

# 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 <sub>2.5</sub> Sequential Filter Sampler	X	X	X	X
PM <sub>2.5</sub> Federal Reference Method Filter Monitor	X	Not Applicable		
PM <sub>10</sub> Federal Reference Method Filter Monitor	X			
PM <sub>2.5</sub> Continuous Monitor	X	X	X	X
PM <sub>10</sub> Continuous Monitor	X	X	X	X
Ultrafine Particle Counter	X	X	X	X
Aethalometer – Black Carbon	X	X	X	X
O <sub>3</sub> Analyzer	X	X	X	X
CO Analyzer	X	X	X	X
NO <sub>2</sub> Analyzer	X	--	X	--
SO <sub>2</sub> Analyzer	X	--	--	--

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

← NO<sub>2</sub> analyzers ship date 06/30/23

← SO<sub>2</sub> analyzers ship date 05/31/23

# Air Quality Monitoring Program – 2023 Upgraded Instruments

## Criteria Pollutants

▪ Continuous PM <sub>2.5</sub>	Met One BAM 1020	Installed - 4 Stations
▪ Continuous PM <sub>10</sub>	Met One BAM 1020	Installed - 4 Stations
▪ Ozone (O <sub>3</sub> )	Thermo Model 49iQ	Installed - 4 Stations
▪ Nitrogen Dioxide (NO <sub>2</sub> )	T-API Model N500	
▪ Carbon Monoxide (CO)	Thermo Model 48iQ	Installed - 4 Stations
▪ Sulfur Dioxide (SO <sub>2</sub> )	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 <sub>2.5</sub> Sequential Filter Sampler	Yes
PM <sub>2.5</sub> Continuous Monitor	Yes
PM <sub>10</sub> Continuous Monitor	Yes
Ultrafine Particle Counter	Yes
Aethalometer - Black Carbon	On Order
O <sub>3</sub> Analyzer	Yes
CO Analyzer	Yes
NO <sub>2</sub> Analyzer	Yes
SO <sub>2</sub> Analyzer	Yes

