

Port of Los Angeles

Air Quality Monitoring Program Update #2

Presented by:

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May 16, 2023

Current Status of Stations

Status of Air Monitoring Stations (as of 05/16/2023)				
Instruments/Equipment	Monitoring Station			
	Wilmington Community Station	Coastal Boundary Station	San Pedro Community Station	Source-Dominated Station
PM _{2.5} Sequential Filter Sampler	X	X	X	X
PM _{2.5} Federal Reference Method Filter Monitor	X	Not Applicable		
PM ₁₀ Federal Reference Method Filter Monitor	X			
PM _{2.5} Continuous Monitor	X	X	X	X
PM ₁₀ Continuous Monitor	X	X	X	X
Ultrafine Particle Counter	X	X	X	X
Aethalometer – Black Carbon	X	X	X	X
O ₃ Analyzer	X	X	X	X
CO Analyzer	X	X	X	X
NO ₂ Analyzer	X	--	X	--
SO ₂ Analyzer	X	--	--	--

← PM FRM monitors are a QA measurement for Sequential Filter Samplers

← NO₂ analyzers ship date 06/30/23

← SO₂ analyzers ship date 05/31/23

Air Quality Monitoring Program – 2023 Upgraded Instruments

Criteria Pollutants

▪ Continuous PM _{2.5}	Met One BAM 1020	Installed - 4 Stations
▪ Continuous PM ₁₀	Met One BAM 1020	Installed - 4 Stations
▪ Ozone (O ₃)	Thermo Model 49iQ	Installed - 4 Stations
▪ Nitrogen Dioxide (NO ₂)	T-API Model N500	
▪ Carbon Monoxide (CO)	Thermo Model 48iQ	Installed - 4 Stations
▪ Sulfur Dioxide (SO ₂)	Thermo Model 43iQ-TL	

Supplemental PM

▪ UFP Counters	TSI, Inc. Model 3783	Installed - 4 Stations
▪ BC Aethalometers	Magee Scientific Model AE-33	Installed - 4 Stations

Backup Instruments by Parameter

Status of Air Monitoring Stations (as of 05/16/2023)	
Air Quality Parameter	Backup Instrument?
PM _{2.5} Sequential Filter Sampler	Yes
PM _{2.5} Continuous Monitor	Yes
PM ₁₀ Continuous Monitor	Yes
Ultrafine Particle Counter	Yes
Aethalometer - Black Carbon	On Order
O ₃ Analyzer	Yes
CO Analyzer	Yes
NO ₂ Analyzer	Yes
SO ₂ Analyzer	Yes

