MCPS Office of Facilities Management Division of Sustainability and Compliance Indoor Air Quality (IAQ)

Poolesville High School IAQ Sensor Monitoring

Reporting Period: January 22, 2024 – January 26, 2024

Report Date: January 29, 2024

MCPS personnel reviewed the following:

- Construction Activities as reported by the MCPS Division of Design and Construction (DDC) to the Poolesville High School (PHS) Administration for inclusion in the community update notification.
- IAQ sensor data included in the Poolesville HS On-Site Construction IAQ Report.

Summary Observations:

- No notifications or alerts were triggered during the reporting period.
- IAQ Sensor data were reviewed daily by IAQ and DDC personnel.
- Approximately four (4) classrooms consistently indicate TVOC concentrations higher than the
 other classrooms for limited durations. These concentrations rise and fall at the same time as
 rises and falls in other IAQ parameters monitored, because of this they are most likely related to
 occupancy and not an on-site or construction source.
- PM data show higher concentrations for limited durations before and after the instructional day in approximately four (4) different classrooms. These concentrations are believed to be related to the air purifier being turned on, at the start of the day and off at the end of the day.

Construction Activities:

Review of planned construction activities against the data collected does not indicate
construction activities impacted indoor air quality at PHS. No construction related incidents
were to IAQ for the Reporting Period.

Response Action(s):

Both IAQ and DDC staff will continue to monitor sensor data at PHS.

Attachments:

• Poolesville HS On-Site Construction IAQ Reports for January 22, 23, 24, 25 & 26, 2024.

POOLESVILLE HS ON-SITE CONSTRUCTION IAQ REPORT



This report was generated on 01/23/2024 at 03:00 AM (America/New_York)

This daily report is for IAQ data collected between 6:00 AM and 6:00 PM for the day previous to the report generated date above.

This report includes the parameters that are most affected by construction activities in close proximity to an occupied buildings:

CO - carbon monoxide

TVOC - total volatile organic compounds

PM10 - particulate matter <=10 micron(ug)

PM2.5 - particulate matter <= 2.5 ug

PM1.0 - particulate matter <= 1.0 ug

ppm - parts per million

ppb - parts per billion

ug/m3 - micrograms per cubic meter of air

All data is monitored as an indicator of ventilation performance. Where suspect ventilation concerns are identified IAQ team members investigate to determine best next steps, including but not limited to - submit work orders to mechanical teams for repairs, review occupancy and use, review occupant activities and or continue to monitor data collected for patterns and trends.

CO Monitoring

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CO Graphs Legend:

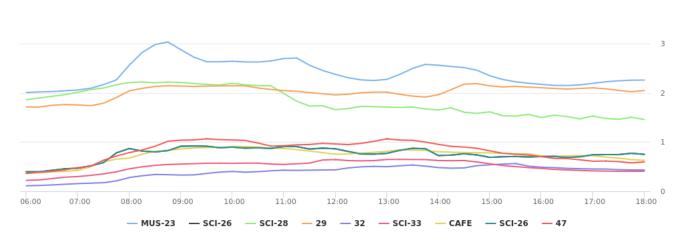
solid lines- indicate data from each room

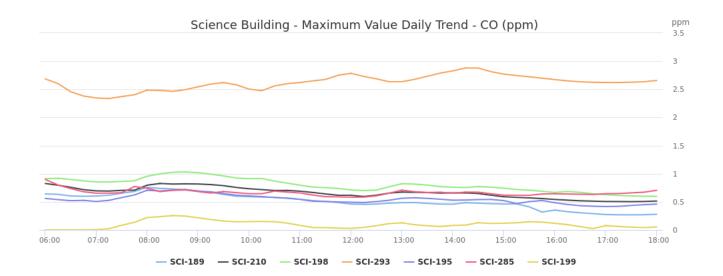
dashed lines appear when data exceeds value for any period of time

IAQ - yellow = 4 ppm; MCPS notified at 4-hours

Ventilation - orange = 9 ppm; MCPS notified at 1-hour; immediate text, investigation Health & Safety - red = 25 ppm; MCPS notified at 8-hours, immediate text, community notification if during school hours







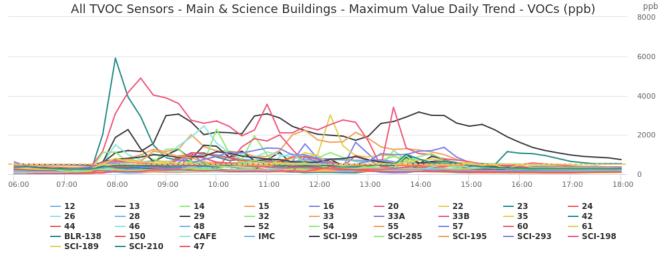
The carbon monoxide standards for indoor air quality are the U.S. Environmental Protection Agency (US EPA) National Ambient Air Quality Standard (NAAQS) of 9 ppm CO on a 8-hour time-weighted average (TWA), and the World Health organization Guidelines for Indoor Air Quality – Selected Pollutants of 6 ppm. However, MCPS will be notified at a sustained measurement of 4 ppm or greater for 4-hours as a more conservative and precautionary approach to this health-based standard.

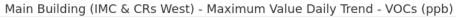
TVOC Monitoring

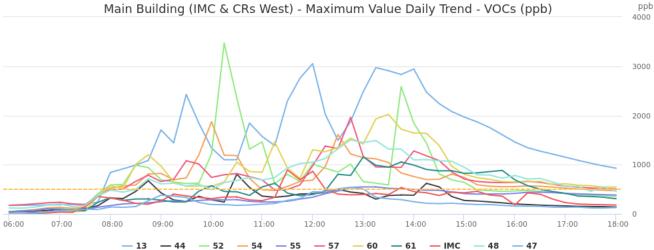
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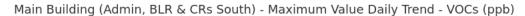
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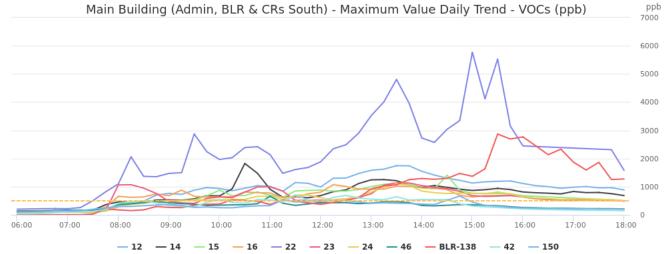


