See Results
Reported: 9/3/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9662.D	E0264	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.55	0.50		1.1	1.0	
n-Butane	106-97-8	58.12	0.82	0.50		2.0	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	200	0.50	E	380	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	0.59	0.50		3.3	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	1.9	0.50		4.6	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	4.4	0.50		11	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	ND	0.50		ND	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	ND	0.50		ND	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000559
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000559-0002
CUSTOMER SAMPLE ID: 58-0826-02

Customer PO:
EMSL Project ID:
Project Name: EB BOE-IAQ Test
Frost ES: Hall Outside Room FR-1213

Collected: 08/26/2020 09:50
Received: 08/26/2020 18:35
Analyzed: See Results
Reported: 9/3/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9662.D	E0264	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	ND	0.50		ND	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	ND	1.0		ND	4.3	
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	3.1	0.50		15	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	1.1	0.50		5.6	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	3.2	0.50		15	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	1.5	0.50		9.1	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			220	ppbv		450	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000559**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000559-0002

CUSTOMER SAMPLE ID: 58-0826-02

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE-IAQ Test
Frost ES: Hall Outside Room FR-1213

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/26/2020 09:50
Received: 08/26/2020 18:35
Analyzed: See Results
Reported: 9/3/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9662.D	E0264	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Decane	000124-18-5	142	1.5	JN	8.6	26.703	
Benzene, propyl-	000103-65-1	120	1.4	JN	7.0	27.04	
unknown substituted benzene		92	1.5	JN	5.5	27.77	
Undecane	001120-21-4	156	1.1	JN	7.1	28.75	
Total TIC Concentrations:			5.5	ppbv	28	ug/m3	

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0003
CUSTOMER SAMPLE ID: 58-0827-03

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Hamarskjold MS: Hall Outside Storage HA-1301

Collected: 08/27/2020 10:27
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9693.D	E0435	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.62	0.50		1.3	1.0	
n-Butane	106-97-8	58.12	0.92	0.50		2.2	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	83	0.50	E	160	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	14	0.50		35	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	4.6	0.50		11	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	ND	0.50		ND	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	ND	0.50		ND	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0003
CUSTOMER SAMPLE ID: 58-0827-03

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Hammariskjold MS: Hall Outside Storage HA-1301

Collected: 08/27/2020 10:27
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9693.D	E0435	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	ND	0.50		ND	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	ND	1.0		ND	4.3	
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	ND	0.50		ND	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.50		ND	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			100	ppbv		210	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000565**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000565-0003

CUSTOMER SAMPLE ID: 58-0827-03

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Hammar skjold MS: Hall Outside Storage HA-1301

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/27/2020 10:27
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9693.D	E0435	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Difluorochloromethane	000075-45-6	86	2.7	JN	9.4	4.919	
Ethane, 1-chloro-1,1-difluoro-	000075-68-3	100	1.4	JN	5.6	5.35	
Butane, 2-methyl-	000078-78-4	72	1.7	JN	4.9	7.17	
Pentane	000109-66-0	72	2.5	JN	7.3	8.00	
unknown		92	1.7	JN	6.4	9.07	
Total TIC Concentrations:			10	ppbv	34	ug/m3	

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0004
CUSTOMER SAMPLE ID: 58-0827-04

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Hammariskjold MS: Hall Outside Room HA-1601

Collected: 08/27/2020 10:37
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9676.D	E15335	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.59	0.50		1.2	1.0	
n-Butane	106-97-8	58.12	1.0	0.50		2.4	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	48	0.50	E	91	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	22	0.50		54	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	4.8	0.50		11	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	ND	0.50		ND	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	0.62	0.50		2.2	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0004
CUSTOMER SAMPLE ID: 58-0827-04

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Hammariskjold MS: Hall Outside Room HA-1601

Collected: 08/27/2020 10:37
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9676.D	E15335	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	ND	0.50		ND	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	ND	1.0		ND	4.3	
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	ND	0.50		ND	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.50		ND	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	0.52	0.50		3.1	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			78	ppbv		160	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E = Estimated concentration exceeding upper calibration range.