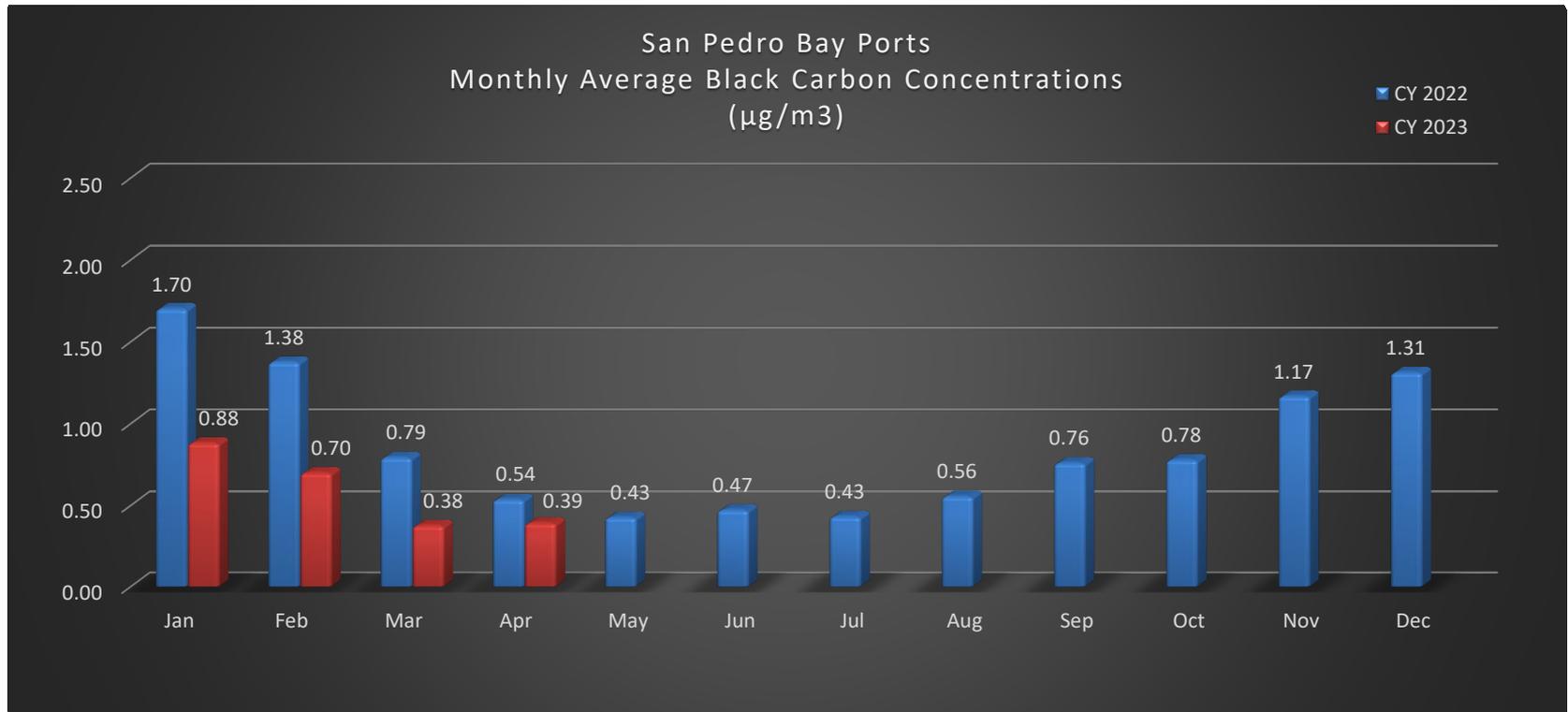
← Upon receipt of new instrumentation

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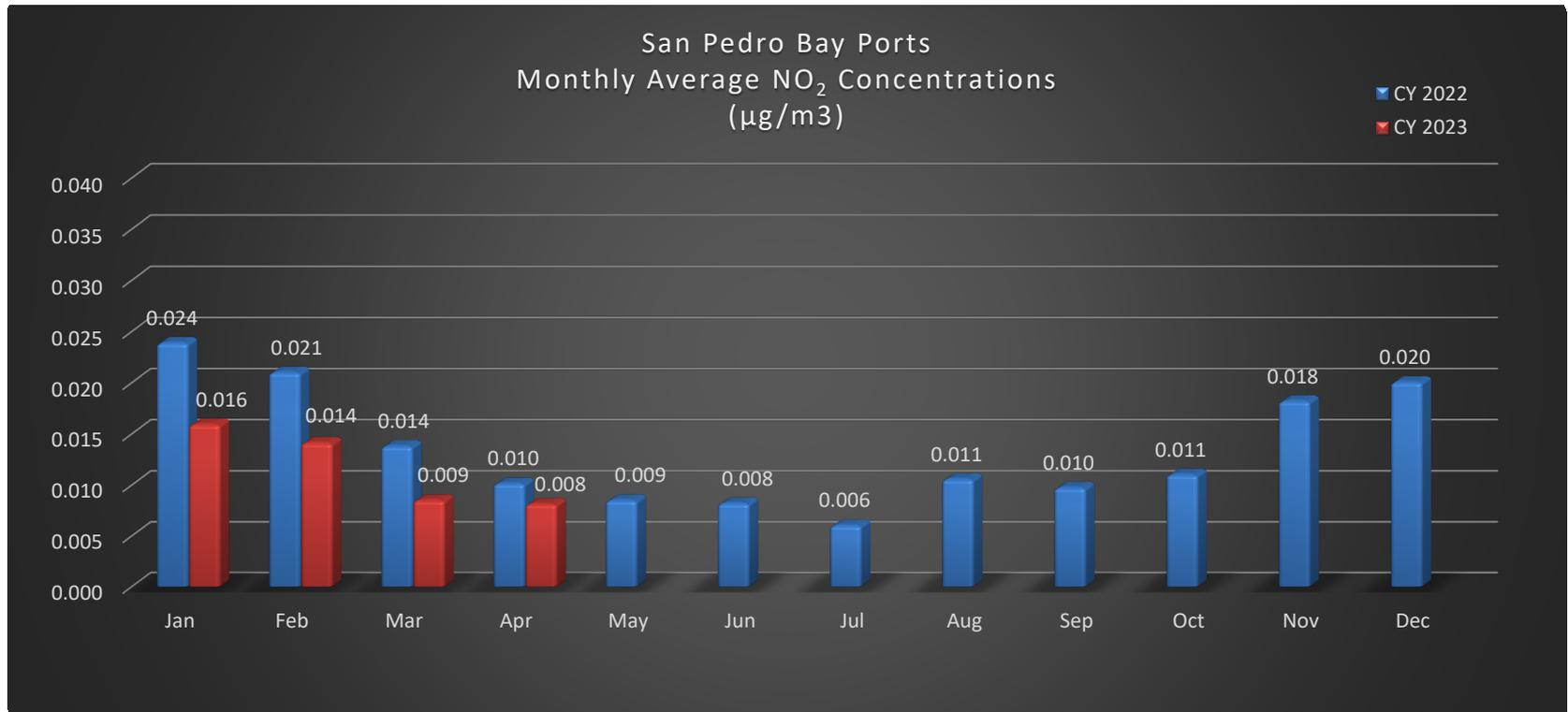
2023 Q1 Overview of Results