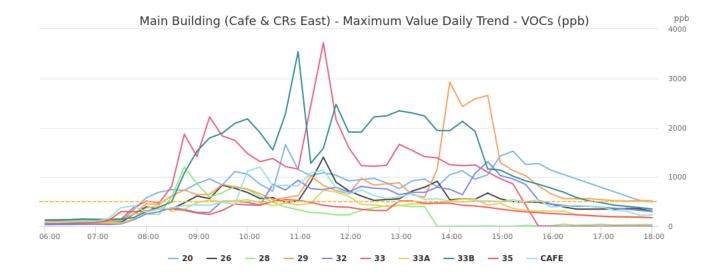


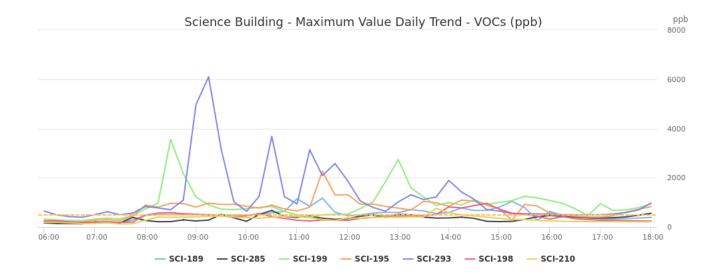








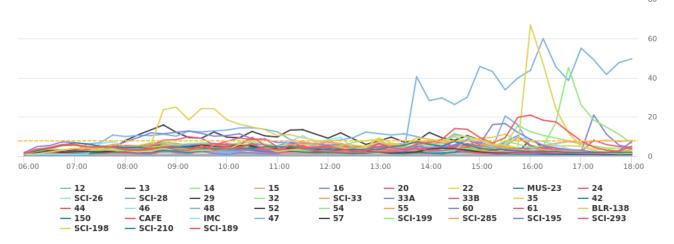


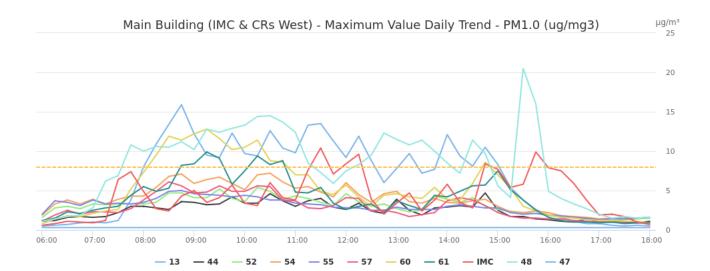


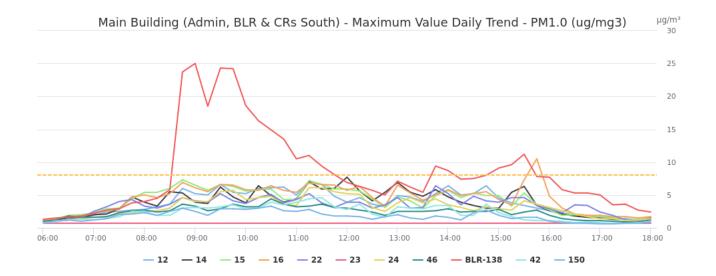
PM1.0 Monitoring

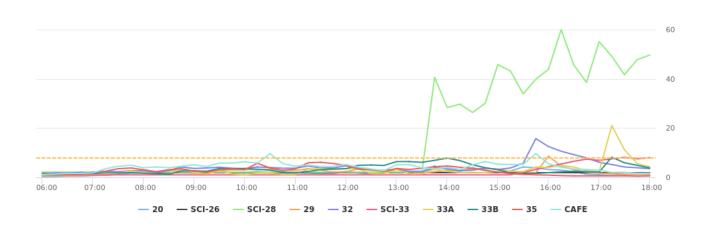
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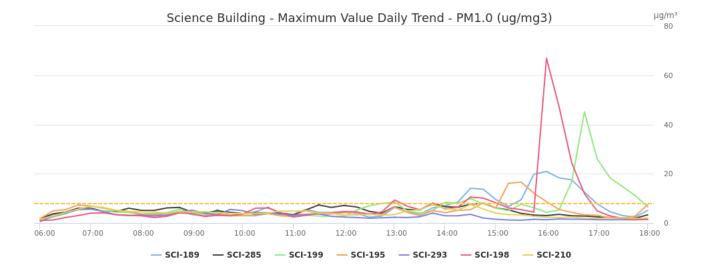
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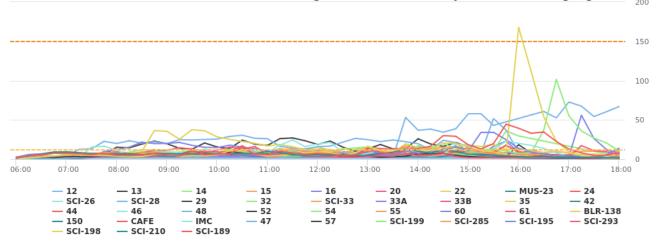


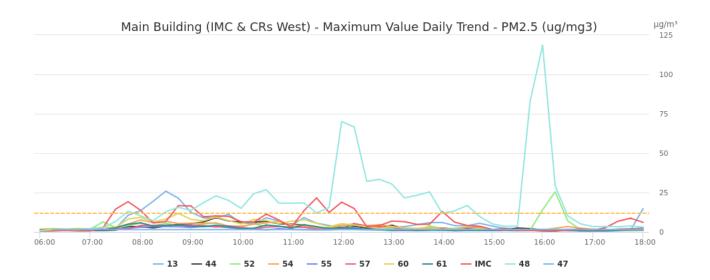


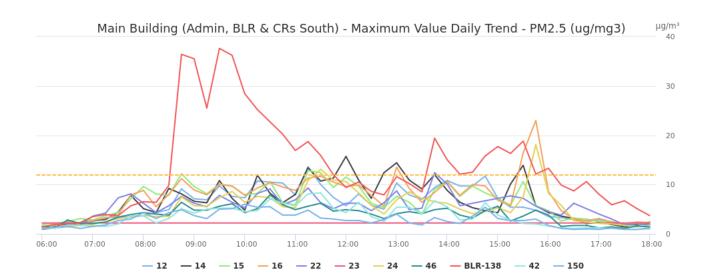
PM2.5 Monitoring

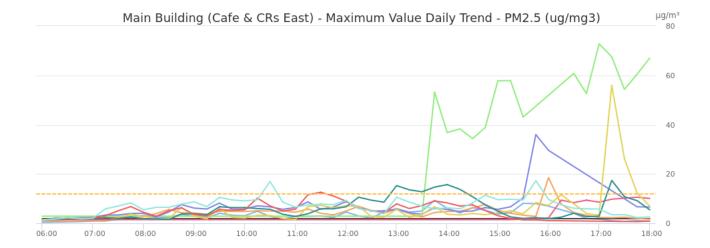
PM2.5 Graphs Legend:

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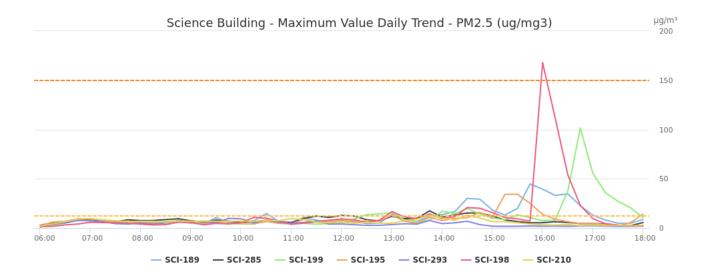




- 32 - SCI-33

— 33A

— 33В



PM10 Monitoring

PM10 Graphs Legend:

solid lines- indicate data from each room dashed lines appear when data exceeds value for any period of time IAQ - yellow = 50 ug/m3; MCPS notified at 4-hours Ventilation - orange = 355 ug/m3; MCPS notified at 2-hours Health & Safety - red = 425 ug/m3; MCPS notified at 8-hours

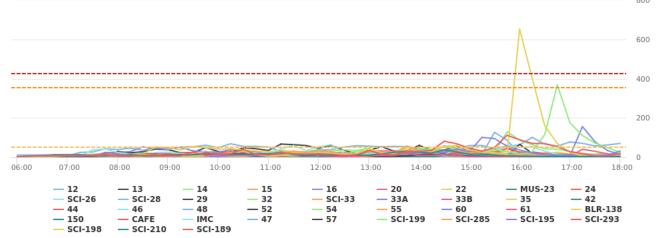
- SCI-26

— SCI-28

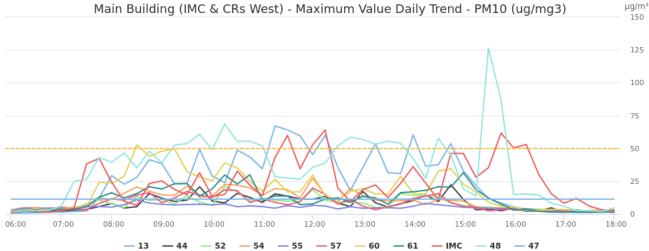
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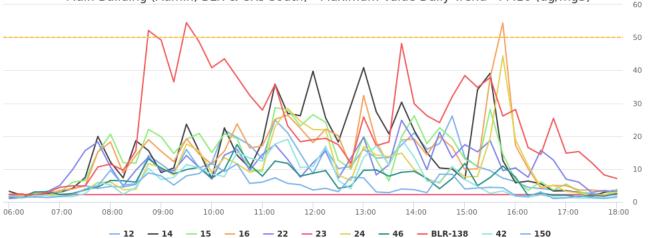
μg/m³

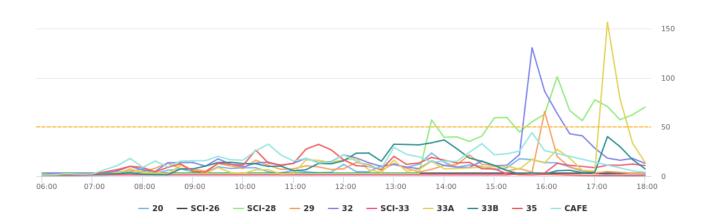


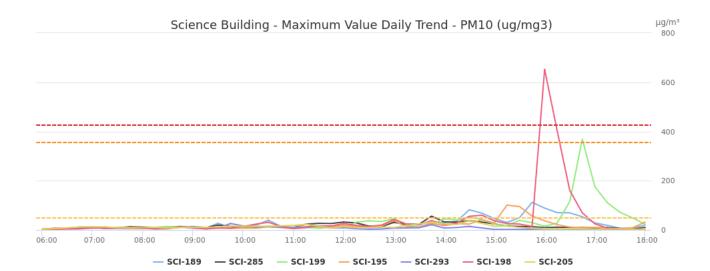












POOLESVILLE HS ON-SITE CONSTRUCTION IAQ REPORT



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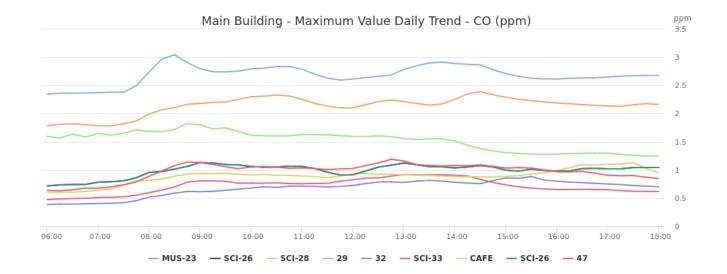
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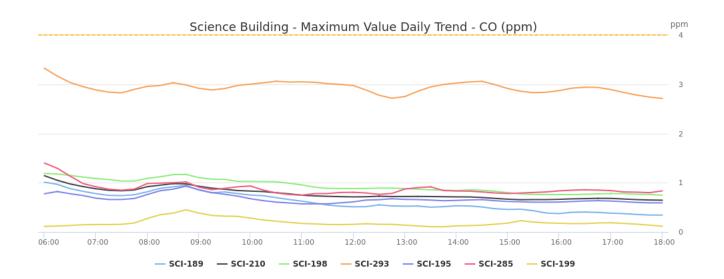
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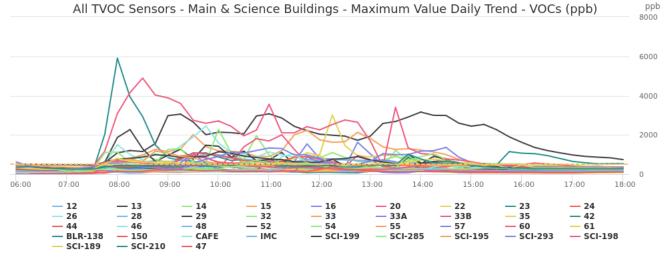
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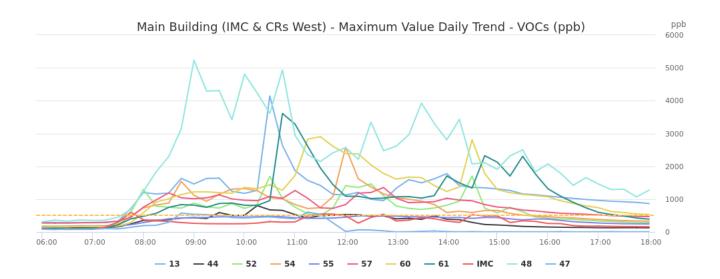
TVOC Monitoring

