



November 4, 2019

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 October 28, 29, 30, 31 and November 1, 2019, Ms. Lauren Mitchell 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/m<sup>3</sup>) for PM 10 (respirable dust) and 15 mg/m<sup>3</sup> 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/m<sup>3</sup> for Total Dust.

The Environmental Protection Agency (EPA) sets a limit of 35 mg/m<sup>3</sup> for PM 2.5 over a 24 hour period and 150 mg/m<sup>3</sup> 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**

The readings for PM10 collected on October 28, 2019 at 8.45 am in the 1<sup>st</sup> Floor Gym Hallway and 8.48 am readings collected at the 1<sup>st</sup> Floor Entrance to Room 102 were found to be above the baseline level that had previously been established. The workers were cutting concrete in these areas over the weekend leaving the area very dusty; it was explained to the workers about dust control practices. The cleaner is scheduled to be on-site tonight so the area will be cleaned then.

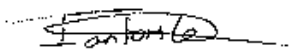
The readings for PM10 and Total on Dust on October 29, 2019 at 9.00 am in the 1<sup>st</sup> floor entrance by Room 102 were found to be above the baseline level that had been previously established. The plastic sheeting over the doorway had been removed; the technician told the workers to replace the plastic and asked the cleaner to clean the hallway. The reading for PM10 and Total Dust on October 29, 2019 at 9.18 am in the 5<sup>th</sup> Floor Elevator Lobby and the PM10 and Total Dust readings at 9.21 am in the Hallway at Room 507 were found to be above the baseline level that had previously been established. The workers were mixing cement and cutting cinder blocks inside the building; they were immediately stopped and told to install dust control devices such as critical barriers and negative air machines. The readings for PM10 and Total Dust collected in the 5<sup>th</sup> floor Elevator Lobby at 11.15 am after the dust control had been initiated still had levels above the established base line. The sampling data on the next day in this area showed the levels back below the established baseline.

The readings for PM10 and Total Dust on November 1, 2019 at 8.30 am in the 1<sup>st</sup> Floor Gym Hallway and the PM10 reading at 8.33 am in the 1<sup>st</sup> Floor Entrance by Room 102 were found to be above the baseline level that had previously been established. The workers had torn down the plastic sheeting to the construction area allowing dust to move out of the work area. Delta workers were told to replace the plastic sheeting. All subsequent testing showed normal levels of PM10 and Total Dust.

All other readings collected during the week of October 28 – November 1, 2019 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)

