

Testing Report – PM₁₀ Base Testing
Manufacturer & Air Sensor Name

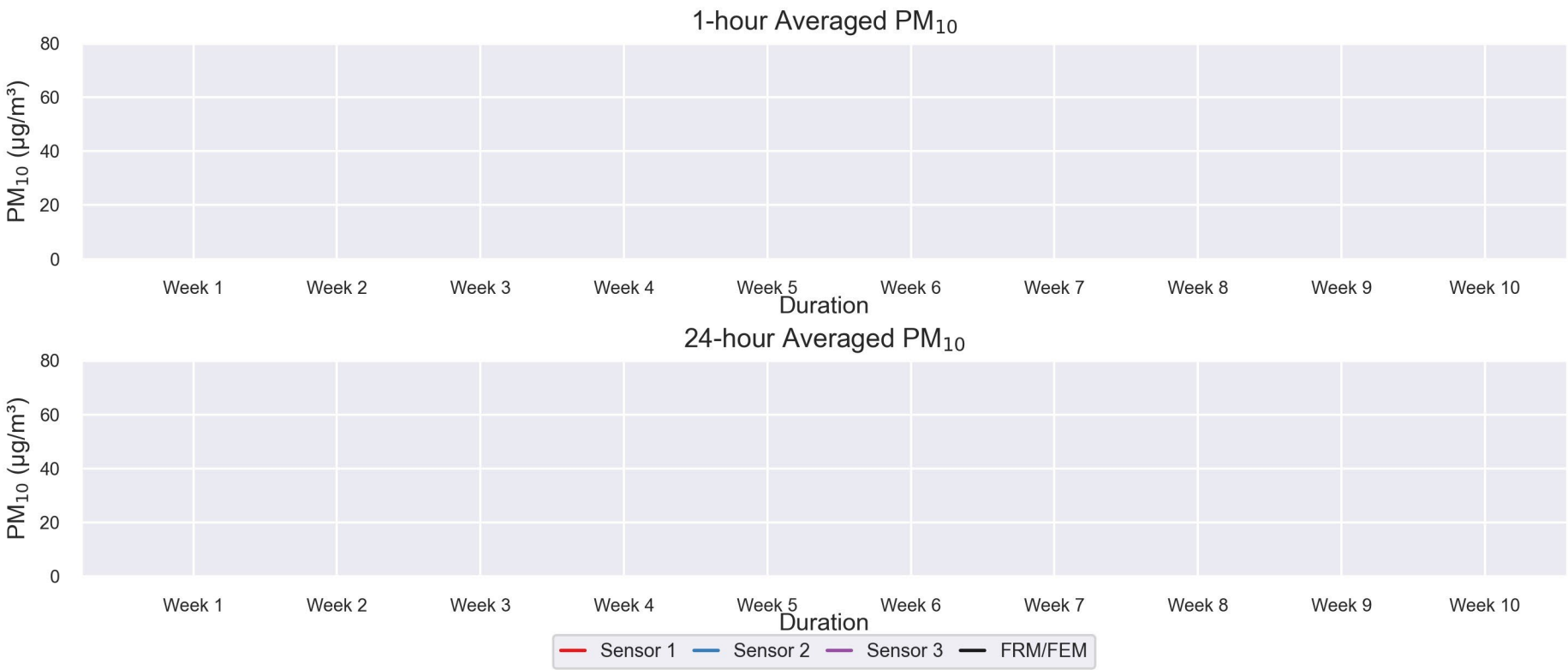
Deployment Number
Testing Organization
Contact Email / Phone Number
Date

