



Field Services... Laboratory Services... Training...

...Solutions

January 14, 2020

School District of Philadelphia Office of Environmental Management & Services 440 N. Broad Street Suite 373 Philadelphia, PA 19130

**ATTENTION:** Mr. Brian Joseph

**REFERENCE:** Dust Monitoring

Benjamin Franklin High School – ULCS #2010 550 North Broad Street, Philadelphia, PA Criterion's Project Number: **192440** 

Dear Mr. Joseph,

On January 6, 7, 8, 9 and 10, 2020, Ms. Alyssa Cartagena of Criterion Laboratories, Inc. (Criterion) conducted particulate dust monitoring in and around various construction areas at Benjamin Franklin High School.

The dust monitoring was conducted using the Met One Aerocet-531S Mass Particle Counter/Dust Monitor. This monitor measures PM 1, PM 2.5, PM 7, PM 10 (respirable dust) and Total Dust. The results for this monitoring are attached to this report.

## **Current Federal Regulations**

Occupational Safety and Health Administration (OSHA) has set a limit of 5 milligrams/cubic meter (mg/m³) for PM 10 (respirable dust) and 15 mg/m³ for Total Dust.

The American Conference of Governmental Industrial Hygienists (ACGIH) has set a threshold limit value (TLV) over an average 8 hour work day over a 40 hour work week of 10 mg/m³ for Total Dust.

The Environmental Protection Agency (EPA) sets a limit of 35 mg/m³ for PM 2.5 over a 24 hour period and 150 mg/m³ for PM 10 over a 24 hour period.

## **Baseline Levels**

On September 21, 2019, baseline levels of various particulates were established while the school was empty of all students, staff and construction personnel. The highest baseline levels recorded outside the work area for PM 10 (respirable dust) and Total Dust plus 50% of this initial highest reading will be used to compare dust levels to the non-construction areas for the remainder of the project.

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If the PM 10 or the Total Dust level of dust is found to be higher than the following baseline levels, corrective action must be taken to prevent continued elevated dust levels.

The baseline level to be used for comparison is 0.277mg for PM 10 and 0.413 mg for Total Dust (TD).

## **Conclusion**

All readings collected during the week of January 6, 2020, to January 10, 2020 were found to be below the baseline level and within the OSHA ACGIH, EPA limits.

Should you have any questions or concerns, please feel free to contact me at (215) 244-1300, extension 1033.

Sincerely,

Ian Forster

Project Manger

Attachment

| Benjamin Franklin High School (UCLS# 2010)  | ranklin High School (UCLS# 2010) Date of Sampling 6-Jan Criterion Project Number |           |             |           |            |                 |          |  |  |
|---|--|-----------|-------------|-----------|------------|-----------------|----------|--|--|
| Location                                    | Time   | PM 1 (mg) | PM 2.5 (mg) | PM 7 (mg) | PM 10 (mg) | Total Dust (mg) | Comments |  |  |
| outdoors                                    | 8:12   | 0.002     | 0.008       | 0.012     | 0.015      | 0.019           |          |  |  |
| 1st floor elevator lobby                    | 8:16   | 0.002     | 0.004       | 0.024     | 0.035      | 0.041           |          |  |  |
| 1st floor gym hallway                       | 8:18   | 0.002     | 0.005       | 0.032     | 0.061      | 0.084           |          |  |  |
| 1st floor entrance by Room 102              | 8:19   | 0.002     | 0.005       | 0.029     | 0.042      | 0.055           |          |  |  |
| Stairwell B-6th floor                       | 8:25   | 0.003     | 0.007       | 0.041     | 0.068      | 0.083           |          |  |  |
| Stairwell B- 5th floor                      | 8:27   | 0.002     | 0.006       | 0.069     | 0.116      | 0.162           |          |  |  |
| Basement Hallway at boiler room by elevator | 8:36   | 0.003     | 0.009       | 0.064     | 0.092      | 0.125           |          |  |  |
| 1st floor elevator lobby                    | 11:23  | 0.002     | 0.009       | 0.046     | 0.068      | 0.095           |          |  |  |
| 1st floor gym hallway                       | 11:26  | 0.002     | 0.008       | 0.032     | 0.047      | 0.071           |          |  |  |
| 1st floor entrance by Room 102              | 11:29  | 0.002     | 0.009       | 0.039     | 0.058      | 0.076           |          |  |  |
| Stairwell B-6th floor                       | 11:35  | 0.003     | 0.011       | 0.057     | 0.074      | 0.089           |          |  |  |
| Stairwell B- 5th floor                      | 11:37  | 0.004     | 0.013       | 0.063     | 0.084      | 0.097           |          |  |  |
| Basement Hallway at boiler room by elevator | 11:46  | 0.005     | 0.018       | 0.073     | 0.102      | 0.158           |          |  |  |
| 1st floor elevator                          | 14:26  | 0.002     | 0.005       | 0.027     | 0.039      | 0.052           |          |  |  |
| 1st floor gym hallway                       | 14:29  | 0.002     | 0.004       | 0.044     | 0.063      | 0.077           |          |  |  |
| 1st floor entrance by Room 102              | 14:31  | 0.002     | 0.004       | 0.051     | 0.06       | 0.082           |          |  |  |
| Stairwell B-6th floor                       | 14:38  | 0.002     | 0.008       | 0.022     | 0.029      | 0.038           |          |  |  |
| Stairwell B- 5th floor                      | 14:40  | 0.002     | 0.006       | 0.024     | 0.033      | 0.041           |          |  |  |
| Basement Hallway at boiler room by elevator | 14:47  | 0.002     | 0.01        | 0.058     | 0.073      | 0.116           |          |  |  |