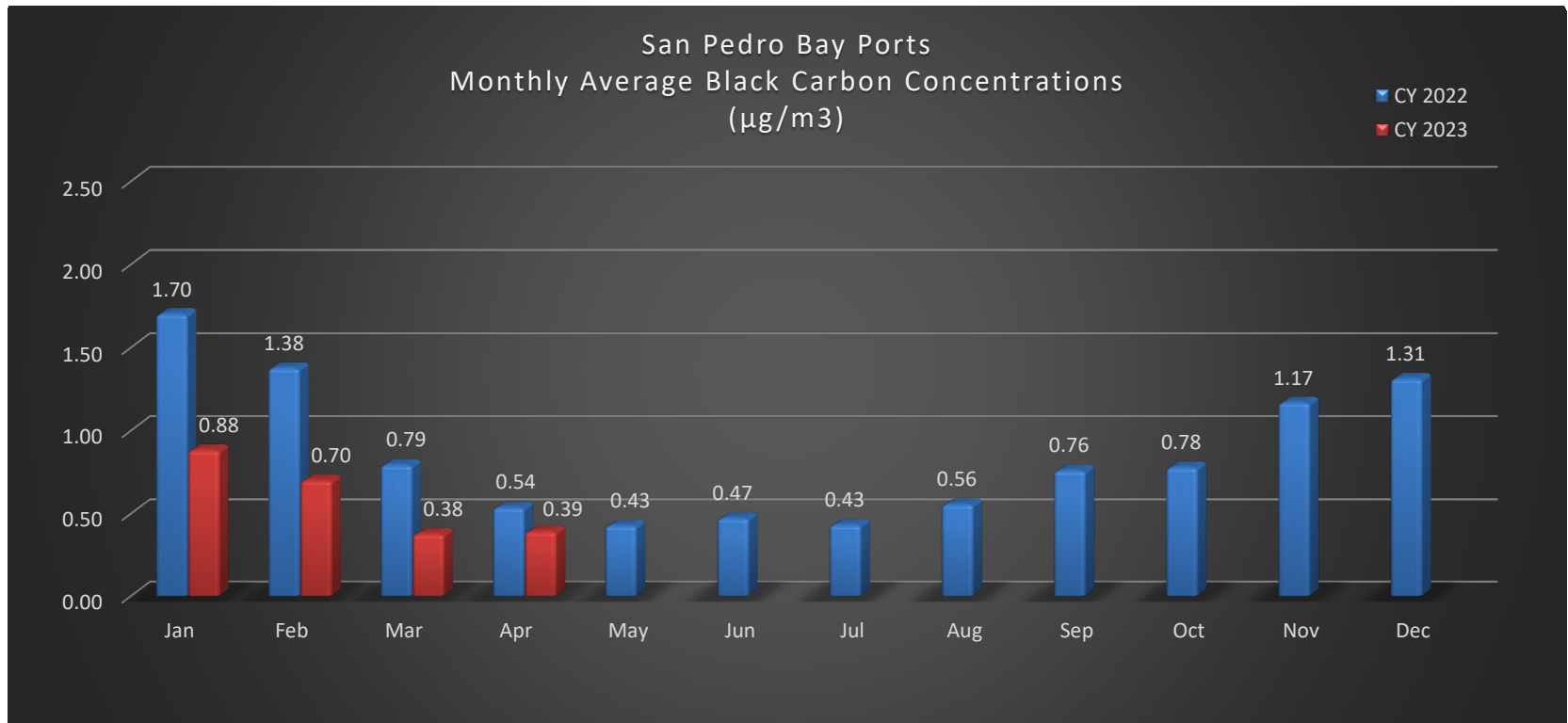
← Upon receipt of new instrumentation

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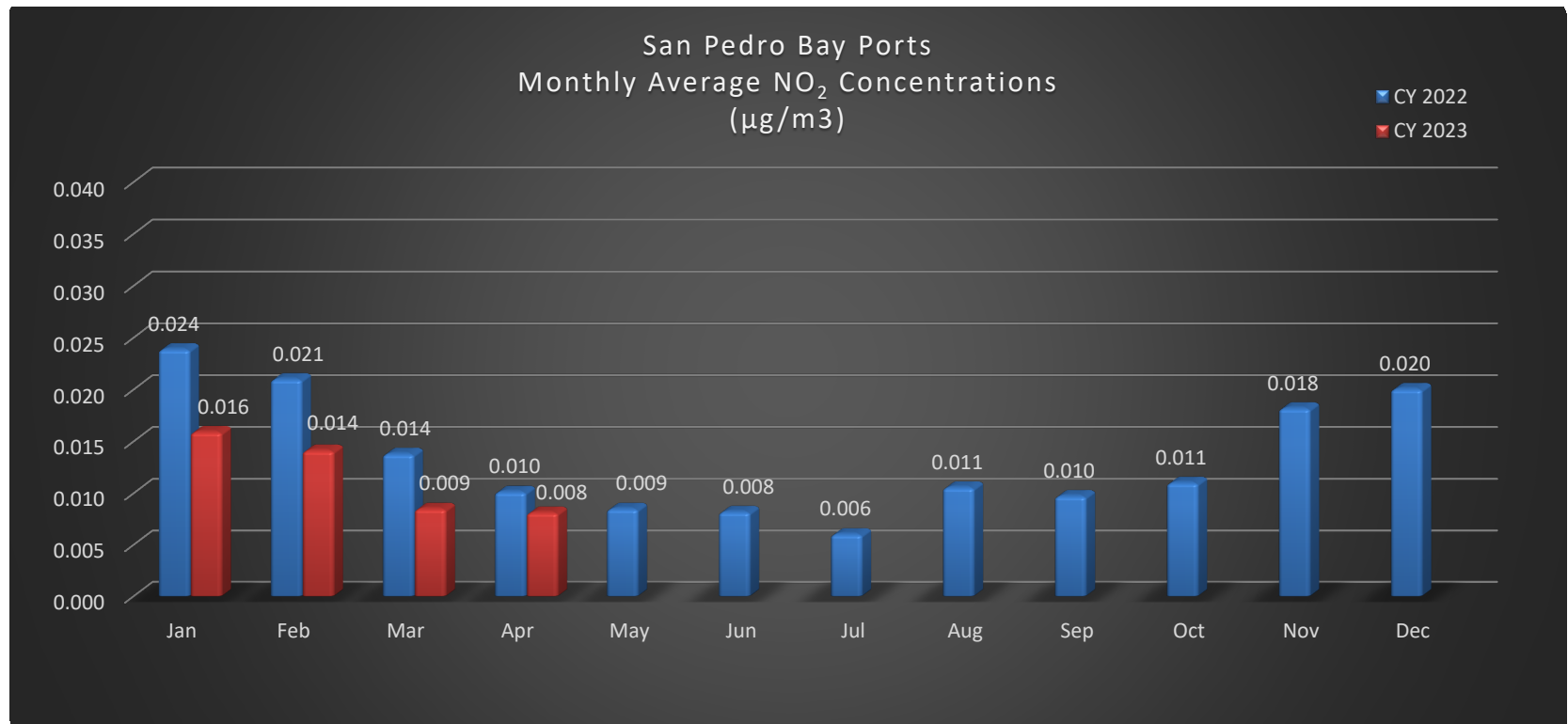
# 2023 Q1 Overview of Results