Image of device
during
deployment

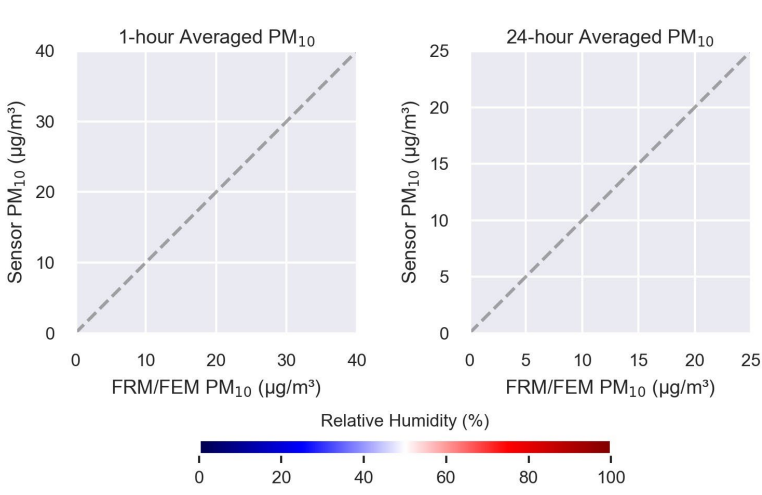
Deployment Details

Testing Organization and Site Information		Sensor Information				FRM/FEM Information	
Testing organization (Name, Organization, Contact website / email / phone number)		Manufacturer, model				Manufacturer, model, designation	
		Device firmware version					
Testing location (City, State, Latitude and Longitude)		Sampling time interval					
AQS site ID		Sensor serial numbers	Sensor 1	Sensor 2	Sensor 3		
Sampling timeframe (MM-DD-YY)							
Sensor data source	Issues encountered during deployment?	<input type="checkbox"/>	Brief Summary of Issues		Date of calibration		
Reference data source					Date of flowrate verification check		
					Description, date(s) of maintenance activities		

Time Series Plots

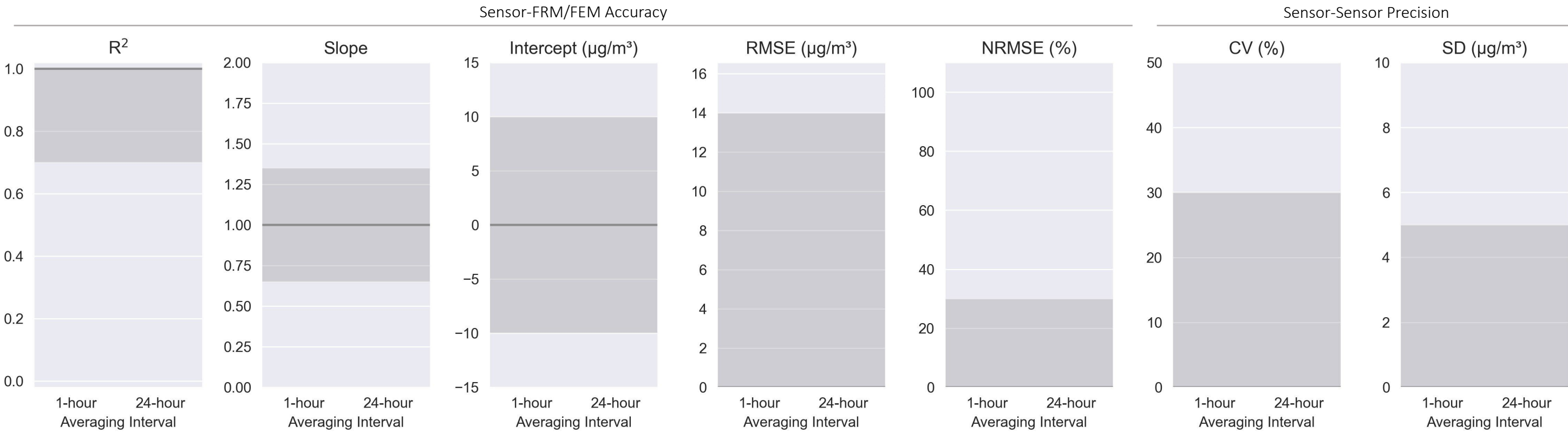


Scatter Plots: Comparison to FRM/FEM

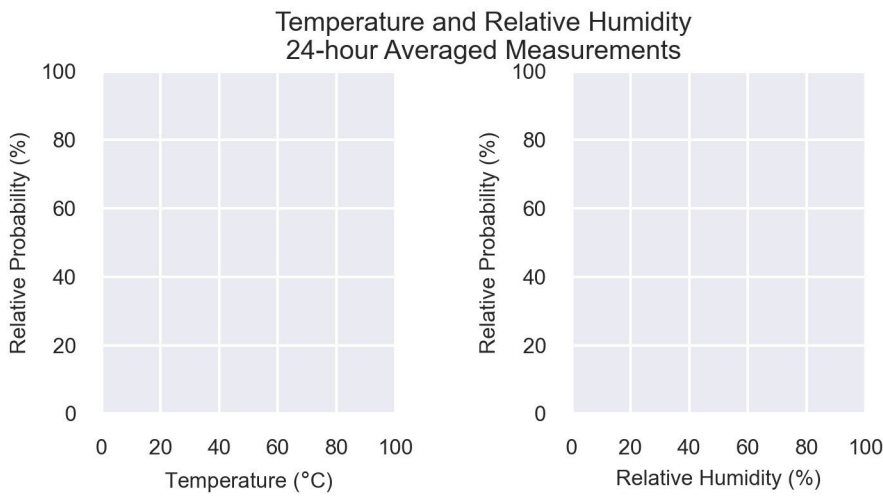


Range of FRM/FEM monitor concentrations over duration of test (µg/m³)	
Number of 24-hour periods in FRM/FEM monitor measurements with a goal concentration of ≥ 40 µg/m³	
Number of 1-hour periods in FRM/FEM monitor measurements with goal PM _{2.5} /PM ₁₀ ratio of ≤ 0.4	

