CleanAir Workshops series 023

Dust Monitoring Compliance

Thursday, September 14, 2023

Morning Program

9:00 Welcome

9:05 Overview and Updates of CDPH Regulatory and Community Air Monitoring Approaches
Michael Enos, CDPH

9:40 Regional and National Regulatory Overview
Brian Newgent and Claire Amin, Aeroqual

10:05 Monitoring Program Design and Data Analysis Considerations
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10:30 **BREAK**

10:45 Intro to Site Contribution Analysis and Aeroqual's Site Contribution Tool
Connor Porter, Aeroqual

11:10 New Developments for Special Applications
Don Allen and Volker Schmid, CleanAir

11:35 Top 10 Support Questions
Don Allen, CleanAir, and Connor Porter, Aeroqual

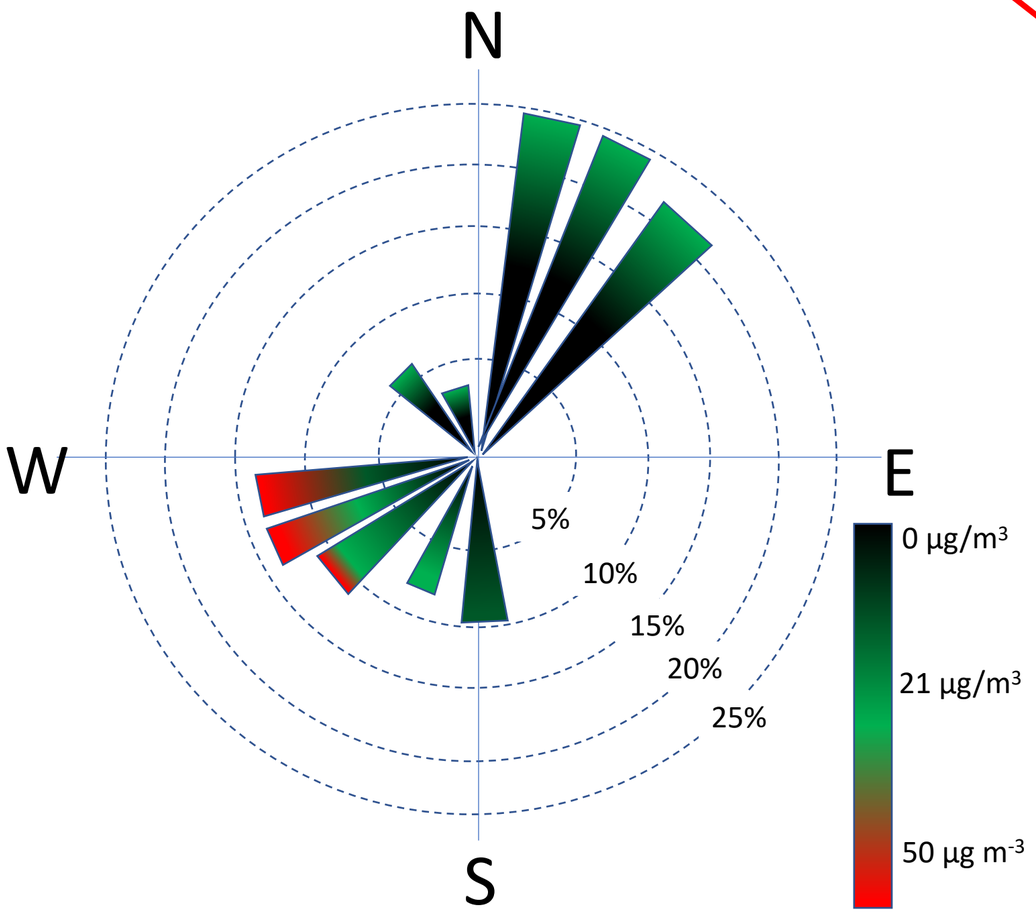
12:00 **LUNCH**

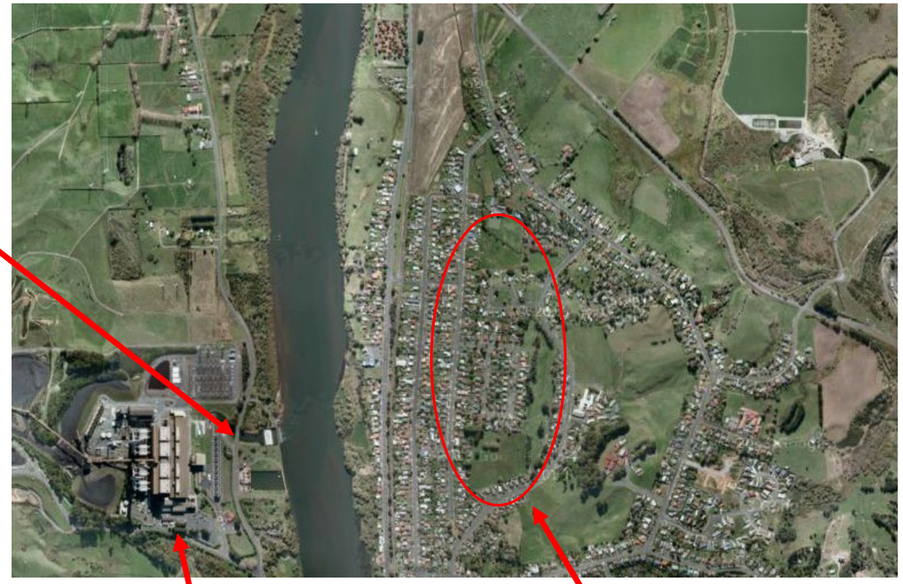
Site Contribution

What is it, What does it Solve; An Introduction and Analysis

Rose Chart |PM Contribution

Dust Monitor location with additional wind speed/direction sensor, located on the boundary between residential area and power station.





Coal-fired power station.

Residential area

The pollution rose says that most of wind comes from the **NorthEast** and when it does **PM values are low**. But when wind blows from the **Southwest PM values are high.**