## Monthly Average BC Concentrations (2022 vs 2023)



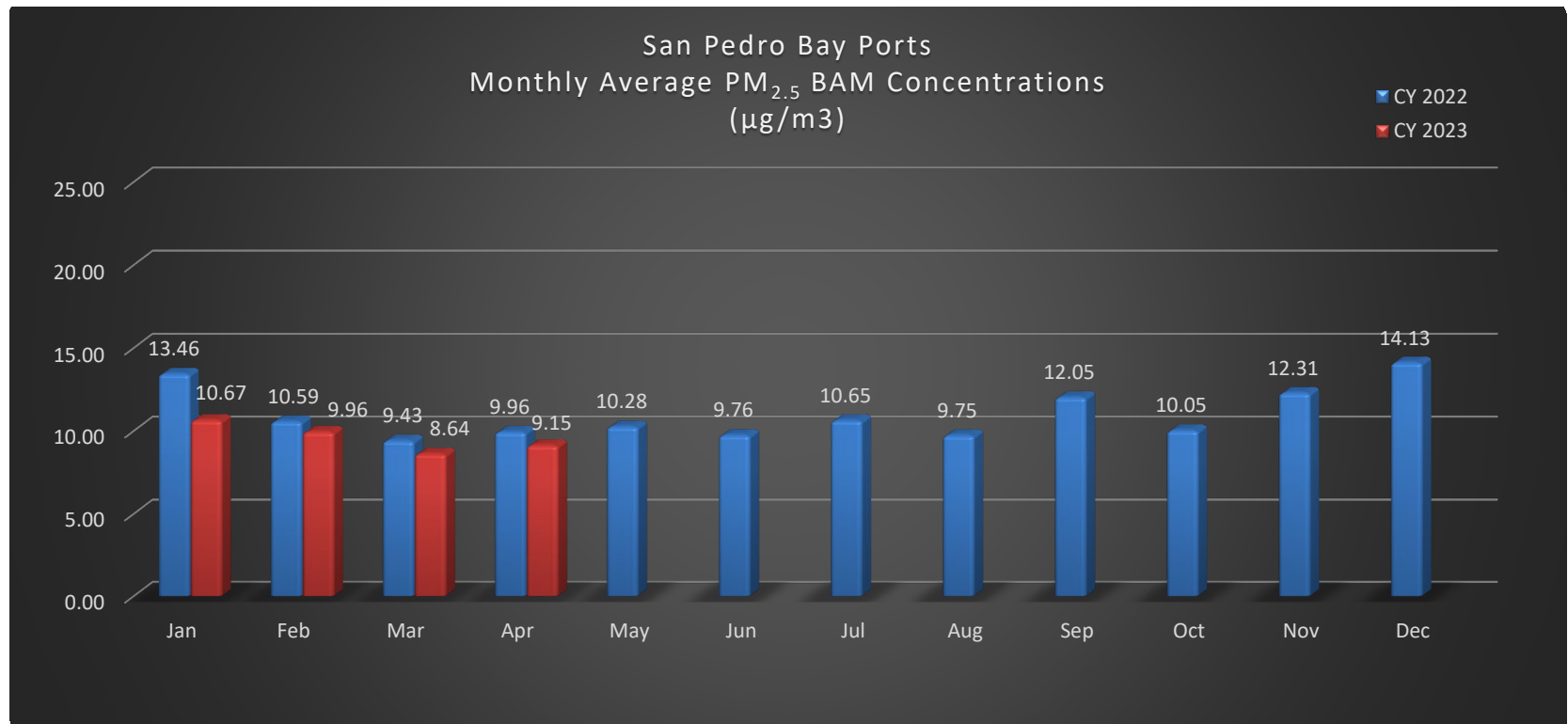
- 2022 Annual Average =  $0.86 \mu\text{g}/\text{m}^3$