Date of Sampling

28-Oct

Criterion Project Number

192440

| Location                                     | Time  | PM 1 (mg) | PM 2.5 (mg) | PM 7 (mg) | PM 10 (mg) | Total Dust (mg) | Comments  |  |  |  |  |
|--|-------|-----------|-------------|-----------|------------|-----------------|---|--|--|--|--|
| outdoors                                     | 9:45  | 0.006     | 0.017       | 0.01      | 0.013      | 0.017           |   |  |  |  |  |
| 1st floor elevator lobby                     | 8:40  | 0.001     | 0.093       | 0.158     | 0.236      | 0.389           | Workers cut concrete in the area over the weekend, high dust count:workers will clean up area                         |  |  |  |  |
| 1st floor gym hallway                        | 8:45  | 0.004     | 0.029       | 0.560     | 0.915      | 0.400           | Same as above   |  |  |  |  |
| 1st floor entrance by Room 102               | 8:48  | 0.004     | 0.025       | 0.431     | 0.727      | 0.390           | Same as above   |  |  |  |  |
| Stairwell B-6th floor                        | 8:55  | 0.002     | 0.012       | 0.174     | 0.200      | 0.370           |   |  |  |  |  |
| Stairwell B- 5th floor                       | 9:00  | 0.002     | 0.010       | 0.123     | 0.108      | 0.270           |   |  |  |  |  |
| 5th floor elevator lobby                     | 9:05  | 0.002     | 0.005       | 0.044     | 0.068      | 0.091           |   |  |  |  |  |
| 5th floor hallway at Room 507                | 9:09  | 0.002     | 0.007       | 0.075     | 0.012      | 0.160           |   |  |  |  |  |
| Room 507                                     | 9:13  | 0.001     | 0.005       | 0.021     | 0.023      | 0.025           |   |  |  |  |  |
| 5th floor hallway at Room 517                | 9:18  | 0.002     | 0.004       | 0.023     | 0.030      | 0.046           |   |  |  |  |  |
| Room 518                                     | 9:24  | 0.000     | 0.001       | 0.005     | 0.006      | 0.010           |   |  |  |  |  |
| 4th floor hallway at Room 406                | 9:30  | 0.002     | 0.007       | 0.057     | 0.073      | 0.097           |   |  |  |  |  |
| Basement hallway at boiler room by elevators | 9:40  | 0.021     | 0.049       | 0.133     | 0.150      | 0.168           |   |  |  |  |  |
| 1st floor elevator lobby                     | 11:39 | 0.006     | 0.007       | 0.033     | 0.047      | 0.067           |   |  |  |  |  |
| 1st floor gym hallway                        | 11:43 | 0.003     | 0.004       | 0.040     | 0.043      | 0.300           | Amount is lower than this morning, however, it's still high and the cleaner has yet to arrive to clean up the hallway |  |  |  |  |
| 1st floor entrance by Room 102               | 11:46 | 0.002     | 0.011       | 0.047     | 0.050      | 0.135           |   |  |  |  |  |
| Stairwell B-6th floor                        | 11:49 | 0.001     | 0.006       | 0.092     | 0.142      | 0.198           |   |  |  |  |  |
| Stairwell B- 5th floor                       | 11:51 | 0.007     | 0.004       | 0.054     | 0.085      | 0.129           |   |  |  |  |  |
| 5th floor elevator lobby                     | 11:53 | 0.004     | 0.014       | 0.039     | 0.273      | 0.230           |   |  |  |  |  |
| 5th floor hallway at Room 507                | 11:55 | 0.005     | 0.020       | 0.165     | 0.213      | 0.263           |   |  |  |  |  |
| Room 507                                     | 12:00 | 0.002     | 0.008       | 0.054     | 0.066      | 0.072           |   |  |  |  |  |
| 5th floor hallway at Room 517                | 12:05 | 0.003     | 0.010       | 0.041     | 0.054      | 0.074           |   |  |  |  |  |
| Room 518                                     | 12:10 | 0.000     | 0.001       | 0.002     | 0.002      | 0.002           |   |  |  |  |  |
| 4th floor hallway at Room 406                | 12:14 | 0.003     | 0.011       | 0.059     | 0.070      | 0.079           |   |  |  |  |  |
| Basement hallway at boiler room by elevators | 12:20 | 0.039     | 0.061       | 0.144     | 0.175      | 0.206           |   |  |  |  |  |
| 1st floor elevator lobby                     | 14:02 | 0.000     | 0.004       | 0.062     | 0.096      | 0.132           |   |  |  |  |  |
| 1st floor gym hallway                        | 14:05 | 0.001     | 0.008       | 0.119     | 0.188      | 0.255           | Cleaner has arrived and is cleaning the hallway now   |  |  |  |  |
| 1st floor entrance by Room 102               | 14:08 | 0.006     | 0.039       | 0.150     | 0.265      | 0.379           | Poly is slit at the top, I ask the workers to tape the poly so no air escapes   |  |  |  |  |
| Stairwell B-6th floor                        | 14:13 | 0.001     | 0.009       | 0.142     | 0.203      | 0.272           |   |  |  |  |  |
| Stairwell B- 5th floor                       | 14:19 | 0.001     | 0.008       | 0.136     | 0.235      | 0.255           |   |  |  |  |  |
| 5th floor elevator lobby                     | 14:24 | 0.002     | 0.008       | 0.073     | 0.104      | 0.141           |   |  |  |  |  |
| 5th floor hallway at Room 507                | 14:27 | 0.006     | 0.018       | 0.150     | 0.204      | 0.251           |   |  |  |  |  |
| Room 507                                     | 14:30 | 0.001     | 0.004       | 0.015     | 0.018      | 0.019           |   |  |  |  |  |
| 5th floor hallway at Room 517                | 14:34 | 0.001     | 0.004       | 0.014     | 0.017      | 0.017           |   |  |  |  |  |
| Room 518                                     | 14:38 | 0.000     | 0.010       | 0.003     | 0.003      | 0.006           |   |  |  |  |  |
| 4th floor hallway at Room 406                | 14:42 | 0.003     | 0.014       | 0.118     | 0.150      | 0.172           |   |  |  |  |  |
| Basement hallway at boiler room by elevators | 14:48 | 0.018     | 0.035       | 0.148     | 0.193      | 0.229           |   |  |  |  |  |