Performance Metrics*

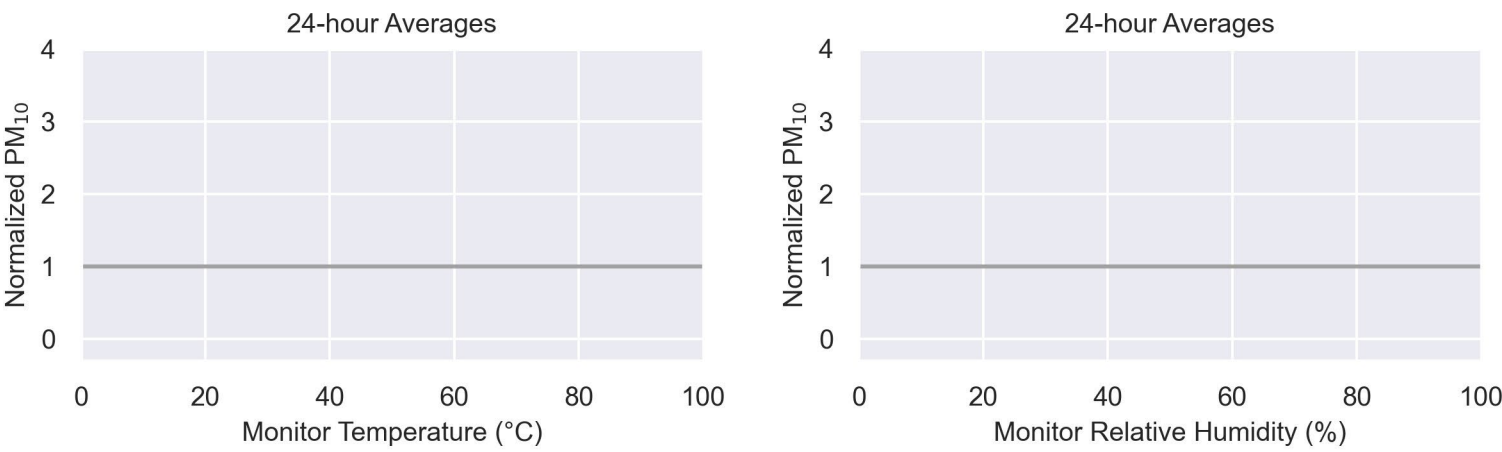


Meteorological Conditions During Deployment



Number of 24-hour periods outside sensor manufacturer-listed temperature operational range	
Number of 24-hour periods outside sensor manufacturer-listed relative humidity operational range	

Meteorological Influence



Number of paired, normalized concentration and temperature values	
Mean number of paired, normalized concentration and relative humidity values	

*For evaluations with greater than three sensors, grouping individual sensor metrics into boxplots is recommended for displaying results. Note that this recommendation does not apply to metrics computed as a single value for all sensors over the whole evaluation group, such as RMSE, NRMSE, CV, and SD.

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Tabular Statistics

Sensor-FRM/FEM Correlation

	Bias and Linearity						Data Quality			
	R ²		Slope		Intercept (µg/m³)		Uptime (%)		Number of paired sensor and FRM/FEM concentration values	
	1-Hour ○○	24-Hour ○○	1-Hour ○○	24-Hour ○○	1-Hour ○○	24-Hour ○○	1-Hour ○○	24-Hour ○○	1-Hour	24-Hour
Metric Target Range	≥ 0.70	≥ 0.70	1.0 ± 0.35	1.0 ± 0.35	-10 ≤ b ≤ 10	-10 ≤ b ≤ 10	75%*	75%*	-	-
Sensor1										
Sensor2										
Sensor3										
Mean										

	Error			
	RMSE (µg/m³)		NRMSE (%)	
	1-Hour ☆	24-Hour ☆	1-Hour ☆	24-Hour ☆
Metric Target Range	≤ 14.0	≤ 14.0	≤ 30.0	≤ 30.0
Deployment Value				

Device-specific metrics (computed for each sensor in evaluation)

- Metric value for none of devices tested falls within the target range
- Metric value for one of devices tested falls within the target range
- Metric value for two of devices tested falls within the target range
- Metric value for three of devices tested falls within the target range