D = Result reported from diluted analysis.

J = Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000565**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000565-0004

CUSTOMER SAMPLE ID: 58-0827-04

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
 Hammaraskjold MS: Hall Outside Room HA-1601

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/27/2020 10:37
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9676.D	E15335	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Difluorochloromethane	000075-45-6	86	1.6	JN	5.6	4.895	
Ethane, 1-chloro-1,1-difluoro-	000075-68-3	100	2.7	JN	11	5.35	
Butane, 2-methyl-	000078-78-4	72	1.6	JN	4.8	7.17	
Pentane	000109-66-0	72	2.9	JN	8.5	8.00	
1,1-Dichloro-1-fluoroethane	001717-00-6	116	1.3	JN	6.1	8.93	
unknown		92	1.6	JN	5.9	9.07	
Total TIC Concentrations:			12 ppbv		42 ug/m3		

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0005
CUSTOMER SAMPLE ID: 58-0827-05

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Hammariskjold MS: Hall Outside Comp. Lab HA-2505

Collected: 08/27/2020 10:42
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9678.D	E15552	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.57	0.50		1.2	1.0	
n-Butane	106-97-8	58.12	1.1	0.50		2.7	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	120	0.50	E	230	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	48	0.50	E	120	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	4.7	0.50		11	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	ND	0.50		ND	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	0.54	0.50		1.9	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0005
CUSTOMER SAMPLE ID: 58-0827-05

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Hammariskjold MS: Hall Outside Comp. Lab HA-2502

Collected: 08/27/2020 10:42
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9678.D	E15552	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	ND	0.50		ND	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	ND	1.0		ND	4.3	
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	ND	0.50		ND	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.50		ND	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			170	ppbv		370	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000565**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000565-0005

CUSTOMER SAMPLE ID: 58-0827-05

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
 Hammar skjold MS: Hall Outside Comp. Lab HA-2502

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/27/2020 10:42
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9678.D	E15552	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Difluorochloromethane	000075-45-6	86	2.0	JN	7.0	4.895	
Ethane, 1-chloro-1,1-difluoro-	000075-68-3	100	1.4	JN	5.7	5.32	
Butane, 2-methyl-	000078-78-4	72	1.9	JN	5.5	7.15	
Pentane	000109-66-0	72	2.9	JN	8.4	7.98	
unknown		92	1.6	JN	5.8	9.05	
Total TIC Concentrations:			10	ppbv	32	ug/m3	

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0001
CUSTOMER SAMPLE ID: 58-0827-01

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Irwin ES: Hall Outside Room IR-1107

Collected: 08/27/2020 08:48
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9691.D	E12270	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.62	0.50		1.3	1.0	
n-Butane	106-97-8	58.12	14	0.50		32	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	190	0.50	E	350	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	23	0.50		58	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	14	0.50		34	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	2.4	0.50		8.3	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	0.73	0.50		2.2	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	0.77	0.50		2.8	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	0.67	0.50		2.3	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	0.95	0.50		3.9	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	1.2	0.50		3.7	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0001
CUSTOMER SAMPLE ID: 58-0827-01

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Irwin ES: Hall Outside Room IR-1107

Collected: 08/27/2020 08:48
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9691.D	E12270	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	4.3	0.50		16	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	0.55	0.50		2.4	2.2	
Xylene (p,m)	1330-20-7	106.2	2.2	1.0		10	4.3	
Xylene (Ortho)	95-47-6	106.2	0.69	0.50		3.0	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	0.58	0.50		2.8	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	0.65	0.50		3.2	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	0.55	0.50		3.3	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			260	ppbv		540	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000565**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000565-0001

