Environmental & Industrial Hygiene



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

...Solutions

February 5, 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 27, 28, 29, 30 and 31, 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.

School District of Philadelphia Mr. Brian Joseph February 5, 2019 Page 2

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

One reading for PM10 and Total Dust on January 31, 2020 was found to be above the baseline level but active cleaning was taking place at the time of sampling. A follow up sample result after cleaning had been completed indicated levels below the established baseline level.

All other readings collected during the week of January 27, 2020, to January 31, 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)	Date of Sampling	27-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	8:39	0.003	0.005	0.037	0.024	0.029	
Basement Elevator Lobby	8:43	0.004	0.012	0.086	0.106	0.134	
1st Floor Elevator Lobby	8:32	0.002	0.008	0.071	0.094	0.111	
2nd Floor Elevator Lobby	8:27	0.001	0.005	0.041	0.057	0.076	
3rd Floor Elevator Lobby	8:23	0.001	0.004	0.023	0.042	0.066	
4th Floor Elevator Lobby	8:19	0.002	0.005	0.029	0.045	0.07	
5th Floor Elevator Lobby	8:16	0.003	0.006	0.064	0.083	0.101	
6th Floor Elevator Lobby	8:11	0.003	0.019	0.094	0.112	0.143	
Basement Elevator Lobby	11:57	0.003	0.021	0.126	0.163	0.194	
1st Floor Elevator Lobby	11:53	0.003	0.007	0.066	0.082	0.117	
2nd Floor Elevator Lobby	11:50	0.001	0.005	0.035	0.049	0.068	
3rd Floor Elevator Lobby	11:46	0.001	0.003	0.026	0.037	0.051	
4th Floor Elevator Lobby	11:41	0.001	0.004	0.038	0.056	0.084	
5th Floor Elevator Lobby	11:38	0.002	0.007	0.067	0.08	0.113	
6th Floor Elevator Lobby	11:34	0.004	0.011	0.079	0.094	0.125	
Basement Elevator Lobby	14:31	0.002	0.009	0.085	0.102	0.132	
1st Floor Elevator Lobby	14:23	0.003	0.005	0.033	0.046	0.069	
2nd Floor Elevator Lobby	14:18	0.001	0.004	0.031	0.039	0.056	
3rd Floor Elevator Lobby	14:15	0.001	0.005	0.049	0.064	0.089	
4th Floor Elevator Lobby	14:09	0.001	0.004	0.052	0.072	0.097	
5th Floor Elevator Lobby	14:05	0.002	0.007	0.068	0.086	0.124	
6th Floor Elevator Lobby	14:02	0.002	0.009	0.074	0.091	0.137	

Benjamin Franklin High School (UCLS# 2010)	Date of Sampling	28-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	8:17	0.003	0.003	0.011	0.014	0.019	
Basement Elevator Lobby	8:48	0.002	0.01	0.063	0.079	0.092	
1st Floor Elevator Lobby	8:42	0.002	0.006	0.047	0.064	0.085	
2nd Floor Elevator Lobby	8:39	0.002	0.004	0.033	0.051	0.76	
3rd Floor Elevator Lobby	8:36	0.002	0.005	0.039	0.07	0.091	
4th Floor Elevator Lobby	8:31	0.001	0.007	0.058	0.084	0.103	
5th Floo Elevator Lobby	8:27	0.002	0.004	0.056	0.079	0.094	
6th Floor Elevator Lobby	8:24	0.003	0.016	0.087	0.114	0.149	