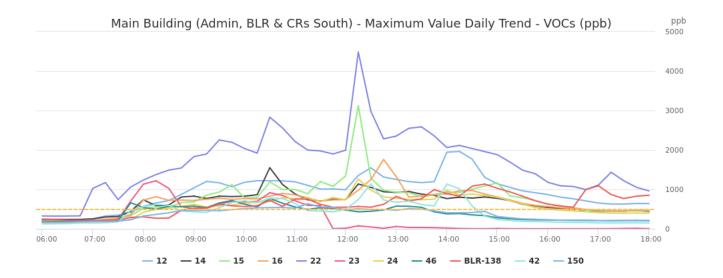
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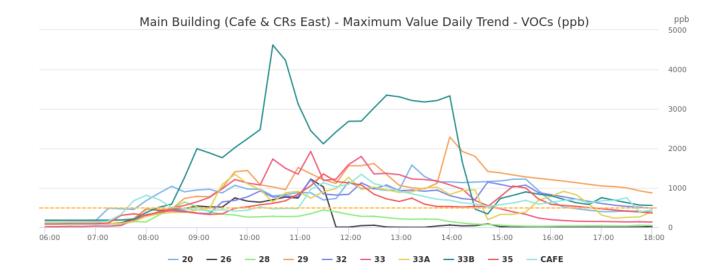
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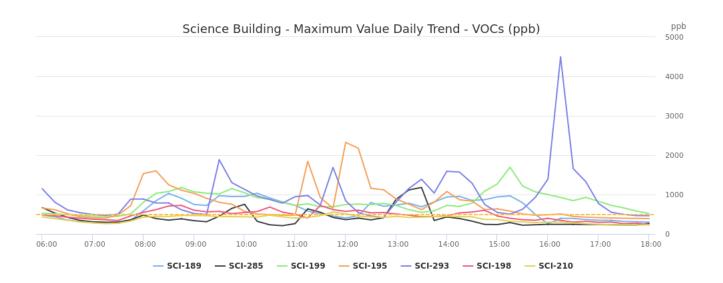








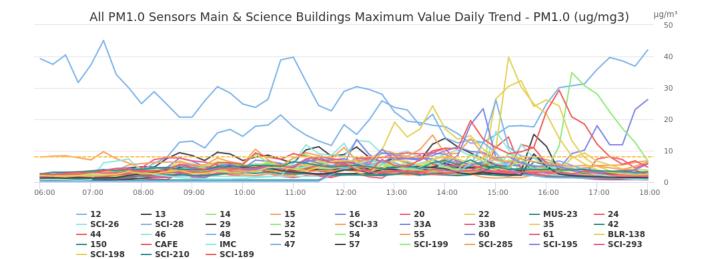


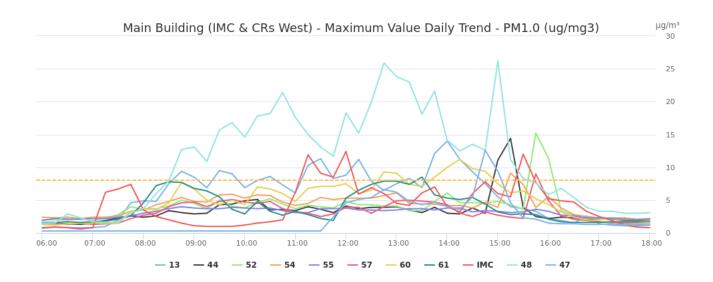


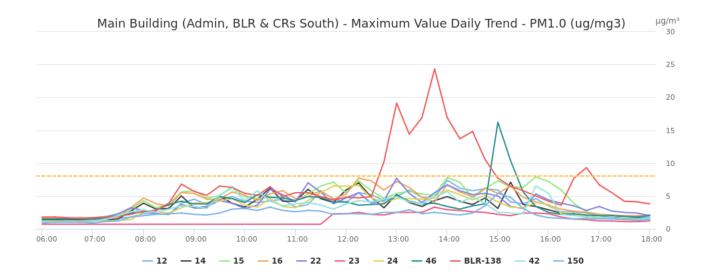
PM1.0 Monitoring

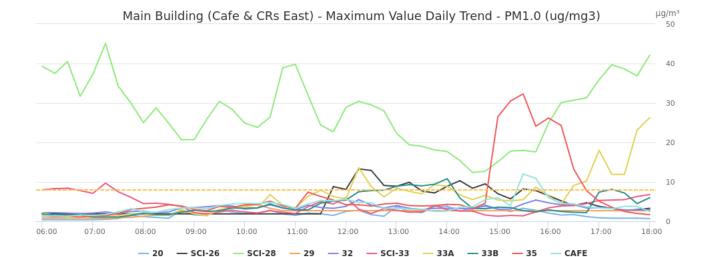
PM1.0 Graphs Legend:

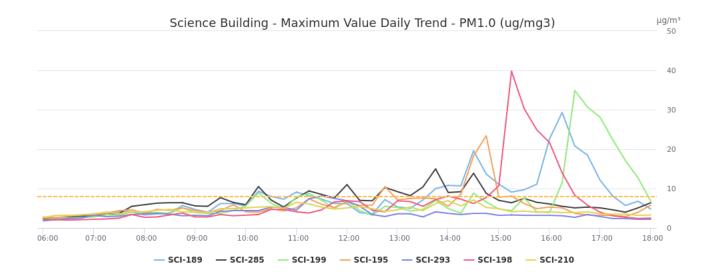
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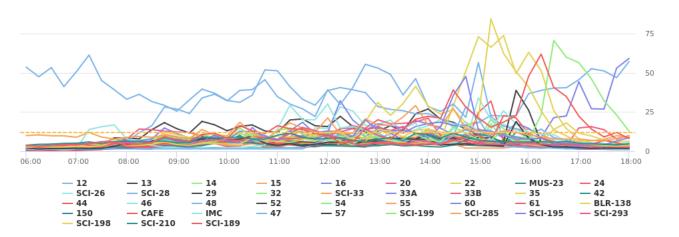


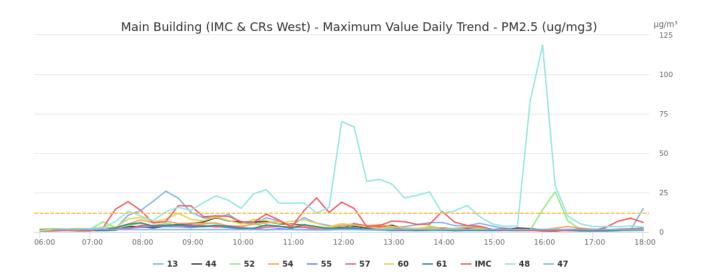


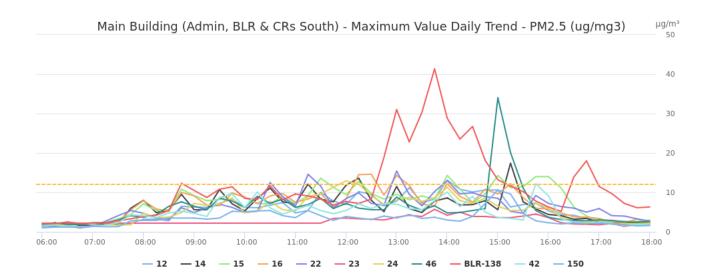
PM2.5 Monitoring

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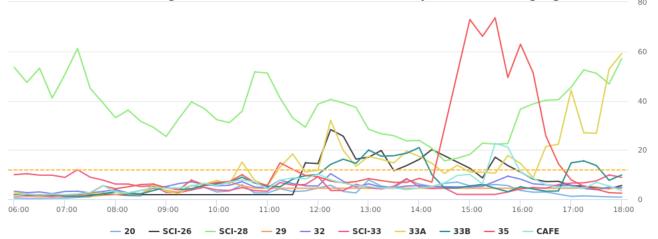