CUSTOMER SAMPLE ID: 58-0827-01

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Irwin ES: Hall Outside Room IR-1107

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/27/2020 08:48
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9691.D	E12270	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Difluorochloromethane	000075-45-6	86	2.0	JN	7.0	4.86	
Isobutane	000075-28-5	58	1.3	JN	3.2	5.29	
Acetaldehyde	000075-07-0	44	1.0	JN	1.9	6.16	
Butane, 2-methyl-	000078-78-4	72	4.5	JN	13	7.14	
Pentane	000109-66-0	72	4.9	JN	15	7.97	
1,1-Dichloro-1-fluoroethane	001717-00-6	116	27	JN	130	8.88	
Pentane, 2-methyl-	000107-83-5	86	2.8	JN	9.8	11.30	
Pentane, 3-methyl-	000096-14-0	86	1.7	JN	5.9	12.30	
Cyclopentane, methyl-	000096-37-7	84	1.3	JN	4.6	15.54	
Hexane, 2-methyl-	000591-76-4	100	1.1	JN	4.3	16.61	
Hexane, 3-methyl-	000589-34-4	100	1.1	JN	4.7	17.07	
Total TIC Concentrations:			49 ppbv		200 ug/m3		

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0002
CUSTOMER SAMPLE ID: 58-0827-02

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Irwin ES: Hall Outside IDF/Storage IR-1317

Collected: 08/27/2020 08:54
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9692.D	E0663	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.59	0.50		1.2	1.0	
n-Butane	106-97-8	58.12	8.0	0.50		19	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	200	0.50	E	380	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	1.1	0.50		5.9	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	14	0.50		35	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	6.9	0.50		16	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	0.52	0.50		1.8	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	0.51	0.50		1.5	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	ND	0.50		ND	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000565
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000565-0002
CUSTOMER SAMPLE ID: 58-0827-02

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Irwin ES: Hall Outside IDF/Storage IR-1317

Collected: 08/27/2020 08:54
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9692.D	E0663	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	1.0	0.50		3.9	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	ND	1.0		ND	4.3	
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	ND	0.50		ND	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.50		ND	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			230	ppbv		460	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E = Estimated concentration exceeding upper calibration range.

D = Result reported from diluted analysis.

J = Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000565**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000565-0002

CUSTOMER SAMPLE ID: 58-0827-02

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Irwin ES: Hall Outside IDF/Storage IR-1317

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/27/2020 08:54
Received: 08/28/2020 13:40
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/04/2020	TP	J9692.D	E0663	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Propane	000074-98-6	44	2.4	JN	4.4	4.859	
Butane, 2-methyl-	000078-78-4	72	1.2	JN	3.5	7.16	
1,1-Dichloro-1-fluoroethane	001717-00-6	116	11	JN	50	8.90	
unknown		92	1.6	JN	6.0	13.13	
Total TIC Concentrations:			16	ppbv	64	ug/m3	

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000556
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000556-0005
CUSTOMER SAMPLE ID: 58-0825-05

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Lawrence Brook ES: Hall Outside Speech 502

Phone: 856-616-9516
Email: tg@editesting.com

Collected: 08/25/2020 15:37
Received: 08/26/2020 09:30
Analyzed: See Results
Reported: 9/2/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/02/2020	TP	J9650.D	E0420	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.65	0.50		1.3	1.0	
n-Butane	106-97-8	58.12	6.6	0.50		16	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	120	0.50	E	230	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	6.8	0.50		17	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	9.2	0.50		22	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	0.81	0.50		2.4	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	0.92	0.50		3.3	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000556
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000556-0005
CUSTOMER SAMPLE ID: 58-0825-05

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Lawrence Brook ES: Hall Outside Speech 502