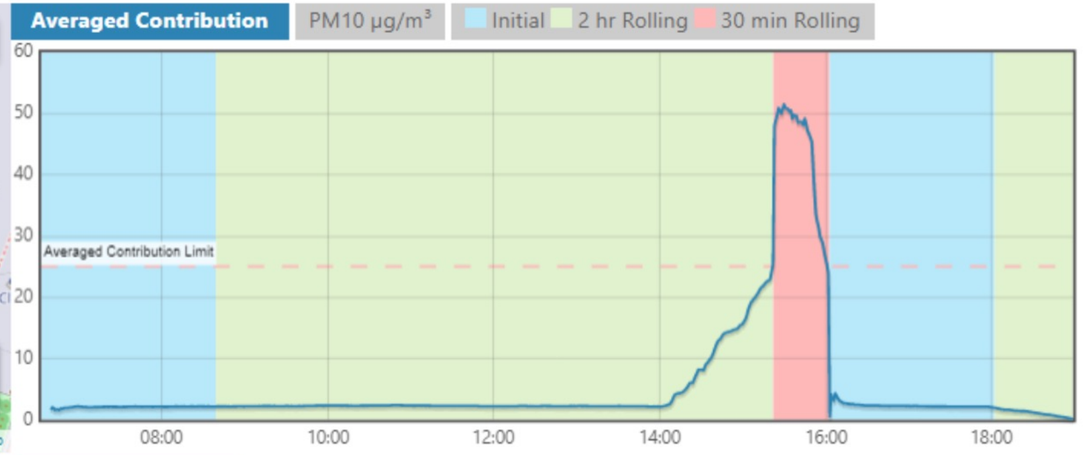
Site Contribution

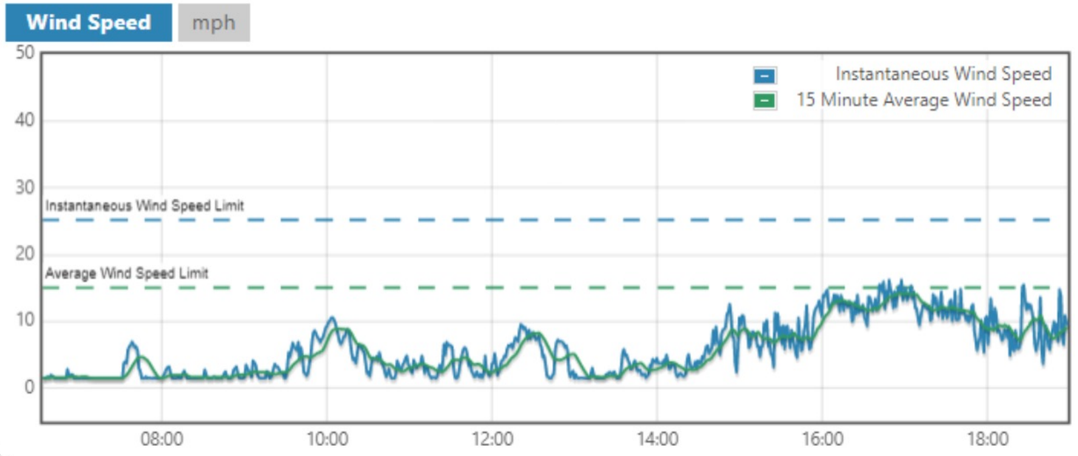
The software automatically tracks pollutant levels, wind direction and speed to calculate the total site contribution. Real-time alerts notify you within a minute if you are approaching regulatory limits. **It seamlessly reports data in the required format.**

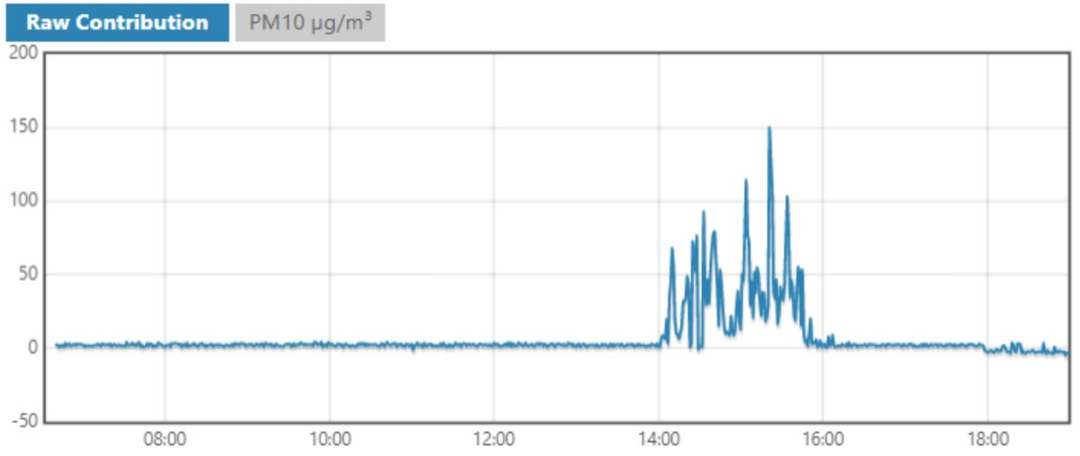
Site Contribution - Dusty Remediation - Historical View

From Date 04/02/2022 06:00 To Date 04/02/2022 19:00 Update

Export as JSON Export as CSV Live View







2019 Catellus / Vista Environmental Consultants

Transforming the former site of the US Navy's Alameda Fleet Industrial Supply Center

Project
Alameda Point Redevelopment

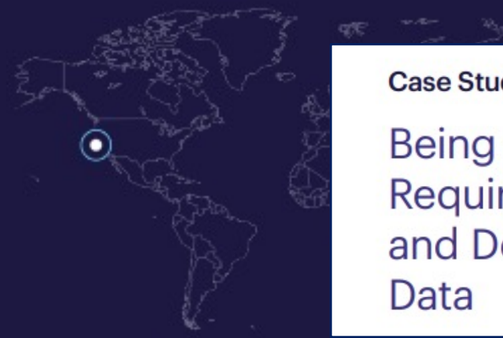
Location
Alameda, California, USA

Date
2019

Services
3x Dust Sentry, Aeroqual Cloud Plus

Measurements
PM_{10}, $PM_{2.5}$, wind and noise

Sector
Remediation



Case Study

Being a Good Neighbor Requires Real-Time Alerts and Defensible Air-Quality Data

A leading national developer used integrated weather, noise, and particulate matter monitoring to produce credible air quality data and achieve regulatory compliance.