| Benjamin Franklin High School (UCLS# 2010)  | Date of Sampling | 7-Jan Criterion Project Number |             |           | 192440     |                 |          |
|---|------------------|--------------------------------|-------------|-----------|------------|-----------------|----------|
| Location                                    | Time             | PM 1 (mg)                      | PM 2.5 (mg) | PM 7 (mg) | PM 10 (mg) | Total Dust (mg) | Comments |
| outdoors                                    | 8:12             | 0.002                          | 0.006       | 0.015     | 0.027      | 0.042           |          |
| 1st floor elevator lobby                    | 8:17             | 0.002                          | 0.008       | 0.042     | 0.073      | 0.094           |          |
| 1st floor gym hallway                       | 8:20             | 0.003                          | 0.009       | 0.063     | 0.094      | 0.132           |          |
| 1st floor entrance by Room 102              | 8:21             | 0.002                          | 0.007       | 0.038     | 0.056      | 0.088           |          |
| Stairwell B-6th floor                       | 8:27             | 0.002                          | 0.004       | 0.028     | 0.045      | 0.071           |          |
| Stairwell B- 5th floor                      | 8:29             | 0.001                          | 0.005       | 0.033     | 0.051      | 0.078           |          |
| Basement Hallway at boiler room by elevator | 8:38             | 0.002                          | 0.007       | 0.054     | 0.079      | 0.106           |          |

| njamin Franklin High School (UCLS# 2010)    | Date of Sampling | 8-Jan Criterion Project Number |             | 192440    |            |                 |                  |
|---|------------------|--------------------------------|-------------|-----------|------------|-----------------|------------------|
| Location                                    | Time             | PM 1 (mg)                      | PM 2.5 (mg) | PM 7 (mg) | PM 10 (mg) | Total Dust (mg) | Comments         |
| outdoors                                    | 8:04             | 0.002                          | 0.005       | 0.021     | 0.027      | 0.036           | windy conditions |
| 1st floor elevator lobby                    | 8:09             | 0.002                          | 0.008       | 0.07      | 0.099      | 0.121           |                  |
| 1st floor gym hallway                       | 8:12             | 0.001                          | 0.007       | 0.087     | 0.123      | 0.155           |                  |
| 1st floor entrance by Room 102              | 8:14             | 0.002                          | 0.006       | 0.062     | 0.084      | 0.118           |                  |
| Stairwell B-6th floor                       | 8:22             | 0.002                          | 0.01        | 0.084     | 0.119      | 0.145           |                  |
| Stairwell B- 5th floor                      | 8:24             | 0.002                          | 0.009       | 0.091     | 0.12       | 0.146           |                  |
| Basement Hallway at boiler room by elevator | 8:45             | 0.003                          | 0.012       | 0.106     | 0.144      | 0.209           |                  |
| 1st floor elevator lobby                    | 11:36            | 0.002                          | 0.009       | 0.092     | 0.134      | 0.189           |                  |
| 1st floor gym hallway                       | 11:39            | 0.002                          | 0.006       | 0.039     | 0.062      | 0.086           |                  |
| 1st floor entrance by Room 102              | 11:41            | 0.002                          | 0.008       | 0.056     | 0.074      | 0.093           |                  |
| Stairwell B-6th floor                       | 11:53            | 0.002                          | 0.009       | 0.061     | 0.086      | 0.113           |                  |
| Stairwell B- 5th floor                      | 11:55            | 0.002                          | 0.01        | 0.054     | 0.074      | 0.109           |                  |
| Basement Hallway at boiler room by elevator | 12:03            | 0.003                          | 0.021       | 0.197     | 0.241      | 0.367           |                  |
| 1st floor elevator                          | 14:26            | 0.002                          | 0.006       | 0.04      | 0.052      | 0.097           |                  |
| 1st floor gym hallway                       | 14:29            | 0.002                          | 0.005       | 0.038     | 0.046      | 0.073           |                  |
| 1st floor entrance by Room 102              | 14:31            | 0.002                          | 0.005       | 0.031     | 0.072      | 0.086           |                  |
| Stairwell B-6th floor                       | 14:38            | 0.002                          | 0.003       | 0.024     | 0.051      | 0.078           |                  |
| Stairwell B- 5th floor                      | 14:40            | 0.002                          | 0.004       | 0.029     | 0.054      | 0.041           |                  |
| Basement Hallway at boiler room by elevator | 14:47            | 0.002                          | 0.011       | 0.086     | 0.142      | 0.187           |                  |