Benjamin Franklin High School  
(UCLS# 2010)

Date of  
Sampling

29-Oct

Criterion Project  
Number

192440

| Location                                     | Time  | PM 1 (mg) | PM 2.5 (mg) | PM 7 (mg) | PM 10 (mg) | Total Dust (mg) | Comments  |
|--|-------|-----------|-------------|-----------|------------|-----------------|---|
| Outdoors                                     | 10:06 | 0.001     | 0.003       | 0.008     | 0.01       | 0.012           |   |
| 1st floor elevator lobby                     | 8:55  | 0.003     | 0.007       | 0.053     | 0.082      | 0.127           | Poly is ripped and not secure, workers will tape the poly back up   |
| 1st floor gym hallway                        | 8:58  | 0.002     | 0.007       | 0.058     | 0.086      | 0.124           |   |
| 1st floor entrance by Room 102               | 9:00  | 0.016     | 0.032       | 0.195     | 0.31       | 0.434           | Poly is not in place and I ask workers to tape poly to prevent dust from escaping. Cleaner will clean the hallway.  |
|  |       |           |             |           |            |                 |   |
| Stairwell B-6th floor                        | 9:07  | 0.002     | 0.007       | 0.068     | 0.104      | 0.165           |   |
| Stairwell B- 5th floor                       | 9:15  | 0.002     | 0.008       | 0.103     | 0.178      | 0.373           |   |
| 5th floor elevator lobby                     | 9:18  | 0.004     | 0.018       | 0.303     | 0.512      | 0.846           | Mixing concrete and cutting cinderblocks in elevator lobby with no precautions. I have the workers stop work immediately. This procedure needs to be done in a room with poly sealed on the door to control the dust or outside. I was not informed this work was being done. I have the workers place a negative air machine in the hallway to get some of the dust out of the area. Once all precautions are in place, I allow the workers to continue. |
|  |       |           |             |           |            |                 |   |
|  |       |           |             |           |            |                 |   |
|  |       |           |             |           |            |                 |   |
|  |       |           |             |           |            |                 |   |
|  |       |           |             |           |            |                 |   |
| 5th floor hallway at Room 507                | 9:21  | 0.01      | 0.024       | 0.2       | 0.306      | 0.455           | Same as above, door from elevator lobby is open to the hallway  |
| Room 507                                     | 9:40  | 0.004     | 0.006       | 0.013     | 0.018      | 0.025           |   |
| 5th floor hallway at Room 517                | 9:44  | 0.003     | 0.01        | 0.063     | 0.093      | 0.123           |   |
| Room 518                                     | 9:48  | 0.005     | 0.018       | 0.052     | 0.059      | 0.065           |   |
| 4th floor hallway at Room 406                | 9:55  | 0.014     | 0.026       | 0.109     | 0.15       | 0.198           |   |
| Basement hallway at boiler room by elevators | 10:00 | 0.001     | 0.003       | 0.019     | 0.023      | 0.034           |   |
| Re-test floor elevator lobby                 | 11:15 | 0.018     | 0.092       | 0.195     | 0.33       | 0.44            | All precautions are now in place. Levels are still high, however, the negative machine continues running and will run all night   |
|  |       |           |             |           |            |                 |   |
| Re-test 5th floor hallway outside room 507   | 11:18 | 0.014     | 0.058       | 0.124     | 0.253      | 0.375           | Same as above   |