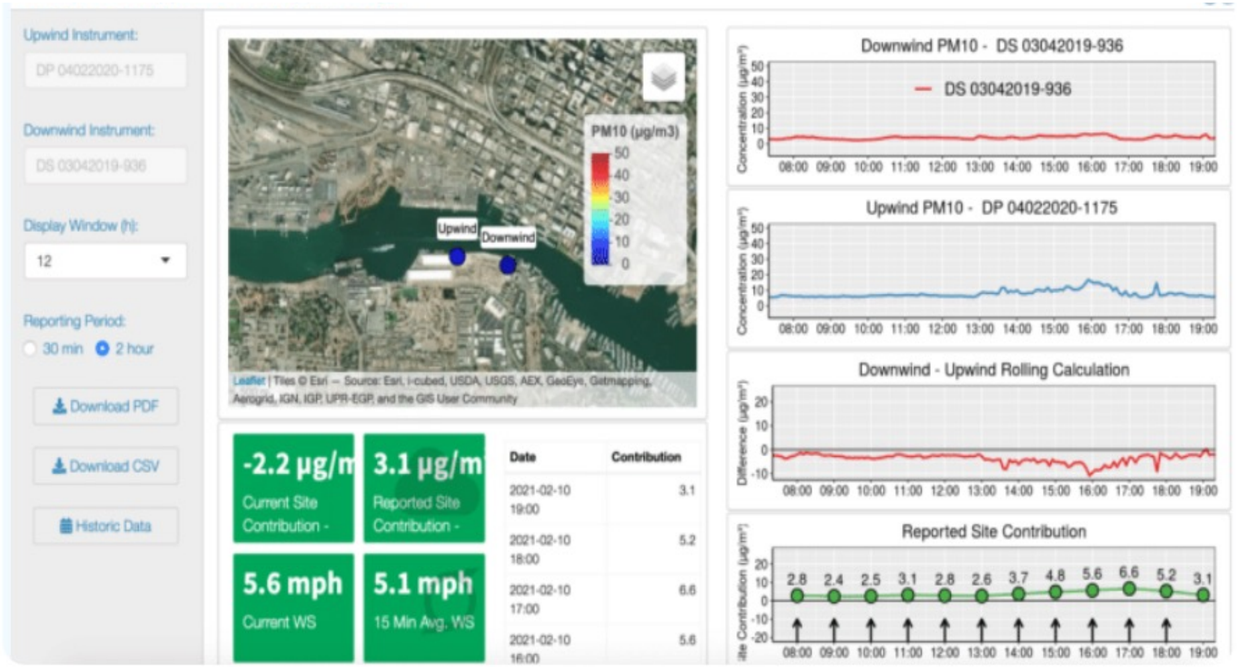
Understanding and Planning for Site Challenges

Challenges

1. The Catellus site shares an eastern boundary with the community and a busy marina housing multiple yacht clubs
2. Prevailing westerly winds blowing down the Oakland estuary picking up dust from other sources
3. Need to restrict and control the spread of dust and particulate matter
4. Catellus needed a solution that would provide accurate, defensible data to protect these community relationships

The Solution

Integration of Hardware and Software



"The solution works really well, and it was valuable to be able to upload and download data remotely and to have a permanent record of it."

Chuck Bove
Vista

- **Proactive Community Outreach**
  - Explaining the development vision, their activities, and their dust mitigation plan
- **Three Aeroqual Dust Sentry PM10 w/MET**
  - One Fully Integrated Meteorological Station
  - One Upwind Boundary, one on the Downwind Boundary, and one fixed monitoring station adjacent to the Sensitive marina area
- **Aeroqual Cloud**
  - Exceedance alerts were configured for PM and Wind Speeds
- **Aeroqual Site Contribution**
  - Calculated the amount of PM10 dust moving onto the site at the west boundary and how much was moving off the east boundary, showing the site's contribution
  - Data was combined with wind roses to prove the low impact the site had on dust creation in the community

The Outcome

Reliable, Accurate, Actionable and Defensible Information Builds Trust, and Reduces Claims

- **Achieved Regulatory Compliance**
  - 100% compliance with air ordinance of PM10 < 75µg/m3
  - Nuisance dust below 20 µg/m3
- **Built Community Trust**
  - Community meetings previously disrupted by accusations of, “the dust was terrible yesterday,” were quickly calmed by sharing reports
- **Proved Responsibility**
  - Catellus was able to prove to a local business owner that the metal recycler and railways to the northwest were responsible for metal dust in their paint
  - Over $60,000 saved in 2 months

“Everything that the equipment promised was delivered,” says Bove. “We have not had any issues or problems with the monitors, they have been reliable and really haven’t missed a step.”

