



Occupational Health & Safety • Environmental Consultants

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January 16, 2019

City of Peabody
Jim Hafey
Facilities Director
50 Farm Avenue
Peabody, MA 01960

RE: PM 2.5 Particulate Measurements
Peabody High School
485 Lowell Street
Peabody, MA

emailed to: james.hafey@peabody-ma.gov

Dear Mr. Hafey:

OccuHealth, Inc. (OHI) is submitting the enclosed report on the Indoor Air Quality (IAQ) PM 2.5 particulate measurements obtained on January 16, 2019 at the above referenced location.

Please call either of us at (508) 339-9119 with any questions. Thank you for opportunity to be of service.

Regards,
OCCUHEALTH, INC.

Jay McNeff, Sr. Project Manager

Thomas E. Hamilton, CIH

Enclosure



OccuHealth

**PM 2.5 PARTICULATE MEASUREMENTS
PEABODY HIGH SCHOOL
485 LOWELL STREET
PEABODY, MASSACHUSETTS**

Prepared for:
**MR. JIM HAFEY
FACILITIES DIRECTORY
CITY OF PEABODY
50 FARM AVENUE
PEABODY, MA 01960**

Conducted by:
**OCCUHEALTH, INC.
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(508) 339-9119
OHI PROJECT 19-9995**

Report Date:
JANUARY 16, 2019

**PM 2.5 PARTICULATE MEASUREMENTS
PEABODY HIGH SCHOOL
485 LOWELL STREET
PEABODY, MASSACHUSETTS**

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Report Synopsis: On January 16, 2018, OccuHealth, Inc. (OHI) obtained PM 2.5 Particulate Measurements in various classrooms and other areas in the Peabody High School located at 485 Lowell Street in Peabody, Massachusetts.

During this assessment, OHI obtained measurements in seven classrooms plus three common areas.

Based on the PM 2.5 air quality measurements taken, OHI concludes that airborne 2.5 micron particulate levels are within normal ranges in all locations sampled. When compared to outdoor air measurements, indoor air levels are 30% to 50% less for PM 2.5. All indoor measurements were less than the NAAQS (National Ambient Air Quality Standard) of 0.035 mg/m³.

1.0 INTRODUCTION

OccuHealth, Inc. (OHI) was requested to obtain indoor air quality measurements for particulates of 2.5 microns or smaller, known as PM 2.5, for the City of Peabody at the Peabody High School located at 485 Lowell Street in Peabody, Massachusetts. This work was requested and authorized by Mr. Jim Hafey, Facilities Director for the City of Peabody. OHI was asked to evaluate seven classroom areas plus three common areas. The assessment was conducted on January 16, 2019 by Mr. Jay McNeff under the supervision of Thomas E. Hamilton, CIH, both of OHI. Mr. Hafey escorted Mr. McNeff for this assessment.

2.0 INDOOR AIR QUALITY (IAQ) PM 2.5 PARTICULATE MEASUREMENTS

This section includes a review of the PM 2.5 particulate measurements obtained in several classrooms plus a few common areas in the high school.

Air Monitoring Techniques

Measurements of the indoor air quality parameter PM 2.5 were taken using real-time direct-reading instrumentation - a Dust Trak DRX handheld/portable 8534 Dust/Aerosol Monitor. Measurements were obtained of all particulates with a diameter equal to or less than 2.5 micrometers in units of mg/m³ (milligrams per cubic meter). The data is presented in Table 1 below.

All indoor measurements ranged from 0.016 mg/m³ to 0.024 mg/m³ which are less than the NAAQS (National Ambient Air Quality Standard) of 0.035 mg/m³.

Table 1: Air Quality Measurements

Floor/Area	Hallway PM 2.5 Mg/m ³	Front PM 2.5 Mg/m ³	Rear PM 2.5 Mg/m ³	Comments
Classroom A204	0.017	0.019	0.018	Acceptable
Classroom C276	0.016	0.017	0.021	Acceptable
Classroom B354	0.018	0.019	0.022	Acceptable
Classroom B360	0.018	0.019	0.018	Acceptable
Classroom C386	0.024	0.024	0.022	Acceptable
Classroom A323	0.020	0.016	0.016	Acceptable
Classroom D8	0.019	0.019	0.018	Acceptable
Atrium	0.020	-	-	Acceptable
Cafeteria	0.022	-	-	Acceptable
Main Office	0.019	-	-	Acceptable
Outdoors	0.039			10:45 am
Outdoors	0.032			11:30 am
EPA National Ambient Air Quality Standard - 0.035 mg/m ³				

3.0 CONCLUSIONS

Based on observed conditions and air quality measurements taken, OHI concludes that PM 2.5 particulate levels were acceptable in all locations sampled. Measurements indicate that the PM 2.5 concentrations are 30% to 50% lower than outdoors levels during the time period measurements were obtained. All indoor measurements ranged from 0.016 mg/m³ to 0.024 mg/m³ which are less than the NAAQS (National Ambient Air Quality Standard) of 0.035 mg/m³. OccuHealth has no recommendations to offer at this time.

4.0 LIMITATIONS

The contents of this report are based on OccuHealth, Inc.'s best professional judgement, comparison of collected data with established industry guidelines, and information obtained from our client.