## Monthly Average NO<sub>2</sub> Concentrations (2022 vs 2023)



- 2022 Annual Average = 0.013 ppm

## Monthly Average PM<sub>2.5</sub> Concentrations (2022 vs 2023)



- 2022 Annual Average = 11.03 µg/m<sup>3</sup>





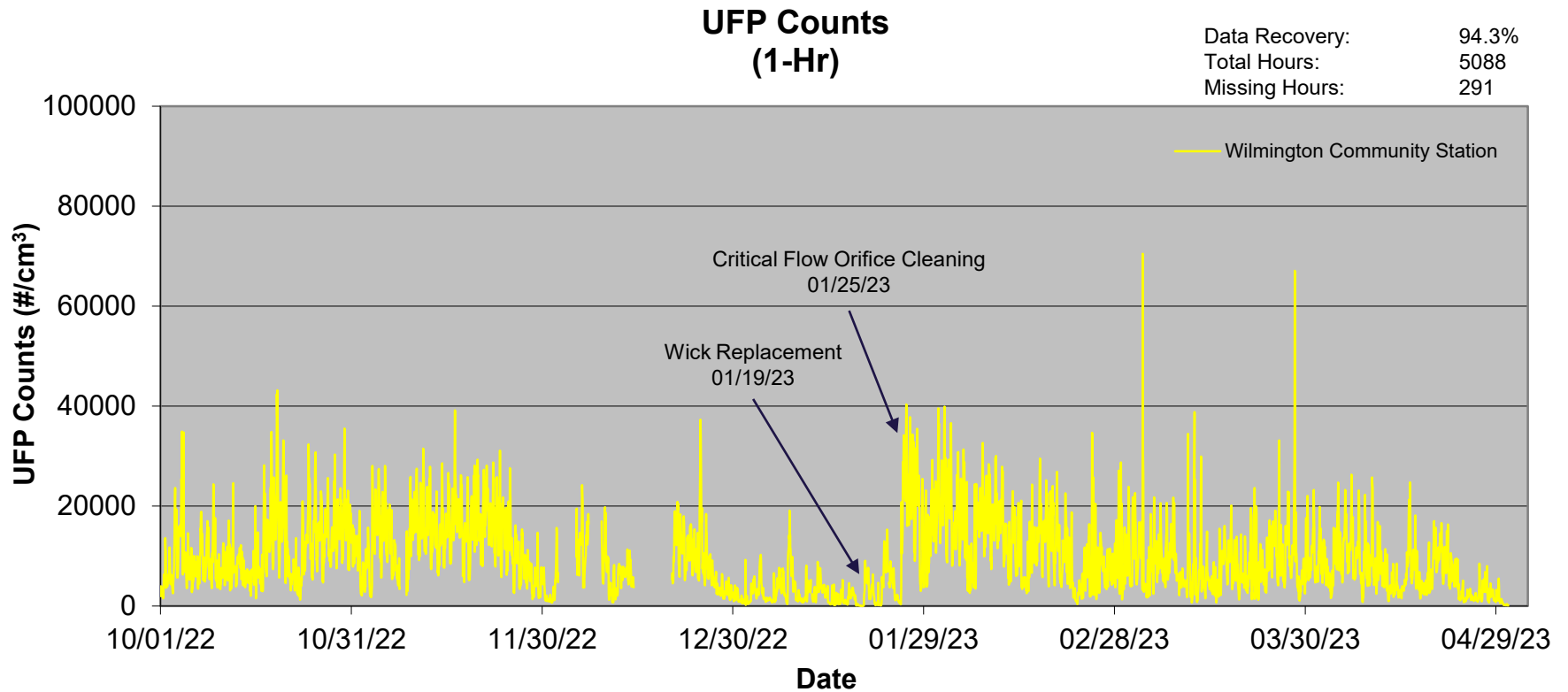
# Public Inquiries

# Public Inquiry on Quality Assurance on UFP Data

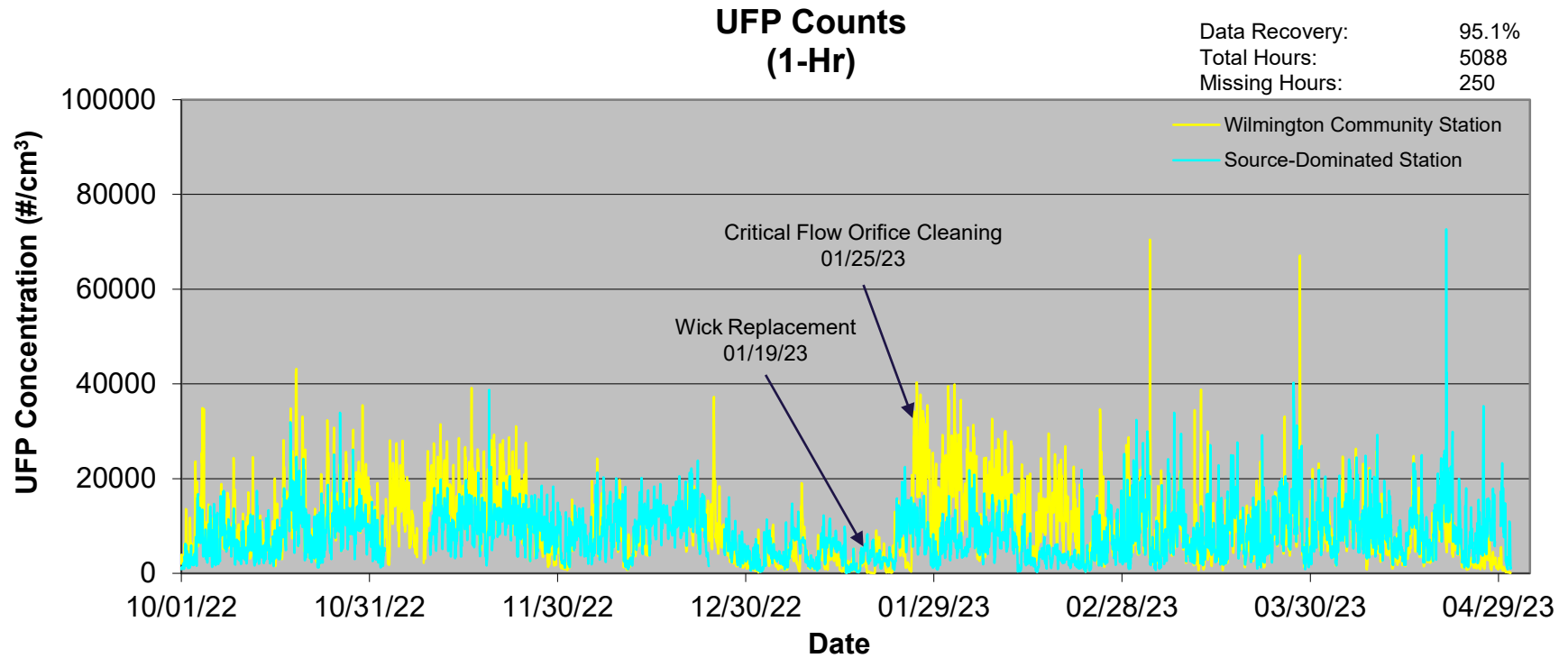
- > Email to Port Air Quality staff on April 19, 2023
- > Question about low UFP data at Wilmington Community station in January 2023
  - > Specifically, dates from January 16 - 19, 2023
  - > UFP counts measurements 10's - 500's  $\#/cm^3$
  - > UFP counts falling from 5,000  $\#/cm^3$  to 100's in 5-hour time period.
- > Asks “why is LEIDOS consultant not “catching” such obvious discrepancies and repairing/replacing/servicing the faulty monitors?”