Collected: 08/25/2020 15:37
Received: 08/26/2020 09:30
Analyzed: See Results
Reported: 9/2/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/02/2020	TP	J9650.D	E0420	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	0.62	0.50		2.3	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	1.6	0.50		7.1	2.2	
Xylene (p,m)	1330-20-7	106.2	7.5	1.0		32	4.3	
Xylene (Ortho)	95-47-6	106.2	9.2	0.50		40	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	2.5	0.50		12	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	39	0.50		190	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	14	0.50		69	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	39	0.50		190	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	0.83	0.50		4.3	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	0.80	0.50		4.2	2.6	
Total Target Compound Concentrations:			260	ppbv		840	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

11

Spike

10

Recovery

110%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000556**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000556-0005

CUSTOMER SAMPLE ID: 58-0825-05

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Lawrence Brook ES: Hall Outside Speech 502

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/25/2020 15:37
Received: 08/26/2020 09:30
Analyzed: See Results
Reported: 9/2/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/02/2020	TP	J9650.D	E0420	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Propane	000074-98-6	44	13	JN	23	4.907	
Isobutane	000075-28-5	58	140	JN	320	5.35	
Butane, 2-methyl-	000078-78-4	72	9.7	JN	29	7.20	
Pentane	000109-66-0	72	53	JN	150	8.01	
unknown		92	6.1	JN	23	23.44	
unknown		92	4.8	JN	18	23.68	
Nonane	000111-84-2	128	16	JN	81	24.38	
unknown hydrocarbon		92	4.0	JN	15	25.17	
unknown		92	3.4	JN	13	25.35	
unknown		92	12	JN	45	25.87	
unknown hydrocarbon		92	4.0	JN	15	26.09	
Decane	000124-18-5	142	21	JN	120	26.70	
unknown		92	3.0	JN	11	26.94	
unknown		92	9.8	JN	37	27.05	
unknown		92	3.7	JN	14	27.13	
unknown substituted benzene		92	8.1	JN	30	27.77	
D-Limonene	005989-27-5	136	33	JN	180	28.39	
Undecane	001120-21-4	156	9.2	JN	59	28.75	
unknown substituted benzene		92	5.4	JN	20	28.85	
unknown substituted benzene		92	4.5	JN	17	29.18	
Total TIC Concentrations:			360	ppbv	1200	ug/m3	

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000556
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000556-0006
CUSTOMER SAMPLE ID: 58-0825-06

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Lawrence Brook ES: Hall Outside Grade 1 Corridor

Collected: 08/25/2020 15:40
Received: 08/26/2020 09:30
Analyzed: See Results
Reported: 9/2/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/02/2020	TP	J9658.D	E0371	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.70	0.50		1.4	1.0	
n-Butane	106-97-8	58.12	6.1	0.50		14	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	170	0.50	E	330	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	17	0.50		43	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	8.8	0.50		21	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	0.93	0.50		2.7	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	0.89	0.50		3.2	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000556
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000556-0006
CUSTOMER SAMPLE ID: 58-0825-06

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Lawrence Brook ES: Hall Outside Grade 1 Corridor

Collected: 08/25/2020 15:40
Received: 08/26/2020 09:30
Analyzed: See Results
Reported: 9/2/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/02/2020	TP	J9658.D	E0371	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	0.64	0.50		2.4	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	1.7	0.50		7.2	2.2	
Xylene (p,m)	1330-20-7	106.2	6.2	1.0		27	4.3	
Xylene (Ortho)	95-47-6	106.2	8.4	0.50		36	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	2.1	0.50		11	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	27	0.50		130	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	6.2	0.50		30	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	18	0.50		86	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			270	ppbv		740	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

11

Spike

10

Recovery

110%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E = Estimated concentration exceeding upper calibration range.

D = Result reported from diluted analysis.

J = Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000556**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000556-0006

CUSTOMER SAMPLE ID: 58-0825-06

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Lawrence Brook ES: Hall Outside Grade 1 Corridor

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/25/2020 15:40
Received: 08/26/2020 09:30
Analyzed: See Results
Reported: 9/2/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/02/2020	TP	J9658.D	E0371	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m ³	Retention Time	Comments
Propane	000074-98-6	44	11	JN	21	4.871	
Isobutane	000075-28-5	58	110	JN	270	5.31	
Butane, 2-methyl-	000078-78-4	72	10	JN	30	7.16	
Pentane	000109-66-0	72	46	JN	130	7.99	
unknown substituted cyclohexane		92	2.1	JN	7.9	23.31	
unknown hydrocarbon		92	4.6	JN	17	23.44	
unknown hydrocarbon		92	3.6	JN	13	23.68	
Nonane	000111-84-2	128	7.5	JN	39	24.38	
unknown hydrocarbon		92	2.0	JN	7.7	25.17	
unknown		92	2.7	JN	10	25.34	
unknown substituted cyclohexane		92	6.7	JN	25	25.87	
.alpha.-Pinene	000080-56-8	136	1.8	JN	9.7	26.16	
Decane	000124-18-5	142	3.9	JN	23	26.70	
unknown		92	1.9	JN	7.3	26.94	
Benzene, propyl-	000103-65-1	120	8.4	JN	41	27.04	
unknown substituted benzene		92	5.8	JN	22	27.77	
Cyclohexane, butyl-	001678-93-9	140	1.9	JN	11	28.15	
D-Limonene	005989-27-5	136	50	JN	280	28.39	
unknown substituted benzene		92	2.3	JN	8.8	28.85	
unknown		92	2.0	JN	7.5	29.06	
Total TIC Concentrations:			280	ppbv	1000	ug/m³	

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000556
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000556-0003
CUSTOMER SAMPLE ID: 58-0825-03

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Memorial ES: Hall Outside Art Room 111

Collected: 08/25/2020 11:30
Received: 08/26/2020 09:30
Analyzed: See Results
Reported: 9/2/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/02/2020	TP	J9648.D	E0495	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.60	0.50		1.2	1.0	
n-Butane	106-97-8	58.12	ND	0.50		ND	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	68	0.50	E	130	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	1.7	0.50		4.1	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	5.5	0.50		13	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	ND	0.50		ND	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	ND	0.50		ND	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000556
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000556-0003
CUSTOMER SAMPLE ID: 58-0825-03

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Memorial ES: Hall Outside Art Room 111

Collected: 08/25/2020 11:30
Received: 08/26/2020 09:30
Analyzed: See Results
Reported: 9/2/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/02/2020	TP	J9648.D	E0495	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	ND	0.50		ND	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	ND	1.0		ND	4.3	
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	ND	0.50		ND	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.50		ND	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	

Total Target Compound Concentrations:

76	ppbv	150	ug/m3
-----------	-------------	------------	--------------

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000556**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000556-0003

CUSTOMER SAMPLE ID: 58-0825-03

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Memorial ES: Hall Outside Art Room 111

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/25/2020 11:30
Received: 08/26/2020 09:30
Analyzed: See Results
Reported: 9/2/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/02/2020	TP	J9648.D	E0495	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Pentane	000109-66-0	72	1.3	JN	3.8	8.026	
Isoprene	000078-79-5	68	1.7	JN	4.7	9.09	
Total TIC Concentrations:			3.0	ppbv	8.5	ug/m3	

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000556
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000556-0004
CUSTOMER SAMPLE ID: 58-0825-04

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Memorial ES: Hall Outside Art Room 114

Phone: 856-616-9516
Email: tg@editesting.com

Collected: 08/25/2020 11:33
Received: 08/26/2020 09:30
Analyzed: See Results
Reported: 9/2/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/02/2020	TP	J9649.D	E0430	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.60	0.50		1.2	1.0	
n-Butane	106-97-8	58.12	0.52	0.50		1.2	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	65	0.50	E	120	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	3.3	0.50		8.2	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	8.1	0.50		19	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	0.71	0.50		2.2	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	1.5	0.50		4.4	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	ND	0.50		ND	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	2.4	0.50		7.2	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000556
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000556-0004
CUSTOMER SAMPLE ID: 58-0825-04