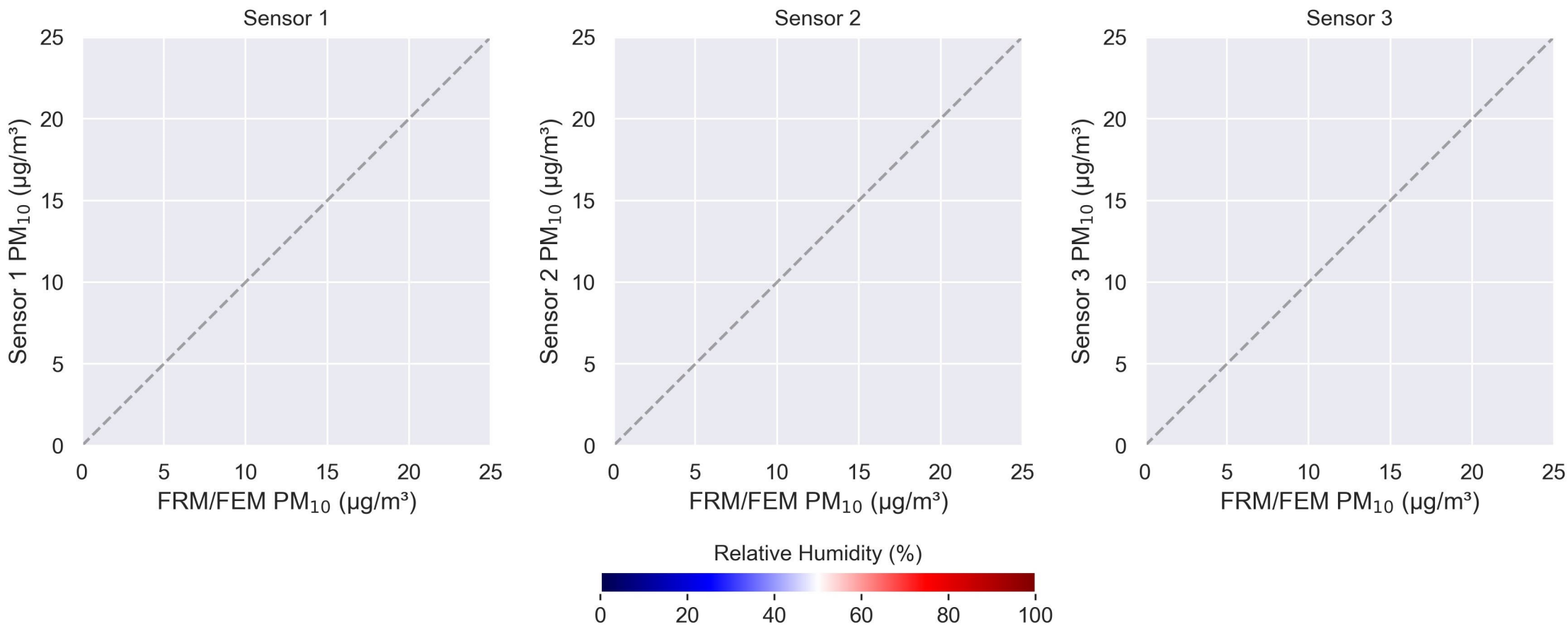
Single-valued metrics (computed via entire evaluation dataset)

- ☆ Indicates that the metric value is not within the target range
- ★ Indicates that the metric value is within the target range

Sensor-Sensor Precision

	Precision (between collocated sensors)				Data Quality	
	CV (%)		SD (µg/m³)		Number of concurrent sensor concentration pairs	
	1-Hour ☆	24-Hour ☆	1-Hour ☆	24-Hour ☆	1-Hour	24-Hour
Metric Target Range	≤ 30.0	≤ 30.0	≤ 5.0	≤ 5.0	-	-
Deployment Value						

Sensor-FRM/FEM Scatter Plots



*This value is only a recommendation for ensuring data quality and is not included in the list of target values discussed in Section 4 of the Performance Testing Protocols, Metrics, and Target Values for Fine Particulate Matter Air Sensors document.

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Supplemental Information

Additional documentation may be attached or linked to digital versions alongside this report. Such documentation may include field reports and observations during the testing period, maintenance logs for sensors and FRM/FEM monitors, standard operating procedures, and other documentation relevant to this testing report (see below for examples).

Supplemental Documentation	Attached	Description & URL or file path to documentation
Field observations	<input type="checkbox"/>	
Maintenance logs	<input type="checkbox"/>	
Standard operating procedure(s)	<input type="checkbox"/>	
Photos of equipment setup and testing	<input type="checkbox"/>	
Product specifications sheet(s)	<input type="checkbox"/>	
Product manual(s)	<input type="checkbox"/>	
Deployment issues	<input type="checkbox"/>	
Data storage and transmission method	<input type="checkbox"/>	
Data correction approach	<input type="checkbox"/>	
Data analysis/correction scripts and version	<input type="checkbox"/>	
Air Monitoring Station QAPP	<input type="checkbox"/>	
Summary of FRM/FEM monitor QC checks	<input type="checkbox"/>	
Other documents	<input type="checkbox"/>	