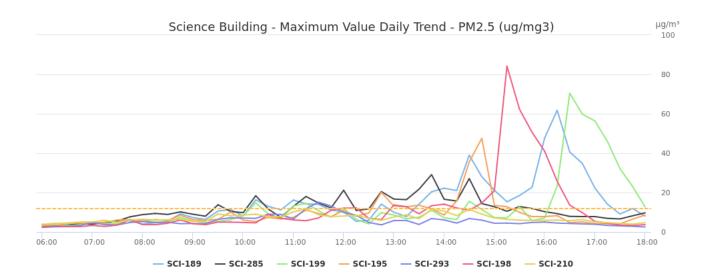






μg/m³

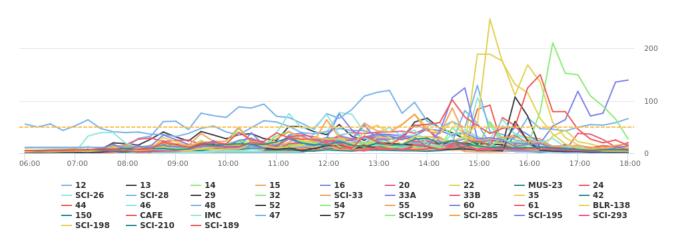


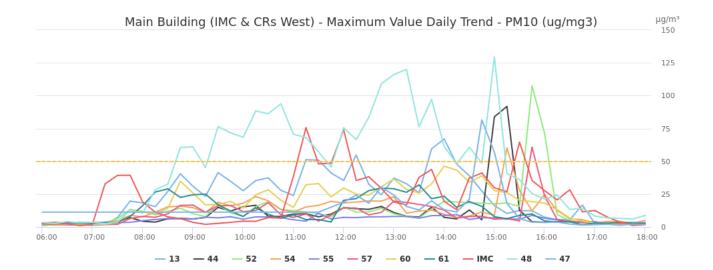


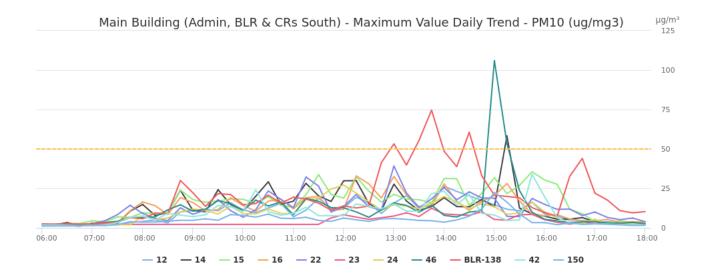
PM10 Monitoring

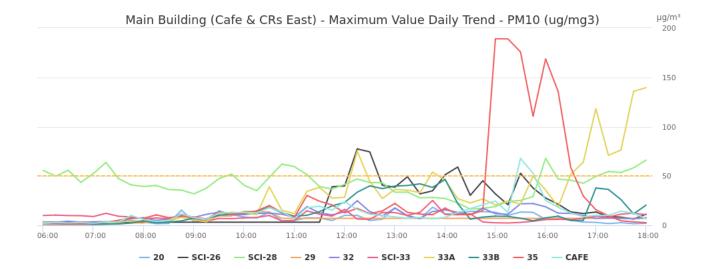
PM10 Graphs Legend:

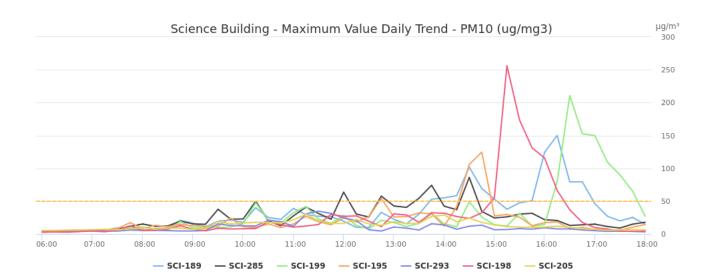
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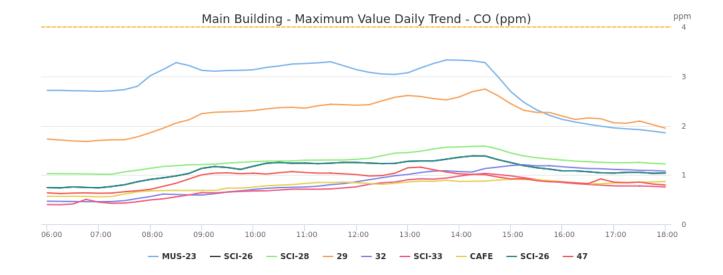
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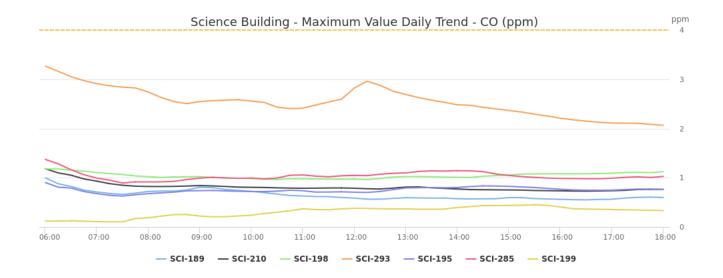
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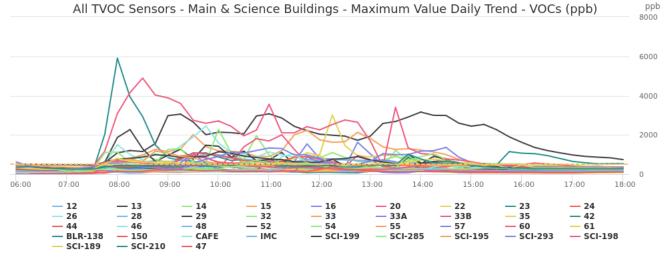
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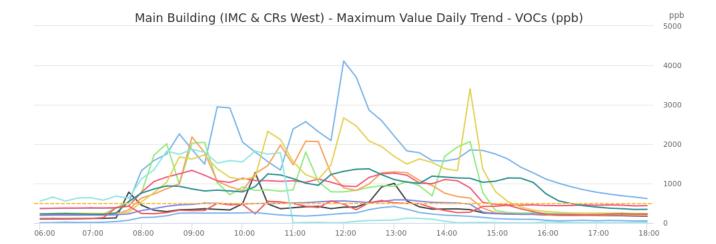
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--- 57

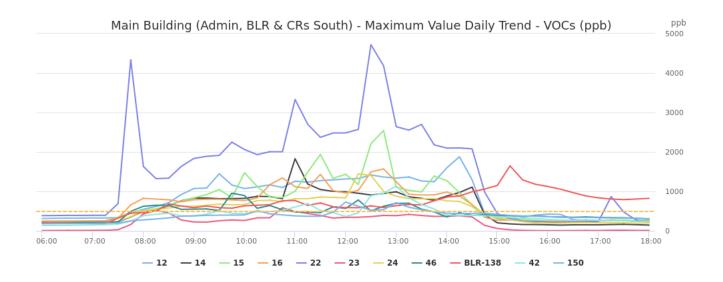
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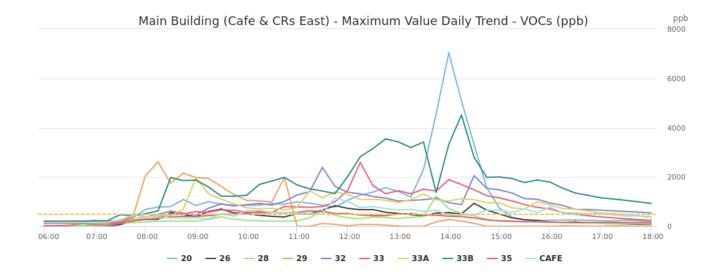
— 61 — IMC