Monthly Average BC Concentrations (2022 vs 2023)



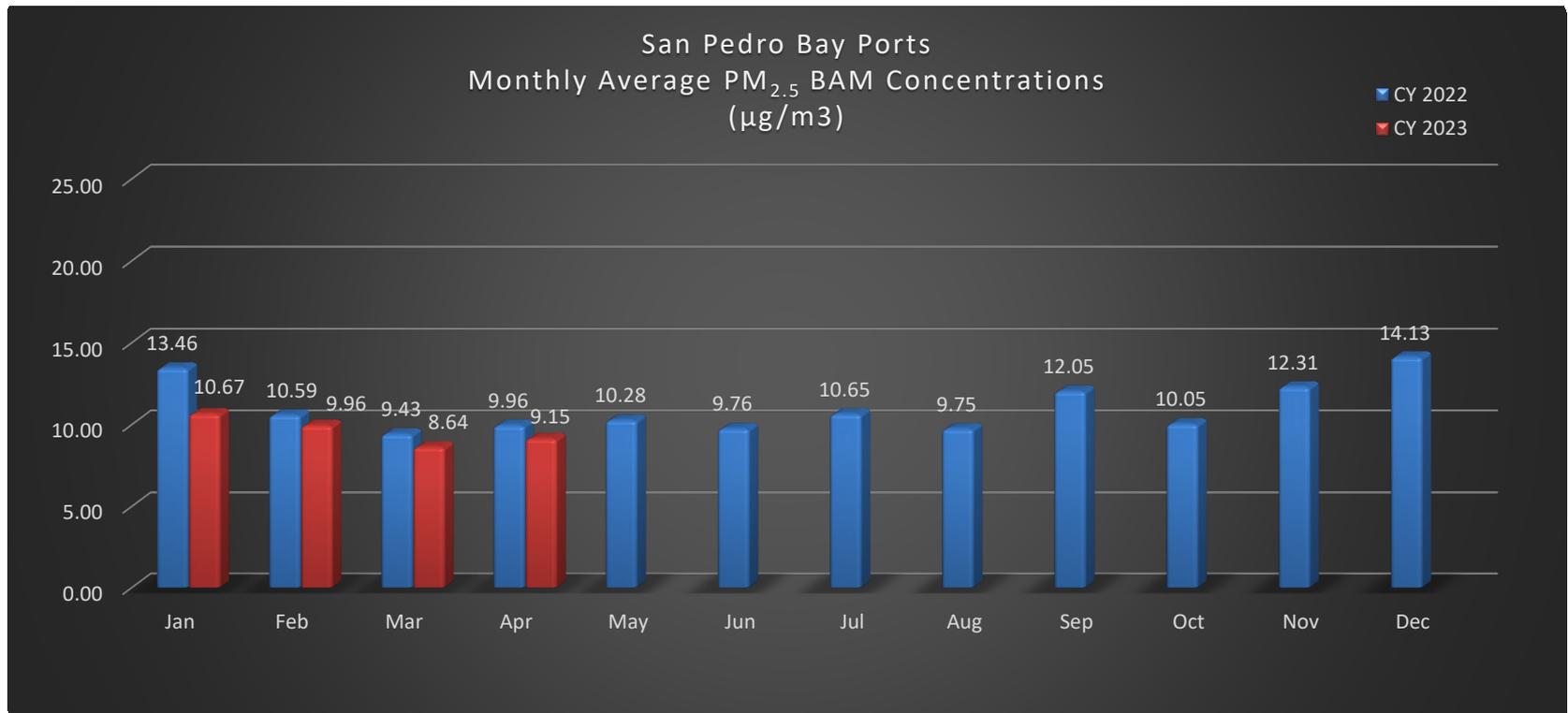
- 2022 Annual Average = $0.86 \mu\text{g}/\text{m}^3$