Time	Parameter	Duration	Value	Unit	Method	Location	Notes
01/16/23 03:00	UFP	1 hr	3,239	counts/cm <sup>3</sup>	--	--	--
01/16/23 04:00	UFP	1 hr	2,847	counts/cm <sup>3</sup>	--	--	--
01/16/23 05:00	UFP	1 hr	2,919	counts/cm <sup>3</sup>	--	--	--
01/16/23 06:00	UFP	1 hr	5,236	counts/cm <sup>3</sup>	--	--	--
01/16/23 07:00	UFP	1 hr	789	counts/cm <sup>3</sup>	--	--	--
01/16/23 08:00	UFP	1 hr	800	counts/cm <sup>3</sup>	--	--	--
01/16/23 09:00	UFP	1 hr	805	counts/cm <sup>3</sup>	--	--	--
01/16/23 10:00	UFP	1 hr	812	counts/cm <sup>3</sup>	--	--	--
01/16/23 11:00	UFP	1 hr	500	counts/cm <sup>3</sup>	--	--	--

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



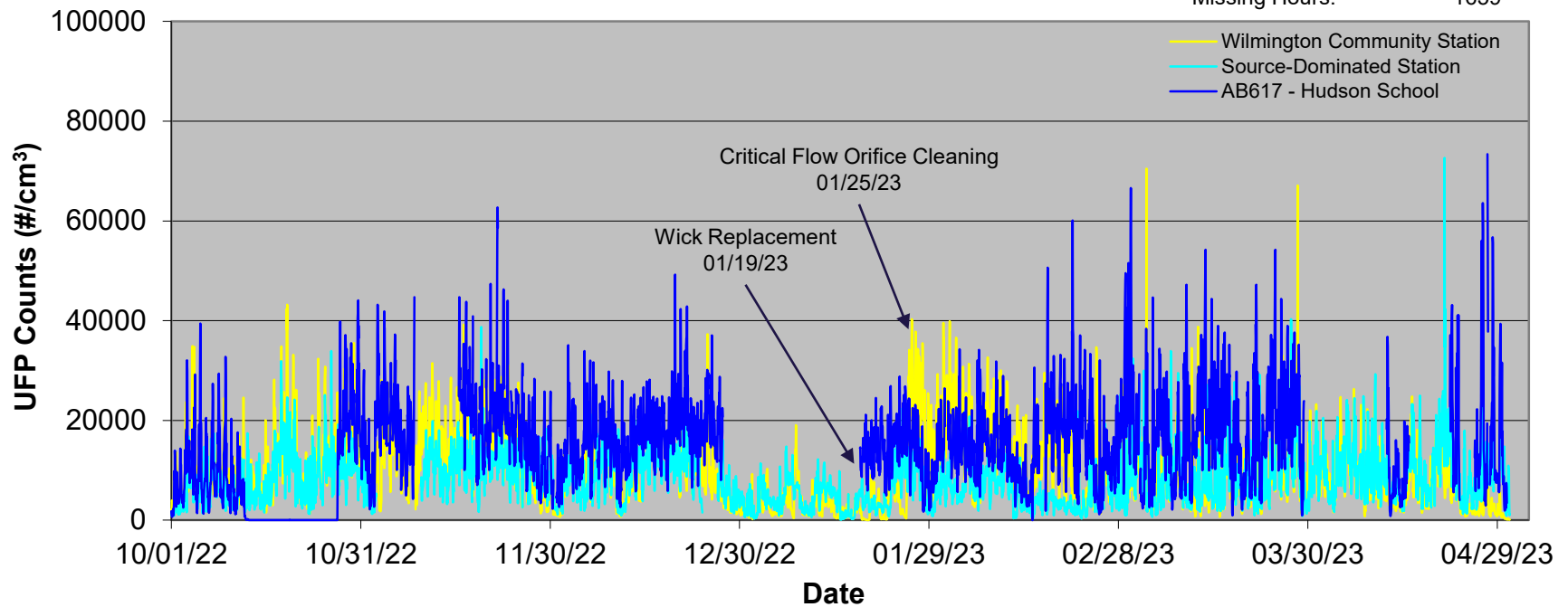
# Hourly UFP Count Data (10-22 to 05-23)



# 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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