- Chuck Bove
- Principal and CEO at Vista

What is Site Contribution?

Understanding how it came about, what it solves

- How’d it come about?

Rule 1466 (California)

- The purpose of Rule 1466 is **to minimize off-site fugitive dust emissions from earth-moving activities at sites containing specific toxic air contaminants by establishing dust control measures**.
  - https://www.aqmd.gov/home/rules-compliance/compliance/rule-1466

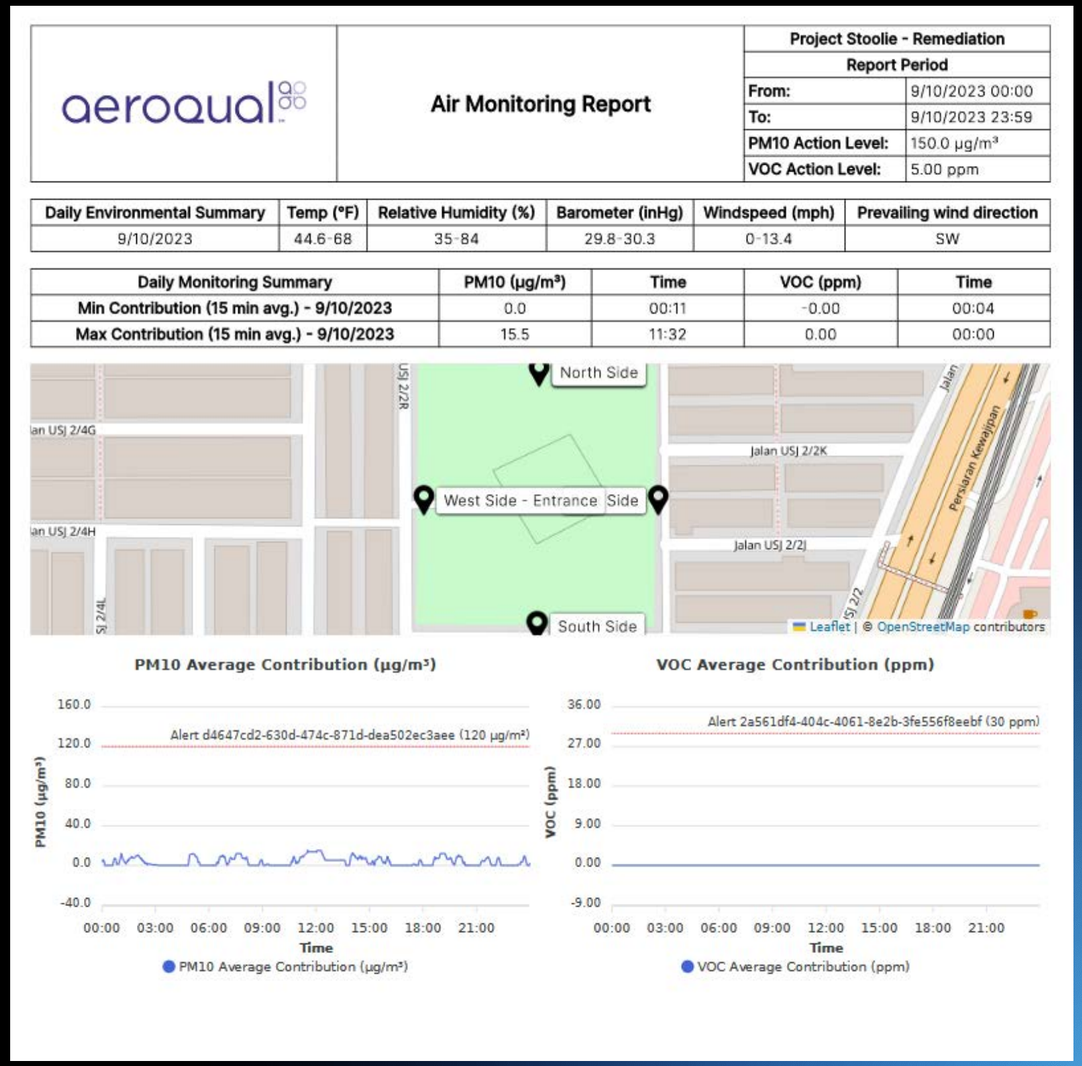
DER-10 (State of New York)