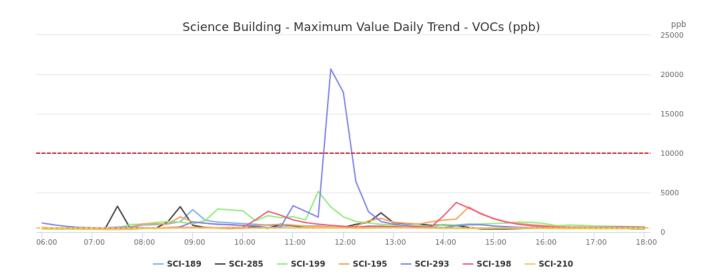
— 13 — 44

--- 52

— 54 — 55



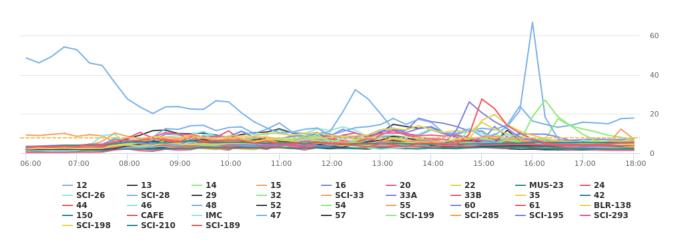


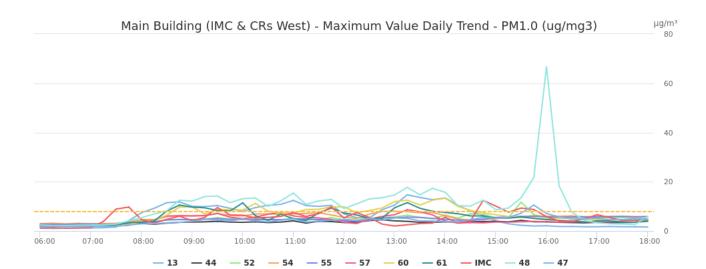


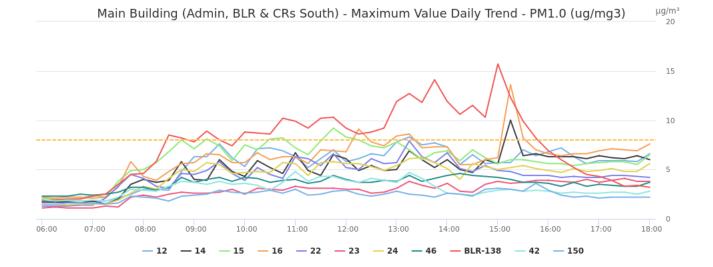
PM1.0 Monitoring

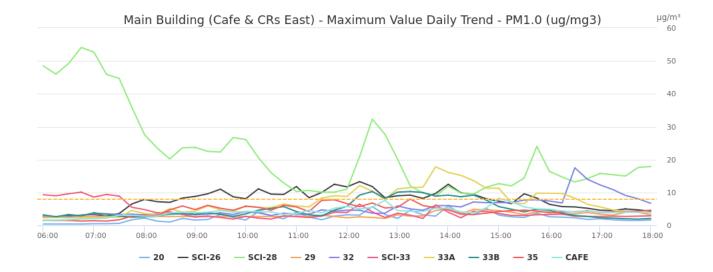
PM1.0 Graphs Legend:

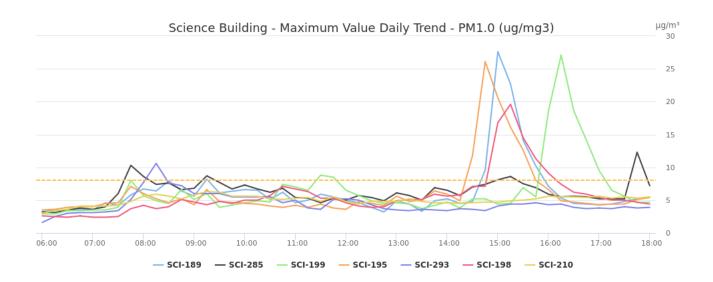
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PM2.5 Monitoring

PM2.5 Graphs Legend:

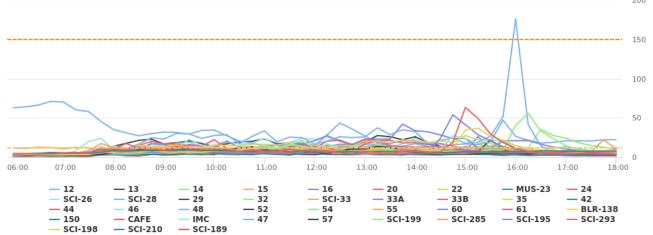
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μg/m³

25

18:00





12:00

— 54 — 55 — 57

13:00

--- 60

14:00

— 61 — IMC

15:00

- 48

16:00

17:00

06:00

07:00

08:00

09:00

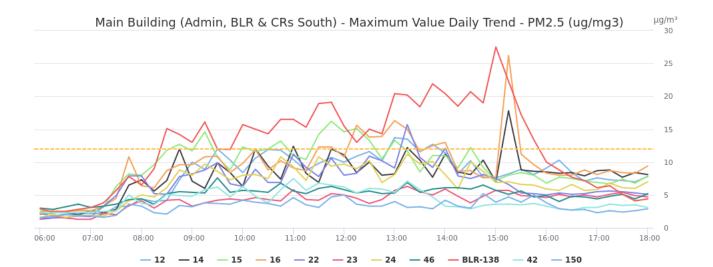
— 13 — 44

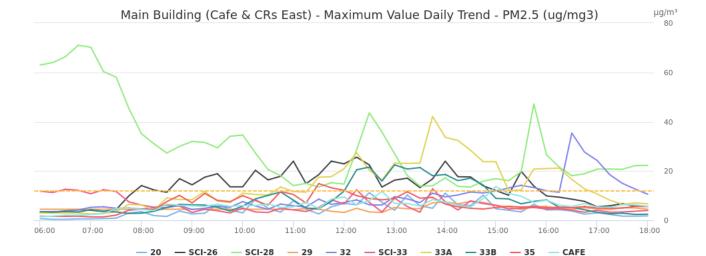
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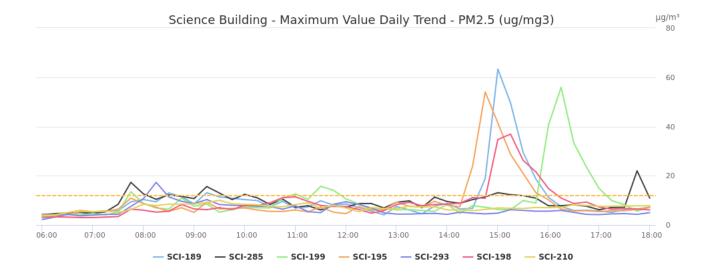
--- 52

11:00

Main Building (IMC & CRs West) - Maximum Value Daily Trend - PM2.5 (ug/mg3)



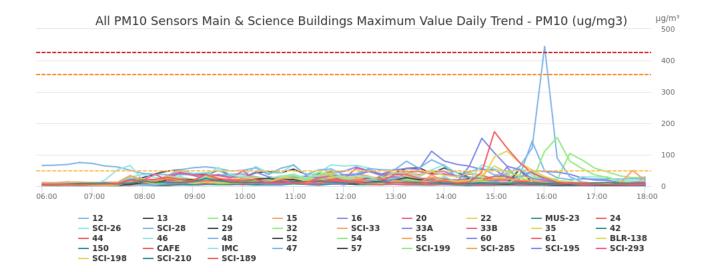


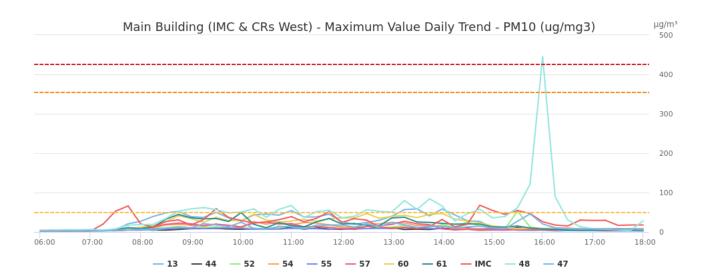


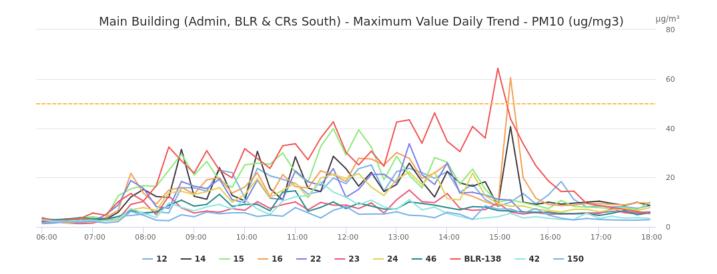
PM10 Monitoring

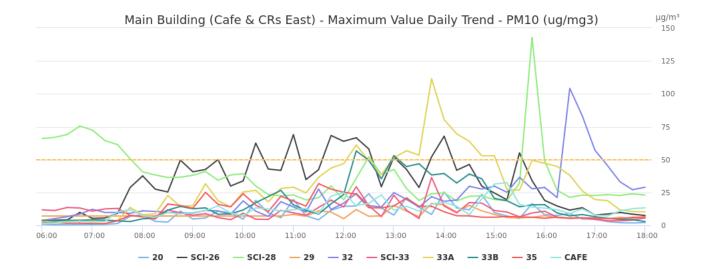
PM10 Graphs Legend:

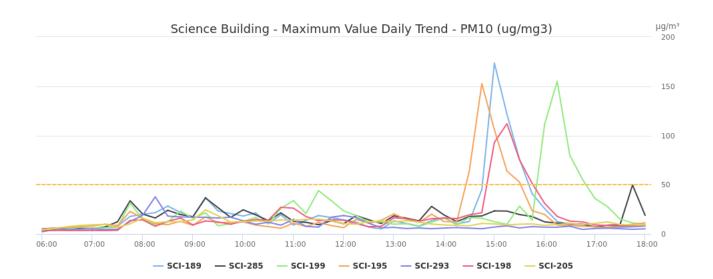
solid lines- indicate data from each room dashed lines appear when data exceeds value for any period of time IAQ - yellow = 50 ug/m3; MCPS notified at 4-hours Ventilation - orange = 355 ug/m3; MCPS notified at 2-hours Health & Safety - red = 425 ug/m3; MCPS notified at 8-hours











POOLESVILLE HS ON-SITE CONSTRUCTION IAQ REPORT



This report was generated on 01/26/2024 at 03:00 AM (America/New_York)

This daily report is for IAQ data collected between 6:00 AM and 6:00 PM for the day previous to the report generated date above.

This report includes the parameters that are most affected by construction activities in close proximity to an occupied buildings:

CO - carbon monoxide

TVOC - total volatile organic compounds

PM10 - particulate matter <=10 micron(ug)

PM2.5 - particulate matter <= 2.5 ug

PM1.0 - particulate matter <= 1.0 ug

ppm - parts per million

ppb - parts per billion

ug/m3 - micrograms per cubic meter of air

All data is monitored as an indicator of ventilation performance. Where suspect ventilation concerns are identified IAQ team members investigate to determine best next steps, including but not limited to - submit work orders to mechanical teams for repairs, review occupancy and use, review occupant activities and or continue to monitor data collected for patterns and trends.