| Location                                     | Time  | PM 1 (mg) | PM 2.5 (mg) | PM 7 (mg) | PM 10 (mg) | Total Dust (mg) | Comments  |
|--|-------|-----------|-------------|-----------|------------|-----------------|---|
| Outdoor                                      | 9:10  | 0.002     | 0.004       | 0.009     | 0.011      | 0.013           |   |
| 1st floor elevator lobby                     | 8:05  | 0.000     | 0.009       | 0.086     | 0.136      | 0.21            | Poly is slightly ripped due to the workers bringing equipment in and out, I have Delta  |
| 1st floor gym hallway                        | 8:09  | 0.003     | 0.015       | 0.163     | 0.266      | 0.402           | Saw cutting right next to flap door, I ask them to saw cut closer to negative air machines  |
| 1st floor entrance by Room 102               | 8:12  | 0.002     | 0.013       | 0.112     | 0.174      | 0.254           |   |
| Stairwell B-6th floor                        | 8:20  | 0.002     | 0.007       | 0.057     | 0.087      | 0.127           |   |
| Stairwell B- 5th floor                       | 8:23  | 0.002     | 0.007       | 0.054     | 0.086      | 0.127           |   |
| 5th floor elevator lobby                     | 8:25  | 0.003     | 0.011       | 0.175     | 0.26       | 0.349           | Levels are still high from yesterday, but within the limits, all cinderblocks are being cut outside, negative air machine continues running |
| 5th floor hallway at Room 507                | 8:29  | 0.005     | 0.017       | 0.135     | 0.234      | 0.375           | Negative air machine is now running in hallway to reduce dust   |
| Room 507                                     | 8:34  | 0.004     | 0.007       | 0.011     | 0.012      | 0.014           |   |
| 5th floor hallway at Room 517                | 8:39  | 0.002     | 0.005       | 0.015     | 0.023      | 0.036           |   |
| Room 518                                     | 8:43  | 0.001     | 0.004       | 0.004     | 0.004      | 0.012           |   |
| 4th floor hallway at Room 406                | 8:50  | 0.006     | 0.007       | 0.023     | 0.256      | 0.32            | Workers are placing tiles down with mortar in hallway, cleaner with clean hallway   |
| Basement hallway at boiler room by elevators | 9:00  | 0.007     | 0.014       | 0.073     | 0.105      | 0.142           |   |
| 1st floor elevator lobby                     | 11:15 | 0.001     | 0.004       | 0.055     | 0.09       | 0.128           |   |
| 1st floor gym hallway                        | 11:18 | 0.005     | 0.008       | 0.0042    | 0.158      | 0.254           |   |
| 1st floor entrance by Room 102               | 11:21 | 0.004     | 0.018       | 0.029     | 0.142      | 0.354           | Poly is ripped at the top, Delta will fix again   |
| Stairwell B-6th floor                        | 11:26 | 0.000     | 0.003       | 0.045     | 0.079      | 0.124           |   |
| Stairwell B- 5th floor                       | 11:29 | 0.000     | 0.003       | 0.037     | 0.058      | 0.107           |   |
| 5th floor elevator lobby                     | 11:34 | 0.001     | 0.004       | 0.039     | 0.06       | 0.077           |   |
| 5th floor hallway at Room 507                | 11:37 | 0.000     | 0.016       | 0.106     | 0.151      | 0.209           |   |
| Room 507                                     | 11:40 | 0.000     | 0.013       | 0.067     | 0.094      | 0.116           |   |
| 5th floor hallway at Room 517                | 11:43 | 0.001     | 0.002       | 0.012     | 0.016      | 0.022           |   |
| Room 518                                     | 11:49 | 0.002     | 0.012       | 0.09      | 0.12       | 0.152           |   |
| 4th floor hallway at Room 406                | 11:55 | 0.004     | 0.018       | 0.179     | 0.269      | 0.379           | All poly is in place but the cleaner will mop the hallway   |
| Basement Hallway at boiler room by elevator  | 12:03 | 0.008     | 0.019       | 0.114     | 0.186      | 0.305           |   |
| 1st floor elevator lobby                     | 13:49 | 0.001     | 0.003       | 0.02      | 0.028      | 0.04            |   |
| 1st floor gym hallway                        | 13:52 | 0.004     | 0.012       | 0.105     | 0.159      | 0.22            |   |
| 1st floor entrance by Room 102               | 13:54 | 0.003     | 0.009       | 0.083     | 0.13       | 0.183           |   |
| Stairwell B-6th floor                        | 13:59 | 0.001     | 0.005       | 0.061     | 0.099      | 0.169           |   |
| Stairwell B- 5th floor                       | 14:04 | 0.001     | 0.006       | 0.062     | 0.107      | 0.167           |   |
| 5th floor elevator lobby                     | 14:06 | 0.005     | 0.021       | 0.12      | 0.248      | 0.410           | No workers in this area, cleaner will mop to reduce dust  |
| 5th floor hallway at Room 507                | 14:08 | 0.007     | 0.021       | 0.148     | 0.208      | 0.276           |   |
| Room 507                                     | 14:11 | 0.004     | 0.009       | 0.033     | 0.041      | 0.047           |   |
| 5th floor hallway at Room 517                | 14:14 | 0.007     | 0.027       | 0.154     | 0.239      | 0.221           |   |
| Room 518                                     | 14:19 | 0.001     | 0.005       | 0.021     | 0.025      | 0.032           |   |
| 4th floor hallway at Room 406                | 14:23 | 0.005     | 0.012       | 0.032     | 0.086      | 0.127           |   |
| Basement Hallway at boiler room by elevator  | 14:30 | 0.001     | 0.004       | 0.034     | 0.054      | 0.082           |   |