- DER-10 **provides an overview of the site investigation and remediation process for DEC's remedial programs administered by the Division of Environmental Remediation (DER)**.
  - https://www.dec.ny.gov/regulations/67386.html

What Does it Solve?

What's the value-add?

- Provides Defensible Data, and Resolves Accountability
- Saves you and your team countless hours of charting and data digestion.
- Provides automated alerts when calculated values reach certain thresholds.
- Collates data for you so you don't have to!



aeroqual

Air Monitoring Report

Project Stoolie - Remediation	
Report Period	
From:	9/10/2023 00:00
To:	9/10/2023 23:59
PM10 Action Level:	150.0 µg/m³
VOC Action Level:	5.00 ppm

Daily Environmental Summary	Temp (°F)	Relative Humidity (%)	Barometer (inHg)	Windspeed (mph)	Prevailing wind direction
9/10/2023	44.6-68	35-84	29.8-30.3	0-13.4	SW

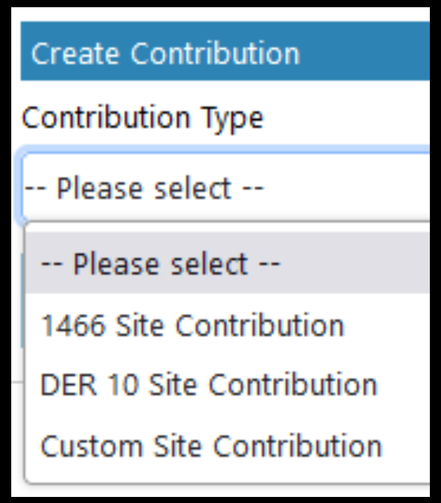
Daily Monitoring Summary	PM10 (µg/m³)	Time	VOC (ppm)	Time
Min Contribution (15 min avg.) - 9/10/2023	0.0	00:11	-0.00	00:04
Max Contribution (15 min avg.) - 9/10/2023	15.5	11:32	0.00	00:00