njamin Franklin High School (UCLS# 2010)	Date of Sampling	29-Jan	Criterion Project N	umber	192440	1	
Location	Time	PM 1 (mg)	PM 2.5 (mg)	PM 7 (mg)	PM 10 (mg)	Total Dust (mg)	Comments
outdoors	8:40	0.002	0.003	0.016	0.023	0.029	
1st floor elevator lobby	8:12	0.003	0.012	0.056	0.07	0.081	
1st floor gym hallway	8:10	0.003	0.01	0.041	0.05	0.063	
1st floor entrance by 102	8:13	0.003	0.013	0.079	0.103	0.118	
Stairwell B-6th floor	8:21	0.002	0.006	0.032	0.052	0.077	
Stairwell B- 5th floor	8:24	0.002	0.007	0.036	0.064	0.092	
Basement Hallway at boiler room by elevator	8:36	0.004	0.026	0.194	0.276	0.301	
1st floor elevator lobby	12:16	0.002	0.004	0.017	0.18	0.023	
1st floor gym hallway	12:11	0.005	0.021	0.095	0.116	0.135	
1st floor entrance by 102	12:14	0.002	0.008	0.08	0.108	0.136	
Stairwell B-6th floor	12:21	0.003	0.011	0.047	0.062	0.71	
Stairwell B- 5th floor	12:24	0.003	0.01	0.051	0.06	0.074	
Basement Hallway at boiler room by elevator	12:32	0.004	0.017	0.087	0.114	0.153	
1st floor elevator	14:23	0.002	0.009	0.084	0.119	0.132	
1st floor gym hallway	14:28	0.002	0.008	0.073	0.101	0.124	
1st floor entrance by 102	14:31	0.002	0.008	0.078	0.105	0.131	
Stairwell B-6th floor	14:37	0.002	0.006	0.061	0.09	0.119	
Stairwell B- 5th floor	14:39	0.002	0.005	0.056	0.082	0.11	
Basement Hallway at boiler room by elevator	14:45	0.002	0.011	0.135	0.157	0.202	

Benjamin Franklin High School (UCLS# 2010)	Date of Sampling	30-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	9:15	0.003	0.004	0.012	0.017	0.022	
Basement Elevator Lobby	9:19	0.001	0.004	0.079	0.145	0.251	dusty equipment in area
							workers walked by with dusty equipment
1st Floor Elevator Lobby	9:12	0.001	0.004	0.061	0.095	0.156	during testing
2nd Floor Elevator Lobby	9:07	0.002	0.008	0.062	0.088	0.133	
3rd Floor Elevator Lobby	9:03	0.001	0.004	0.031	0.058	0.075	
4th Floor Elevator Lobby	8:59	0.001	0.004	0.041	0.056	0.075	
5th Floo Elevator Lobby	8:57	0.001	0.005	0.046	0.062	0.072	
6th Floor Elevator Lobby	8:54	0.001	0.004	0.032	0.043	0.055	

Benjamin Franklin High School (UCLS# 2010)	Date of Sampling	31-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	9:00	0.003	0.009	0.05	0.063	0.079	trucks are idling
Basement Elevator Lobby	8:33	0.002	0.004	0.047	0.063	0.077	
1st Floor Elevator Lobby	8:36	0.003	0.009	0.051	0.063	0.089	
2nd Floor Elevator Lobby	9:58	0.003	0.014	0.166	0.247	0.334	
3rd Floor Elevator Lobby	8:56	0.002	0.008	0.068	0.096	0.113	
4th Floor Elevator Lobby	8:52	0.003	0.014	0.143	0.215	0.268	
							cleaners are buffering floors and mopping in
5th Floor Elevator Lobby	8:46	0.024	0.039	0.164	0.229	0.307	preparation for air testing next week
6th Floor Elevator Lobby	8:43	0.003	0.011	0.105	0.157	0.215	roof access door is open. positive air flow.
Basement Elevator Lobby	12:34	0.002	0.007	0.03	0.036	0.044	
1st Floor Elevator Lobby	12:09	0.003	0.012	0.08	0.103	0.125	
2nd Floor Elevator Lobby	12:27	0.006	0.016	0.115	0.167	0.241	cleaning equipment and dirty rags in area
3rd Floor Elevator Lobby	12:25	0.004	0.022	0.176	0.232	0.29	cleaners coming through the area
4th Floor Elevator Lobby	12:22	0.004	0.018	0.135	0.186	0.22	cleaners on the floor
5th Floor Elevator Lobby	12:18	0.01	0.07	0.424	0.457	0.47	agent in the lobby. I assume this area was just
6th Floor Elevator Lobby	12:15	0.003	0.011	0.062	0.08	0.096	
Basement Elevator Lobby	14:23	0.003	0.021	0.087	0.125	0.195	
1st Floor Elevator Lobby	14:22	0.003	0.01	0.059	0.08	0.104	
2nd Floor Elevator Lobby	14:19	0.003	0.009	0.073	0.109	0.145	
3rd Floor Elevator Lobby	14:14	0.006	0.023	0.168	0.218	0.248	
4th Floor Elevator Lobby	14:11	0.003	0.011	0.093	0.143	0.186	
5th Floor Elevator Lobby	14:07	0.004	0.019	0.185	0.28	0.395	same observations as mid day sample results

0.095

0.133

0.164

roof door open again

6th Floor Elevator Lobby

14:04

0.002

0.01