Monthly Average NO₂ Concentrations (2022 vs 2023)



- 2022 Annual Average = 0.013 ppm

Monthly Average PM_{2.5} Concentrations (2022 vs 2023)



- 2022 Annual Average = 11.03 µg/m³



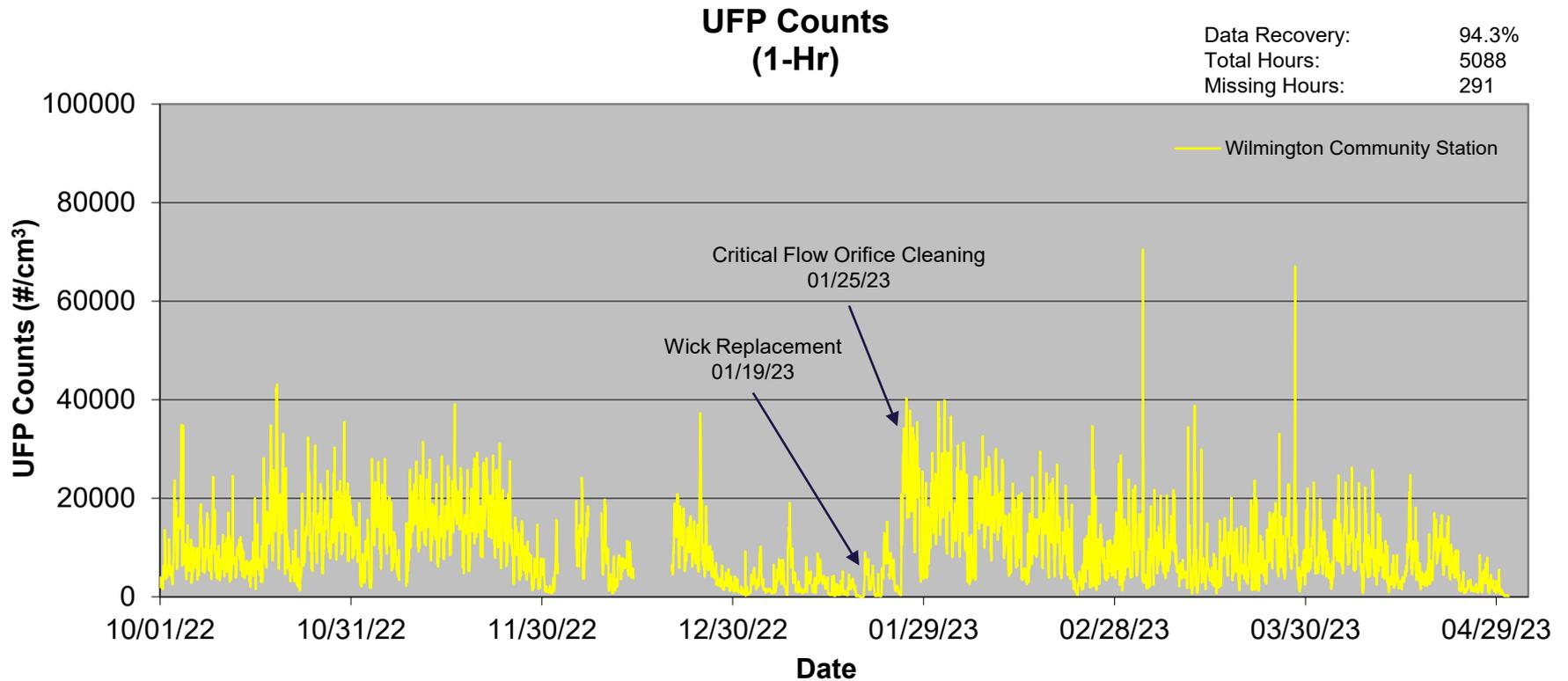
Public Inquiries

Public Inquiry on Quality Assurance on UFP Data

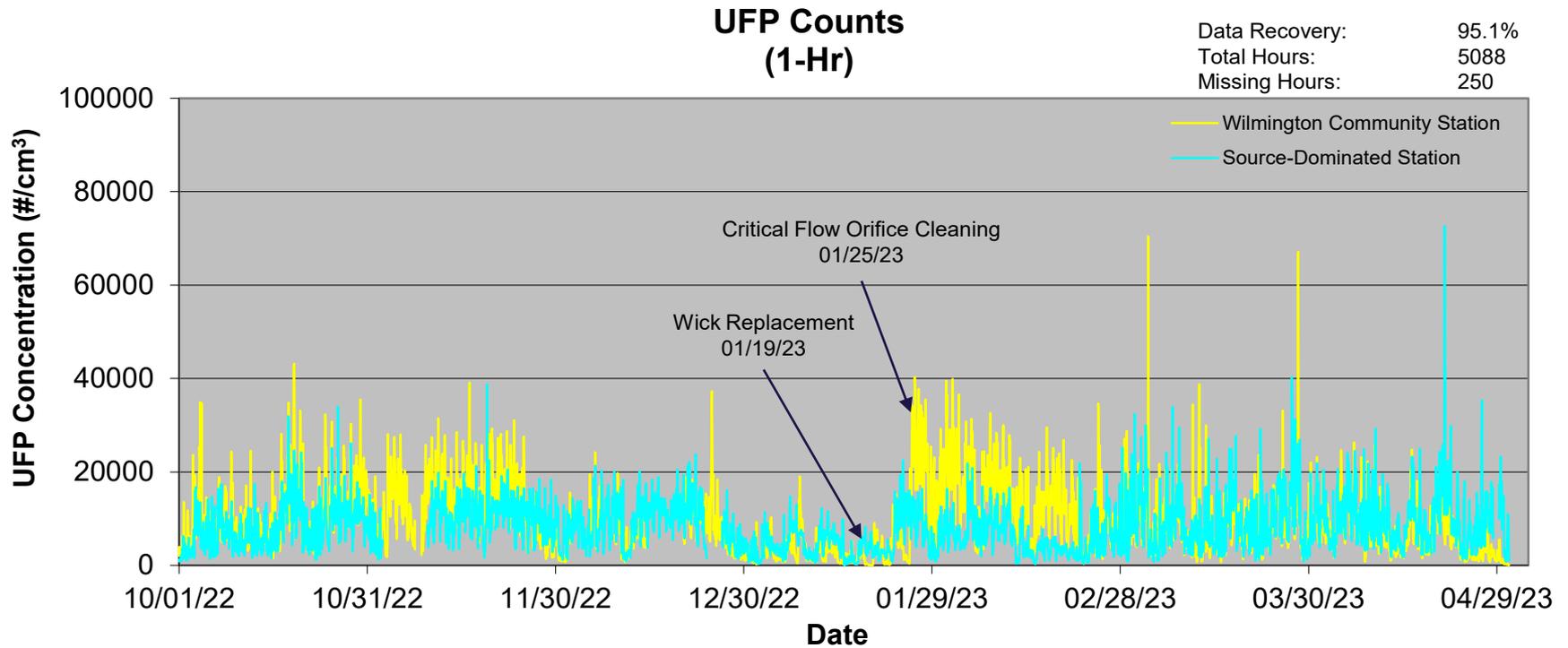
- > Email to Port Air Quality staff on April 19, 2023
- > Question about low UFP data at Wilmington Community station in January 2023
 - > Specifically, dates from January 16 - 19, 2023
 - > UFP counts measurements 10's - 500's #/cm³
 - > UFP counts falling from 5,000 #/cm³ to 100's in 5-hour time period.
- > Asks “why is LEIDOS consultant not “catching” such obvious discrepancies and repairing/replacing/servicing the faulty monitors?”