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Memorial ES: Hall Outside Art Room 114

Collected: 08/25/2020 11:33
Received: 08/26/2020 09:30
Analyzed: See Results
Reported: 9/2/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/02/2020	TP	J9649.D	E0430	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	ND	0.50		ND	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	ND	1.0		ND	4.3	
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	ND	0.50		ND	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.50		ND	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			82	ppbv		160	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000556**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000556-0004

CUSTOMER SAMPLE ID: 58-0825-04

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE - IAQ Testing
Memorial ES: Hall Outside Room 114

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/25/2020 11:33
Received: 08/26/2020 09:30
Analyzed: See Results
Reported: 9/2/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/02/2020	TP	J9649.D	E0430	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Butane, 2-methyl-	000078-78-4	72	1.3	JN	3.8	7.196	
Pentane	000109-66-0	72	1.9	JN	5.6	8.01	
Isoprene	000078-79-5	68	1.7	JN	4.7	9.08	
Total TIC Concentrations:			4.9	ppbv	14	ug/m3	

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
 Cinnaminson, NJ 08077
 Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000568
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000568-0002
CUSTOMER SAMPLE ID: 13-0828-02

Attention: Tim Gromen
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: East Brunswick IAQ
 SOP Building

Phone: 856-616-9516
Email: tg@editesting.com

Collected: 08/28/2020 11:51
Received: 08/28/2020 16:55
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	KW	y00644.D	E31295	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.61	0.50		1.2	1.0	
n-Butane	106-97-8	58.12	0.60	0.50		1.4	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	150	0.50	E	270	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	20	0.50		49	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	7.1	0.50		17	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	ND	0.50		ND	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	ND	0.50		ND	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
 Cinnaminson, NJ 08077
 Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
 Environmental Design, Inc.
 5434 King Avenue
 Suite 101
 Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000568
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000568-0002
CUSTOMER SAMPLE ID: 13-0828-02

Customer PO:
EMSL Project ID:
Project Name: East Brunswick IAQ
 SOP Building

Collected: 08/28/2020 11:51
Received: 08/28/2020 16:55
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	KW	y00644.D	E31295	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	ND	0.50		ND	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	ND	1.0		ND	4.3	
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	ND	0.50		ND	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.50		ND	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			180	ppbv		340	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

9.5

Spike

10

Recovery

95%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000568

EMSL CUSTOMER ID: EDI50

EMSL SAMPLE ID: 492000568-0002

CUSTOMER SAMPLE ID: 13-0828-02

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: East Brunswick IAQ
SOP Building

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/28/2020 11:51
Received: 08/28/2020 16:55
Analyzed: See Results
Reported: 9/4/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	KW	y00644.D	E31295	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Pentane	000109-66-0	72	5.5	JN	16	8.696	
Total TIC Concentrations:			5.5	ppbv	16	ug/m3	

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000559
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000559-0003
CUSTOMER SAMPLE ID: 58-0826-03

Customer PO:
EMSL Project ID:
Project Name: EB BOE-IAQ Test
Warnsdorfer ES: Hall Outside MP Room

Collected: 08/26/2020 11:05
Received: 08/26/2020 18:35
Analyzed: See Results
Reported: 9/3/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9663.D	E0312	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.56	0.50		1.2	1.0	
n-Butane	106-97-8	58.12	0.53	0.50		1.3	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	200	0.50	E	370	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	7.8	0.50		19	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	3.2	0.50		7.6	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	ND	0.50		ND	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	0.75	0.50		2.7	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000559
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000559-0003
CUSTOMER SAMPLE ID: 58-0826-03

Customer PO:
EMSL Project ID:
Project Name: EB BOE-IAQ Test
Warnsdorfer ES: Hall Outside MP Room