| Benjamin Franklin High School (UCLS# 2010)  | Date of Sampling | 9-Jan Criterion Project Number |             |           | 192440     |                 |          |
|---|------------------|--------------------------------|-------------|-----------|------------|-----------------|----------|
| Location                                    | Time             | PM 1 (mg)                      | PM 2.5 (mg) | PM 7 (mg) | PM 10 (mg) | Total Dust (mg) | Comments |
| outdoors                                    | 8:12             | 0.0004                         | 0.001       | 0.006     | 0.008      | 0.009           |          |
| 1st floor elevator lobby                    | 8:44             | 0.001                          | 0.006       | 0.08      | 0.121      | 0.162           |          |
| 1st floor gym hallway                       | 8:46             | 0.003                          | 0.009       | 0.063     | 0.094      | 0.132           |          |
| 1st floor entrance by 102                   | 8:49             | 0.001                          | 0.004       | 0.043     | 0.06       | 0.084           |          |
| Stairwell B-6th floor                       | 8:27             | 0.002                          | 0.004       | 0.028     | 0.045      | 0.071           |          |
| Stairwell B- 5th floor                      | 8:29             | 0.001                          | 0.005       | 0.033     | 0.051      | 0.078           |          |
| Basement Hallway at boiler room by elevator | 8:38             | 0.003                          | 0.008       | 0.063     | 0.082      | 0.141           |          |

| Location                                    | Time  | PM 1 (mg) | PM 2.5 (mg) | PM 7 (mg) | PM 10 (mg) | Total Dust (mg) | Comments               |
|---|-------|-----------|-------------|-----------|------------|-----------------|------------------------|
| outdoors                                    | 8:42  | 0.002     | 0.002       | 0.015     | 0.015      | 0.018           |                        |
| 1st floor elevator lobby                    | 8:46  | 0.001     | 0.005       | 0.029     | 0.052      | 0.079           |                        |
| 1st floor gym hallway                       | 8:49  | 0.001     | 0.003       | 0.012     | 0.016      | 0.019           |                        |
| 1st floor entrance by Room 102              | 8:51  | 0.001     | 0.004       | 0.022     | 0.035      | 0.049           |                        |
| Stairwell B-6th floor                       | 8:57  | 0.003     | 0.007       | 0.051     | 0.074      | 0.113           |                        |
| Stairwell B- 5th floor                      | 8:59  | 0.002     | 0.005       | 0.046     | 0.067      | 0.096           |                        |
| Basement Hallway at boiler room by elevator | 9:08  | 0.004     | 0.023       | 0.136     | 0.206      | 0.345           | dry sweeping occuring. |
| 1st floor elevator lobby                    | 11:36 | 0.002     | 0.009       | 0.092     | 0.134      | 0.189           |                        |
| 1st floor gym hallway                       | 11:39 | 0.002     | 0.006       | 0.039     | 0.062      | 0.086           |                        |
| 1st floor entrance by Room 102              | 11:41 | 0.002     | 0.008       | 0.056     | 0.074      | 0.093           |                        |
| Stairwell B-6th floor                       | 11:53 | 0.002     | 0.009       | 0.061     | 0.086      | 0.113           |                        |
| Stairwell B- 5th floor                      | 11:55 | 0.002     | 0.01        | 0.054     | 0.074      | 0.109           |                        |
| Basement Hallway at boiler room by elevator | 12:03 | 0.003     | 0.021       | 0.197     | 0.241      | 0.367           |                        |
| 1st floor elevator                          | 14:12 | 0.002     | 0.009       | 0.081     | 0.113      | 0.159           |                        |
| 1st floor gym hallway                       | 14:16 | 0.002     | 0.008       | 0.065     | 0.093      | 0.104           |                        |
| 1st floor entrance by Room 102              | 14:19 | 0.002     | 0.009       | 0.069     | 0.091      | 0.106           |                        |
| Stairwell B-6th floor                       | 14:26 | 0.002     | 0.005       | 0.047     | 0.075      | 0.094           |                        |
| Stairwell B- 5th floor                      | 14:29 | 0.002     | 0.004       | 0.04      | 0.072      | 0.086           |                        |
| Basement Hallway at boiler room by elevator | 14:39 | 0.003     | 0.01        | 0.092     | 0.131      | 0.152           |                        |