01/16/23 03:00	UFP	1 hr	3,239	counts/cm ³	--	--	--
01/16/23 04:00	UFP	1 hr	2,847	counts/cm ³	--	--	--
01/16/23 05:00	UFP	1 hr	2,919	counts/cm ³	--	--	--
01/16/23 06:00	UFP	1 hr	5,236	counts/cm ³	--	--	--
01/16/23 07:00	UFP	1 hr	789	counts/cm ³	--	--	--
01/16/23 08:00	UFP	1 hr	800	counts/cm ³	--	--	--
01/16/23 09:00	UFP	1 hr	805	counts/cm ³	--	--	--
01/16/23 10:00	UFP	1 hr	812	counts/cm ³	--	--	--
01/16/23 11:00	UFP	1 hr	500	counts/cm ³	--	--	--

Hourly UFP Count Data (10-22 to 05-23)



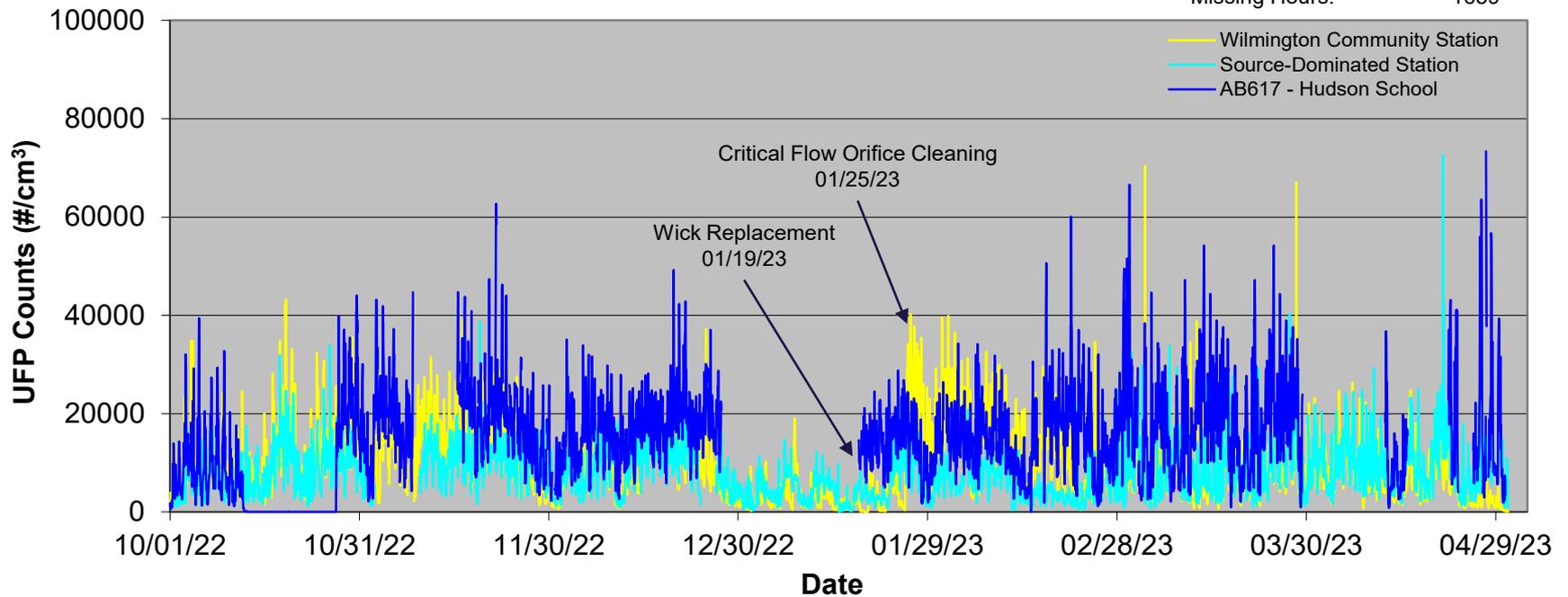
Hourly UFP Count Data (10-22 to 05-23)



Hourly UFP Count Data (10-22 to 05-23)

UFP Counts (1-Hr)

Data Recovery: 67.4%
Total Hours: 5088
Missing Hours: 1659





Questions?

Leidos - Point of Contact

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