Collected: 08/26/2020 11:05
Received: 08/26/2020 18:35
Analyzed: See Results
Reported: 9/3/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9663.D	E0312	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	ND	0.50		ND	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	1.4	0.50		10	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	ND	1.0		ND	4.3	
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	2.8	0.50		14	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	0.98	0.50		4.8	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	2.9	0.50		14	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			220	ppbv		440	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000559**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000559-0003

CUSTOMER SAMPLE ID: 58-0826-03

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE-IAQ Test
Warnsdorfer ES: Hall Outside MP Room

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/26/2020 11:05
Received: 08/26/2020 18:35
Analyzed: See Results
Reported: 9/3/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9663.D	E0312	250 cc	1

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Butane, 2-methyl-	000078-78-4	72	1.2	JN	3.5	7.184	
Pentane	000109-66-0	72	13	JN	39	8.01	
Nonane	000111-84-2	128	1.2	JN	6.2	24.38	
unknown hydrocarbon		92	1.5	JN	5.7	25.86	
Decane	000124-18-5	142	2.6	JN	15	26.70	
Benzene, propyl-	000103-65-1	120	1.5	JN	7.3	27.04	
unknown substituted benzene		92	1.2	JN	4.4	27.77	
Undecane	001120-21-4	156	1.9	JN	12	28.75	
Total TIC Concentrations:			24 ppbv		93 ug/m3		

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000559
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000559-0004
CUSTOMER SAMPLE ID: 58-0826-04

Customer PO:
EMSL Project ID:
Project Name: EB BOE-IAQ Test
Warnsdorfer ES: Hall Outside Room WA-1215

Collected: 08/26/2020 11:08
Received: 08/26/2020 18:35
Analyzed: See Results
Reported: 9/3/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9664.D	E0542	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.54	0.50		1.1	1.0	
n-Butane	106-97-8	58.12	ND	0.50		ND	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	88	0.50	E	170	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	1.4	0.50		3.6	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	3.0	0.50		7.2	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	ND	0.50		ND	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	ND	0.50		ND	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	ND	0.50		ND	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	0.66	0.50		2.4	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	ND	0.50		ND	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	ND	0.50		ND	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	7.1	0.50		33	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	1.8	0.50		7.2	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	

**EMSL ANALYTICAL, INC.**

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: 856-616-9516
Email: tg@editesting.com

EMSL ORDER ID: 492000559
EMSL CUSTOMER ID: EDI50
EMSL SAMPLE ID: 492000559-0004
CUSTOMER SAMPLE ID: 58-0826-04

Customer PO:
EMSL Project ID:
Project Name: EB BOE-IAQ Test
Warnsdorfer ES: Hall Outside Room WA-1215

Collected: 08/26/2020 11:08
Received: 08/26/2020 18:35
Analyzed: See Results
Reported: 9/3/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9664.D	E0542	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	
Toluene	108-88-3	92.14	ND	0.50		ND	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	ND	1.0		ND	4.3	
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	1.2	0.50		5.8	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	0.88	0.50		4.3	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			100	ppbv		230	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.

200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000559**EMSL CUSTOMER ID:** EDI50

EMSL SAMPLE ID: 492000559-0004

CUSTOMER SAMPLE ID: 58-0826-04

Attention: Tim Gromen
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Customer PO:
EMSL Project ID:
Project Name: EB BOE-IAQ Test
Warnsdorfer ES: Hall Outside Room WA-1215

Phone: 856-616-9516
Email: tq@editesting.com

Collected: 08/26/2020 11:08
Received: 08/26/2020 18:35
Analyzed: See Results
Reported: 9/3/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	09/03/2020	TP	J9664.D	E0542	250 cc	1

Tentatively Identified Compound Results Summary

[illegible]

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

LAST PAGE INTENTIONALLY BLANK