Benjamin Franklin High School (UCLS# 2010)

Date of Sampling

31-Oct

Criterion Project Number

192440

| Location                                       | Time  | PM 1 (mg) | PM 2.5 (mg) | PM 7 (mg) | PM 10 (mg) | Total Dust (mg) | Comments   |
|--|-------|-----------|-------------|-----------|------------|-----------------|--|
| Outside  | 10:00 | 0.002     | 0.009       | 0.048     | 0.053      | 0.054           |  |
| 1st floor elevator lobby                       | 8:55  | 0.006     | 0.014       | 0.115     | 0.181      | 0.302           |  |
| 1st floor gym hallway                          | 9:00  | 0.003     | 0.011       | 0.111     | 0.176      | 0.264           |  |
| 1st floor entrance by 102                      | 9:03  | 0.001     | 0.012       | 0.124     | 0.180      | 0.397           | Poly is slit at top again, workers will fix  |
| Stairwell B-6th floor                          | 9:10  | 0.002     | 0.009       | 0.092     | 0.135      | 0.174           |  |
| Stairwell B- 5th floor                         | 9:15  | 0.002     | 0.010       | 0.114     | 0.169      | 0.245           |  |
| 5th floor elevator lobby                       | 9:18  | 0.003     | 0.020       | 0.189     | 0.238      | 0.31            |  |
| 5th floor hallway at 507                       | 9:25  | 0.003     | 0.012       | 0.146     | 0.226      | 0.354           |  |
| Room 507                                       | 9:29  | 0.000     | 0.002       | 0.005     | 0.006      | 0.007           |  |
| 5th floor hallway at 517                       | 9:34  | 0.003     | 0.018       | 0.021     | 0.25       | 0.413           | Worker laying down tiles with cement mixture in hallway, cleaner will clean up hallway |
| Room 518                                       | 9:38  | 0.001     | 0.004       | 0.012     | 0.012      | 0.014           |  |
| 4th floor hallway at 406                       | 9:45  | 0.004     | 0.014       | 0.086     | 0.108      | 0.222           |  |
| Basement hallway at boiler room near elevators | 9:55  | 0.102     | 0.151       | 0.313     | 0.363      | 0.413           | Is pretty Smokey, I let Steve know so the correct precautions are in place             |

Benjamin Franklin High School (UCLS# 2010)