CO Monitoring

Carbon Monoxide (CO): Carbon monoxide is a colorless, odorless gas. It results from incomplete combustion processes. Common sources of CO in schools are improperly vented furnaces, malfunctioning gas ranges, canned heat (e.g. a Sterno), or exhaust fumes that have been drawn back into the building. Worn or poorly adjusted and maintained combustion devices (e.g., boilers, furnaces), or a flue that is improperly sized, blocked, disconnected, or leaking, can be significant sources. Auto, truck, or bus exhaust from attached garages, nearby roads, or idling vehicles in parking areas can also be sources. Carbon monoxide at high concentrations is considered to be a serious health hazard.

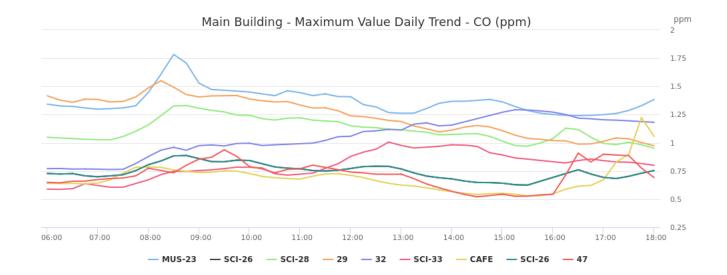
CO Graphs Legend:

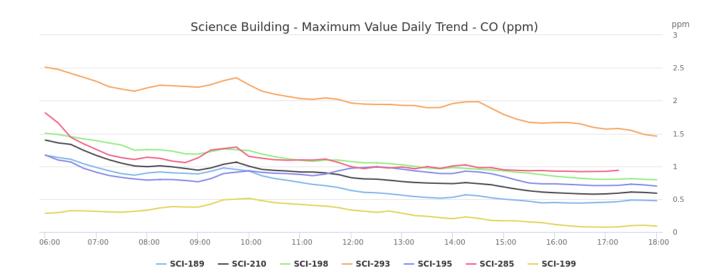
solid lines- indicate data from each room

dashed lines appear when data exceeds value for any period of time

IAQ - yellow = 4 ppm; MCPS notified at 4-hours

Ventilation - orange = 9 ppm; MCPS notified at 1-hour; immediate text, investigation Health & Safety - red = 25 ppm; MCPS notified at 8-hours, immediate text, community notification if during school hours





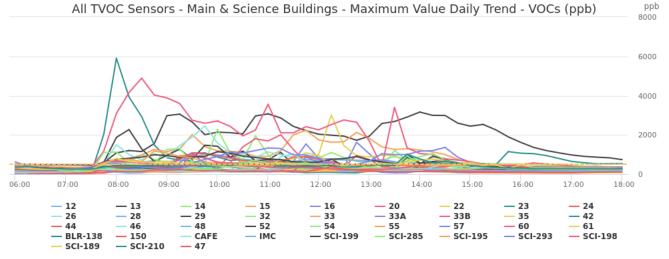
The carbon monoxide standards for indoor air quality are the U.S. Environmental Protection Agency (US EPA) National Ambient Air Quality Standard (NAAQS) of 9 ppm CO on a 8-hour time-weighted average (TWA), and the World Health organization Guidelines for Indoor Air Quality – Selected Pollutants of 6 ppm. However, MCPS will be notified at a sustained measurement of 4 ppm or greater for 4-hours as a more conservative and precautionary approach to this health-based standard.

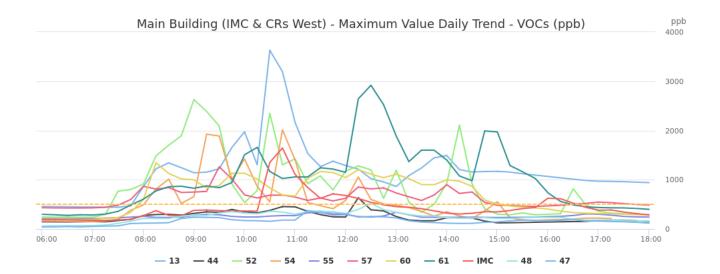
TVOC Monitoring

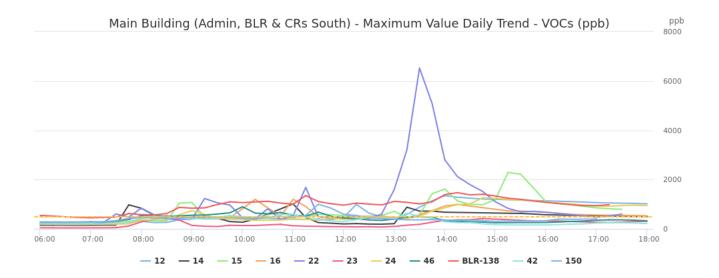
TVOC Graphs Legend:

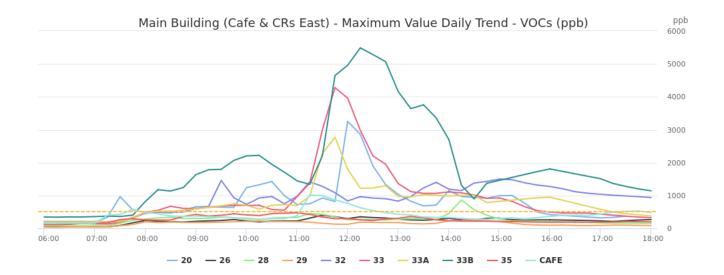
solid lines indicate data from each room dashed lines appear when exceeds value for any period of time IAQ - yellow = 500 ppb (0.5 ppm); MCPS notified at 4-hours Ventilation - red = 10,000 ppb (10 ppm); MCPS notified at 4-hours

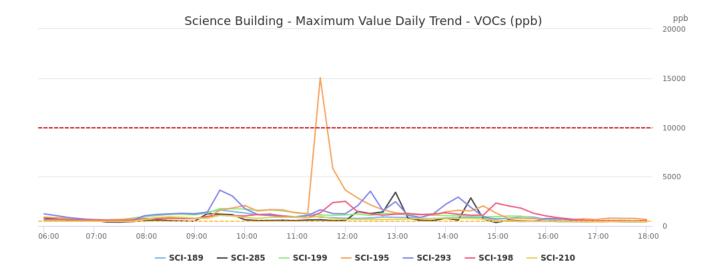








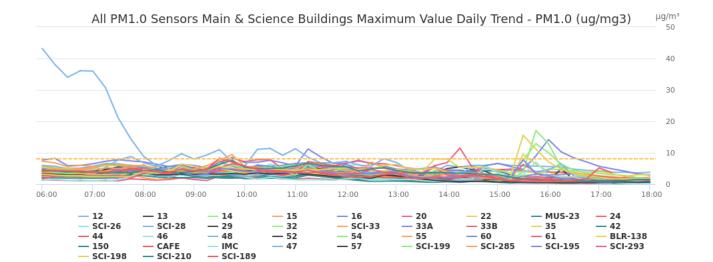


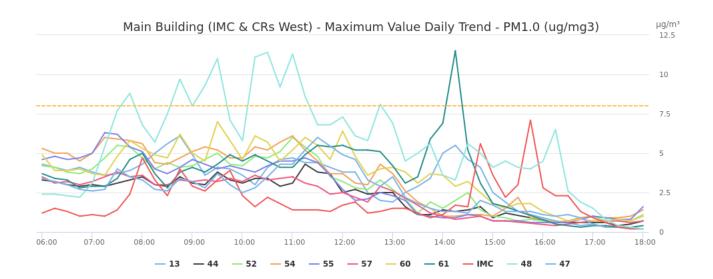


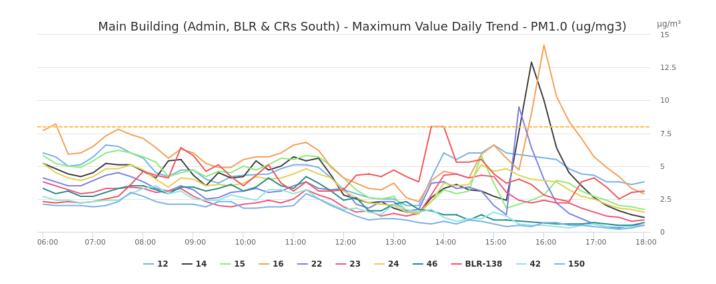
PM1.0 Monitoring

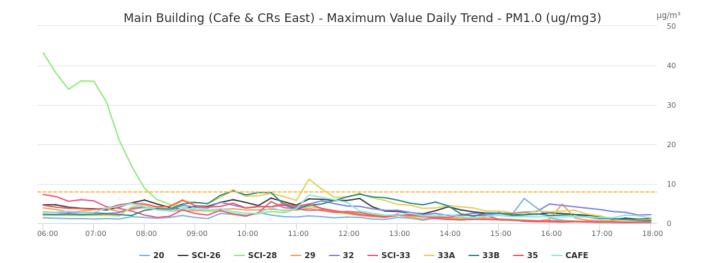
PM1.0 Graphs Legend:

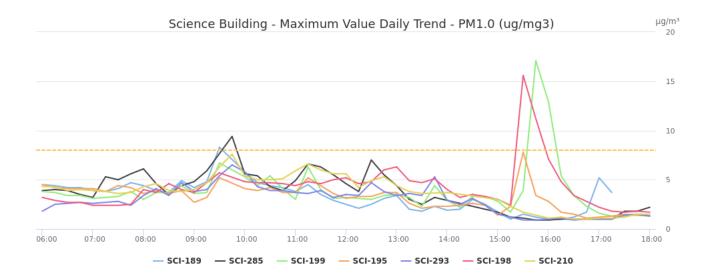
solid lines- indicate data from each room dashed lines appear when data exceeds value for any period of time IAQ - yellow = 8 ug/m3; MCPS notified at 4-hours Ventilation - orange = 150 ug/m3; MCPS notified at 2-hours Health & Safety - red = 250 ug/m3; MCPS notified at 8-hours







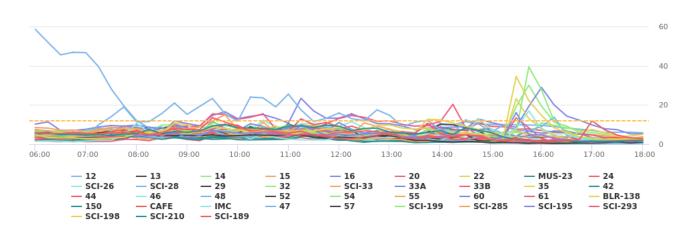


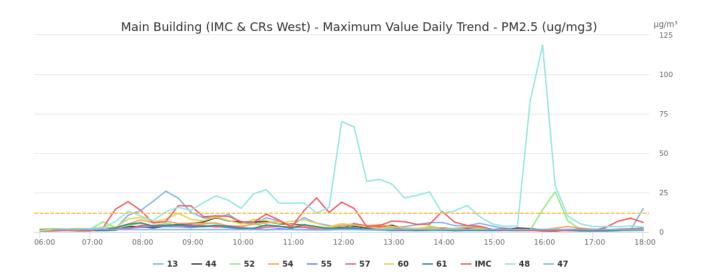


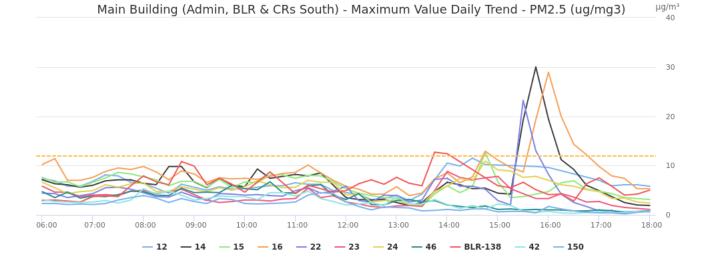
PM2.5 Monitoring

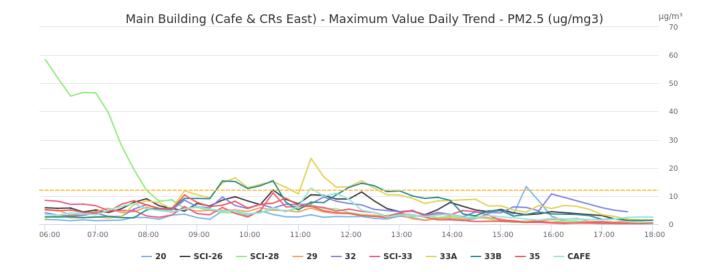
PM2.5 Graphs Legend:

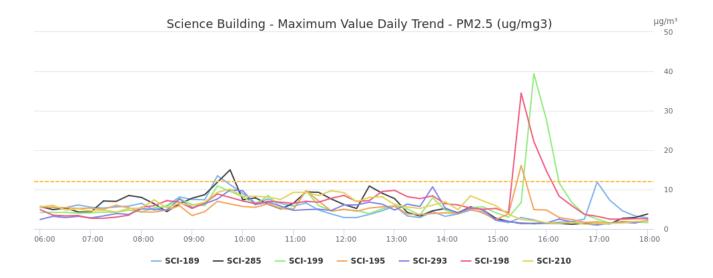
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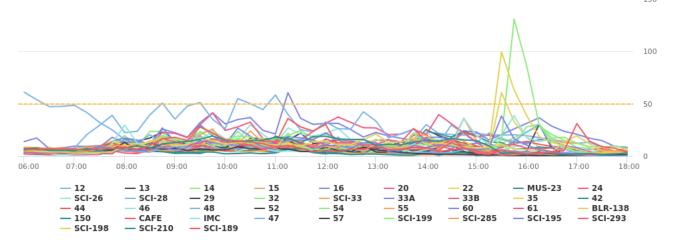


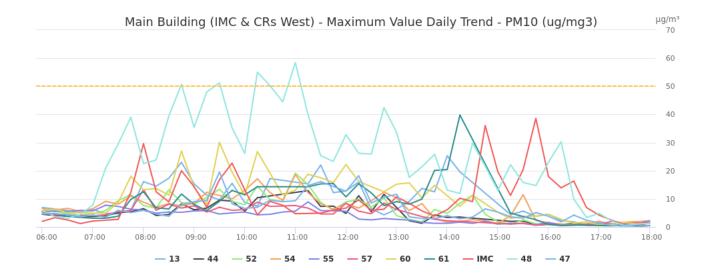


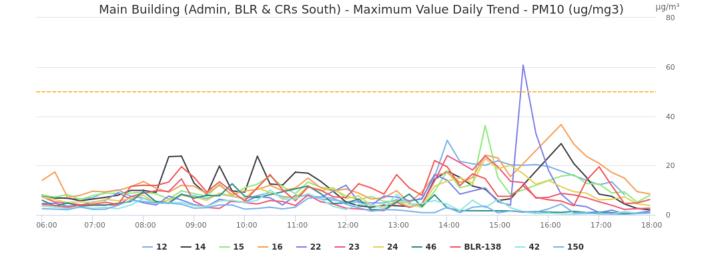
PM10 Monitoring

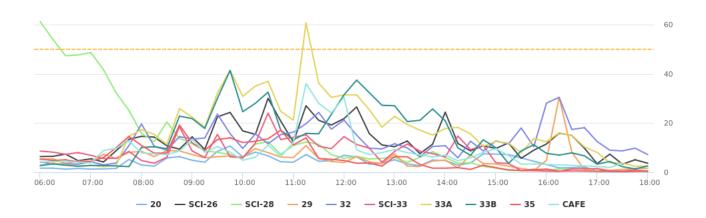
PM10 Graphs Legend:

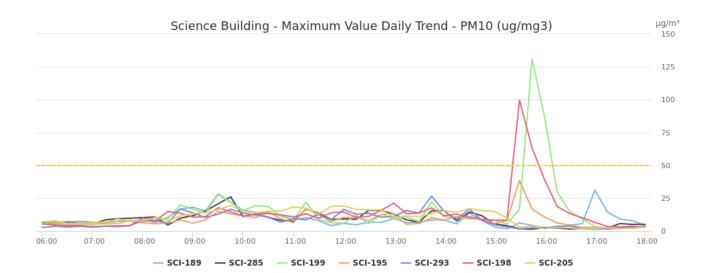
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POOLESVILLE HS ON-SITE CONSTRUCTION IAQ REPORT



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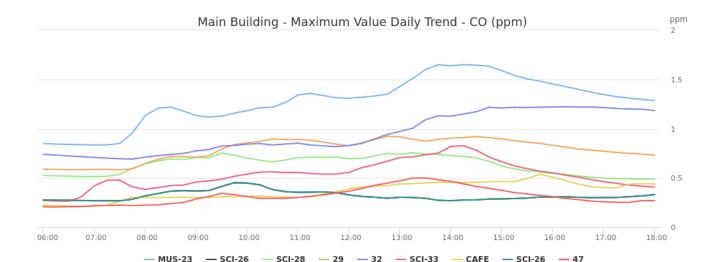
CO Graphs Legend:

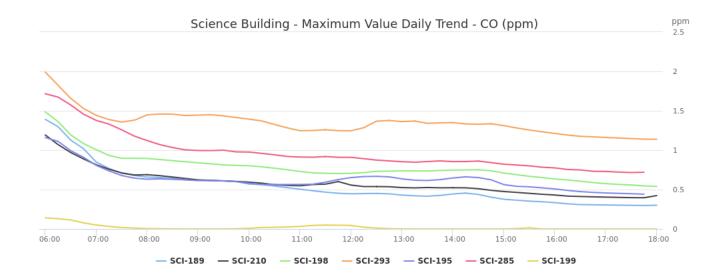
solid lines- indicate data from each room

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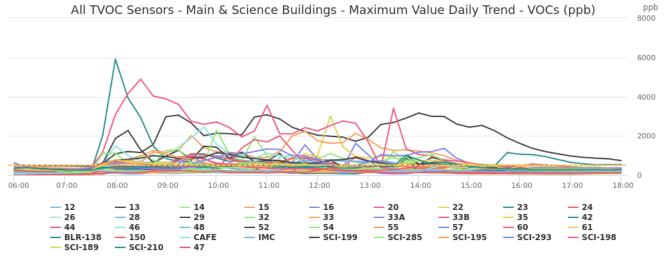
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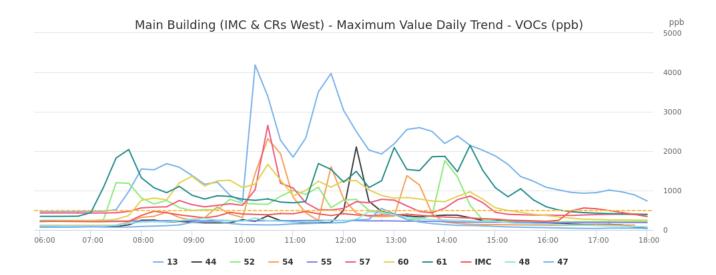
TVOC Monitoring