Date of Sampling

1-Nov

Criterion Project Number

192440

| Location                                    | Time  | PM 1 (mg) | PM 2.5 (mg) | PM 7 (mg) | PM 10 (mg) | Total Dust (mg) | Comments  |
|---|-------|-----------|-------------|-----------|------------|-----------------|---|
| outdoors                                    | 9:18  | 0.000     | 0.000       | 0.005     | 0.007      | 0.009           |   |
| 1st floor elevator lobby                    | 8:28  | 0.004     | 0.015       | 0.142     | 0.205      | 0.273           |   |
| 1st floor gym hallway                       | 8:30  | 0.005     | 0.02        | 0.269     | 0.429      | 0.592           | Workers have ripped down poly, Delta will replace poly  |
| 1st floor entrance by Room 102              | 8:33  | 0.005     | 0.014       | 0.039     | 0.640      | 0.313           |   |
| Stairwell B-6th floor                       | 8:39  | 0.005     | 0.011       | 0.127     | 0.205      | 0.309           |   |
| Stairwell B- 5th floor                      | 8:41  | 0.002     | 0.009       | 0.09      | 0.139      | 0.185           |   |
| 5th floor elevator lobby                    | 8:45  | 0.004     | 0.021       | 0.05      | 0.074      | 0.214           |   |
| 5th floor hallway at Room 507               | 8:47  | 0.001     | 0.019       | 0.026     | 0.099      | 0.328           | Workers saw cutting in hallway, workers need to do this inside a room with poly. I do not let work proceed until this is done.  |
| Room 507                                    | 8:49  | 0.002     | 0.01        | 0.06      | 0.076      | 0.09            |   |
| 5th floor hallway at Room 517               | 8:54  | 0.004     | 0.031       | 0.151     | 0.258      | 0.41            | Workers saw cutting in hallway, this needs to be done in a room sealed with poly. I do not let work proceed until this is done. |
| Room 518                                    | 8:58  | 0.000     | 0.001       | 0.012     | 0.016      | 0.22            |   |
| 4th floor hallway at Room 406               | 9:04  | 0.002     | 0.012       | 0.125     | 0.183      | 0.255           |   |
| Basement Hallway at boiler room by elevator | 9:13  | 0.000     | 0.003       | 0.034     | 0.055      | 0.079           |   |
| 1st floor elevator lobby                    | 11:35 | 0.002     | 0.006       | 0.058     | 0.103      | 0.171           |   |
| 1st floor gym hallway                       | 11:38 | 0.006     | 0.012       | 0.072     | 0.106      | 0.152           |   |
| 1st floor entrance by Room 102              | 11:40 | 0.013     | 0.021       | 0.059     | 0.076      | 0.088           |   |
| Stairwell B-6th floor                       | 11:45 | 0.000     | 0.004       | 0.06      | 0.095      | 0.137           |   |
| Stairwell B- 5th floor                      | 11:48 | 0.000     | 0.003       | 0.028     | 0.047      | 0.078           |   |
| 5th floor elevator lobby                    | 11:53 | 0.002     | 0.009       | 0.112     | 0.172      | 0.223           |   |
| 5th floor hallway at Room 507               | 11:57 | 0.003     | 0.009       | 0.1       | 0.141      | 0.188           |   |
| Room 507                                    | 11:59 | 0.001     | 0.002       | 0.007     | 0.009      | 0.011           |   |
| 5th floor hallway at 517                    | 12:03 | 0.001     | 0.008       | 0.116     | 0.174      | 0.223           |   |
| Room 518                                    | 12:06 | 0.000     | 0.000       | 0.005     | 0.009      | 0.011           |   |
| 4th floor hallway at Room 406               | 12:10 | 0.004     | 0.012       | 0.122     | 0.178      | 0.252           |   |
| Basement Hallway at boiler room by elevator | 12:17 | 0.001     | 0.007       | 0.119     | 0.196      | 0.342           |   |
| 1st floor elevator lobby                    | 14:17 | 0.002     | 0.007       | 0.056     | 0.082      | 0.126           |   |
| 1st floor gym hallway                       | 14:21 | 0.003     | 0.015       | 0.182     | 0.271      | 0.369           | Workers moving materials in and out of containment, causing the area to loose negative pressure                                 |
| 1st floor entrance by Room 102              | 14:24 | 0.008     | 0.01        | 0.063     | 0.175      | 0.268           |   |
| Stairwell B-6th floor                       | 14:28 | 0.001     | 0.005       | 0.071     | 0.12       | 0.186           |   |
| Stairwell B- 5th floor                      | 14:33 | 0.002     | 0.007       | 0.107     | 0.174      | 0.28            |   |
| 5th floor elevator lobby                    | 14:37 | 0.001     | 0.005       | 0.053     | 0.069      | 0.082           |   |
| 5th floor hallway at 507                    | 14:40 | 0.002     | 0.006       | 0.05      | 0.067      | 0.081           |   |
| Room 507                                    | 14:44 | 0.001     | 0.002       | 0.012     | 0.016      | 0.02            |   |
| 5th floor hallway at 517                    | 14:49 | 0.001     | 0.005       | 0.05      | 0.065      | 0.078           |   |
| Room 518                                    | 14:53 | 0.000     | 0.000       | 0.004     | 0.005      | 0.008           |   |
| 4th floor hallway at 406                    | 14:58 | 0.003     | 0.007       | 0.058     | 0.08       | 0.109           |   |
| Basement Hallway at boiler room by elevator | 15:03 | 0.01      | 0.016       | 0.056     | 0.076      | 0.114           |   |