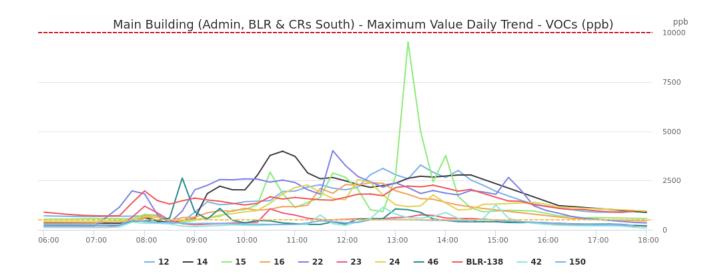
TVOC Graphs Legend:

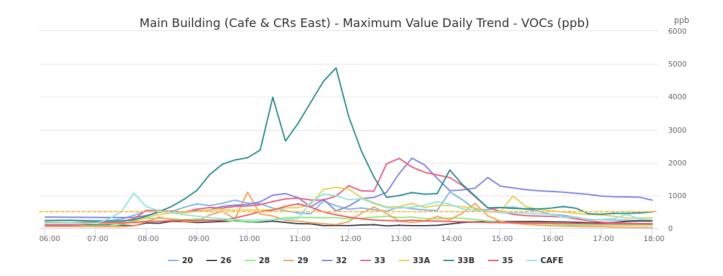
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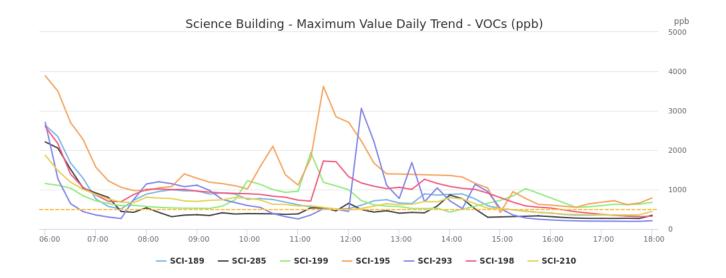








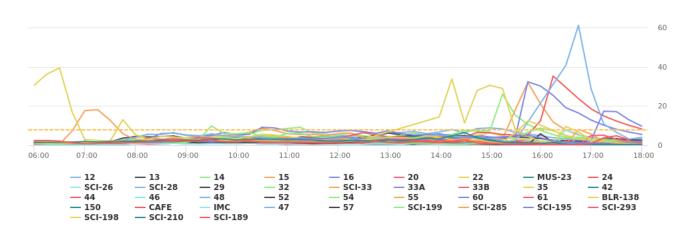


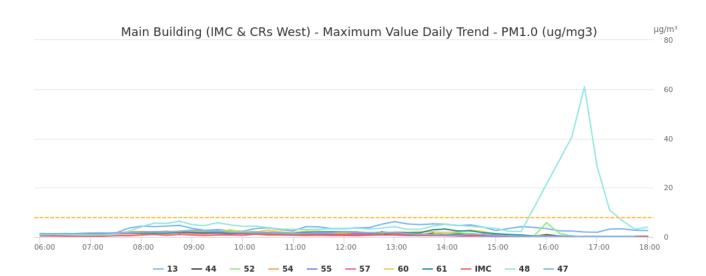


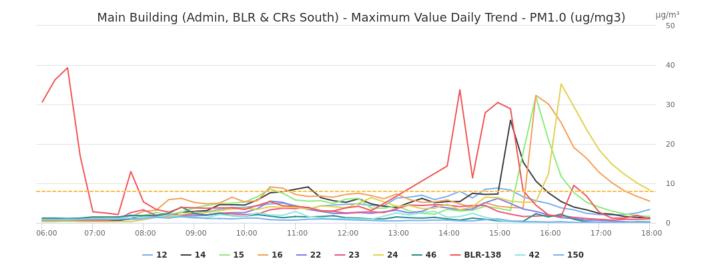
PM1.0 Monitoring

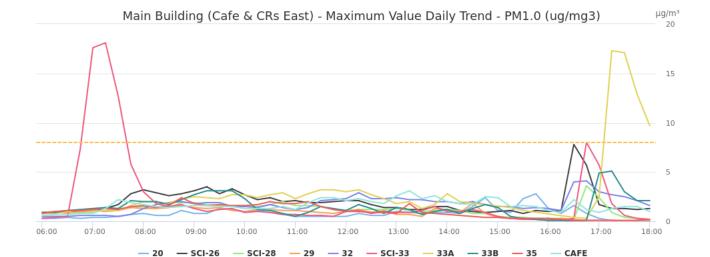
PM1.0 Graphs Legend:

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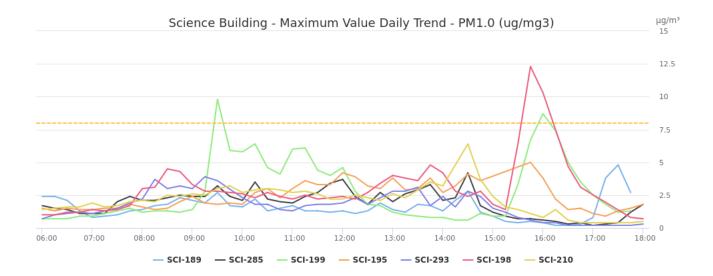






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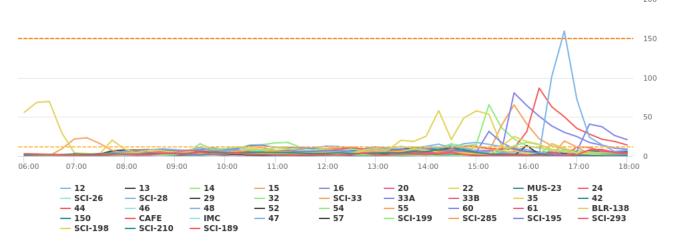


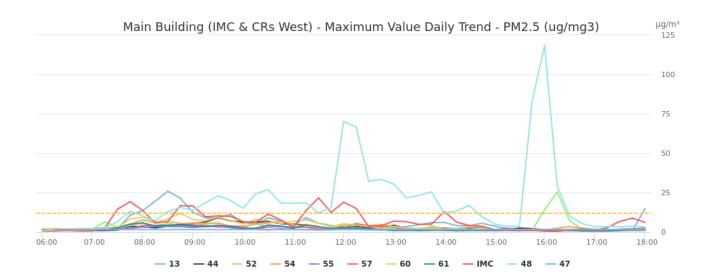
PM2.5 Monitoring

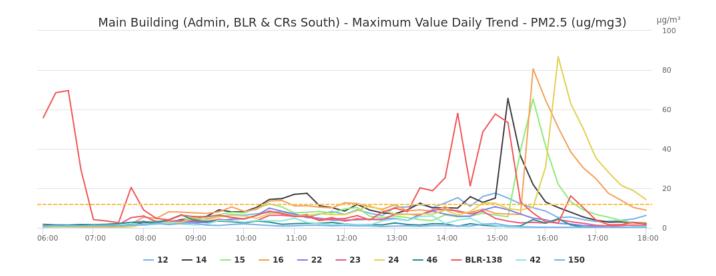
PM2.5 Graphs Legend:

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solid lines- indicate data from each room dashed lines appear when data exceeds value for any period of time IAQ - yellow = 12 ug/m3; MCPS notified at 4-hours Ventilation - orange = 150 ug/m3; MCPS notified at 2-hours Health & Safety - red = 250 ug/m3; MCPS notified at 8-hours

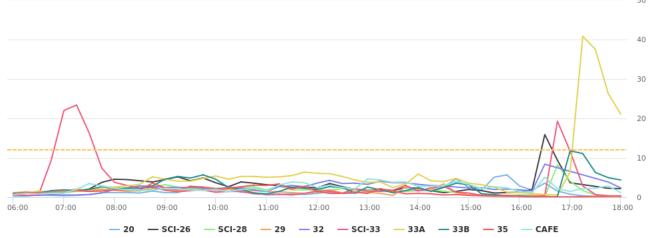


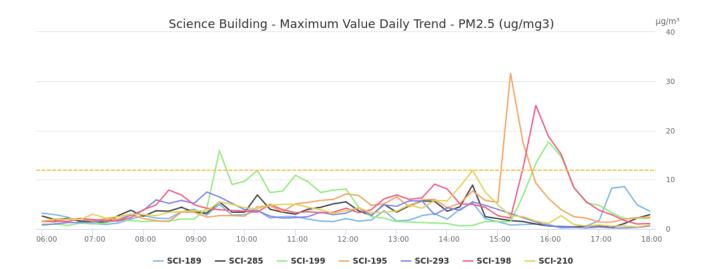






μg/m³





PM10 Monitoring

PM10 Graphs Legend:

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