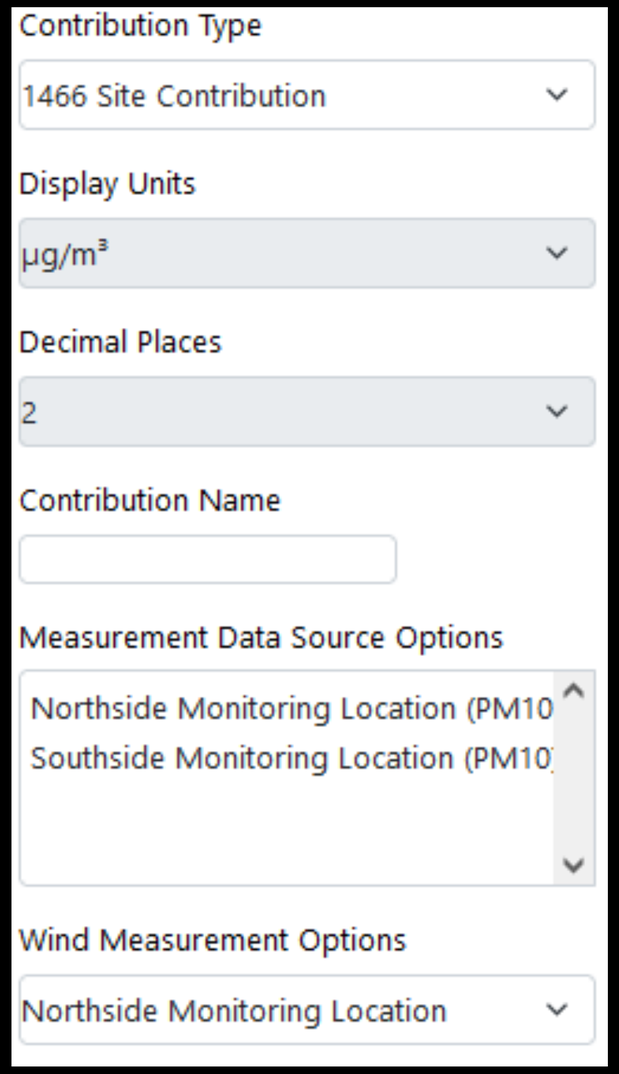
Getting Started

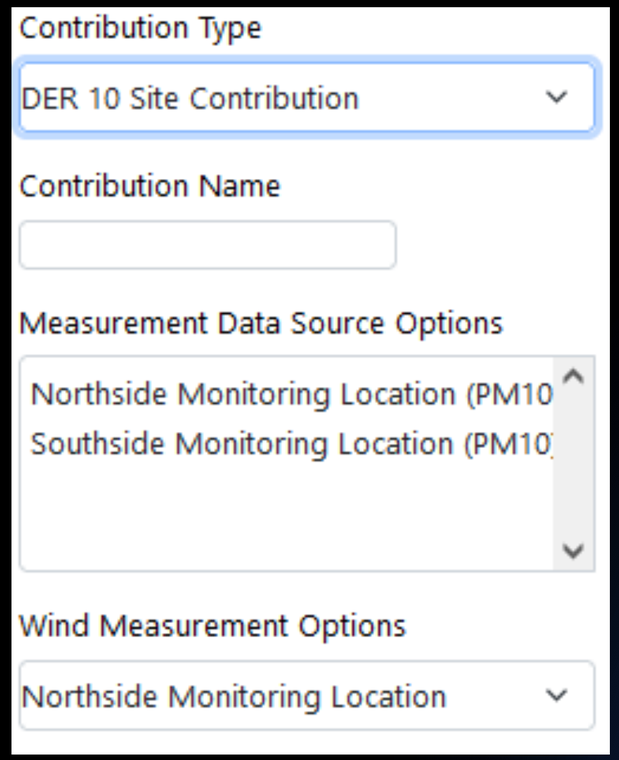
All the Prep Work

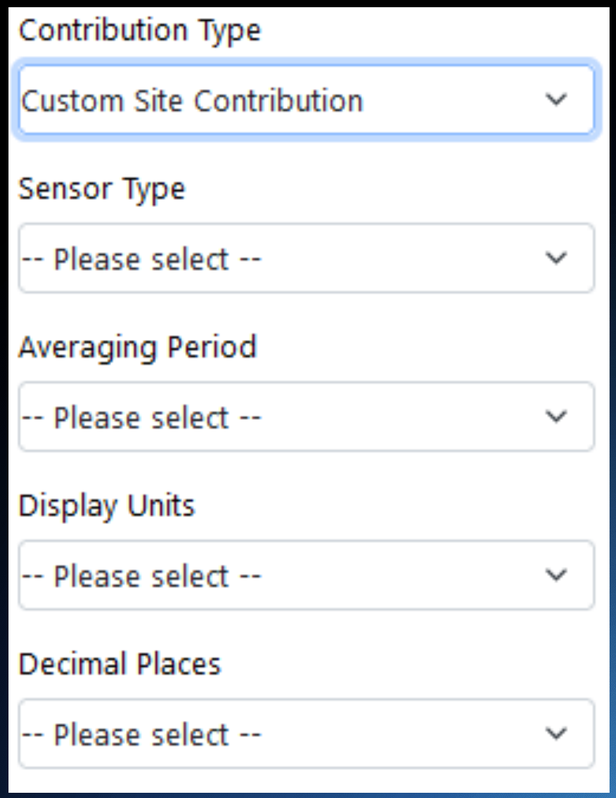
- Ensure There's a Unit That Has Wind Speed & Direction
- Plan it out
  - Where are the units going on site?
  - How many units?
  - Are there designated names for each location?
- Get Your Users Enabled
  - Send an e-mail with a list of e-mails of the users that will be using the Site Contribution tool
- What Contribution Type will you be using?
  - 1466, DER-10, Custom, Other?
  - Know the Averaging Period

Creating the Contribution

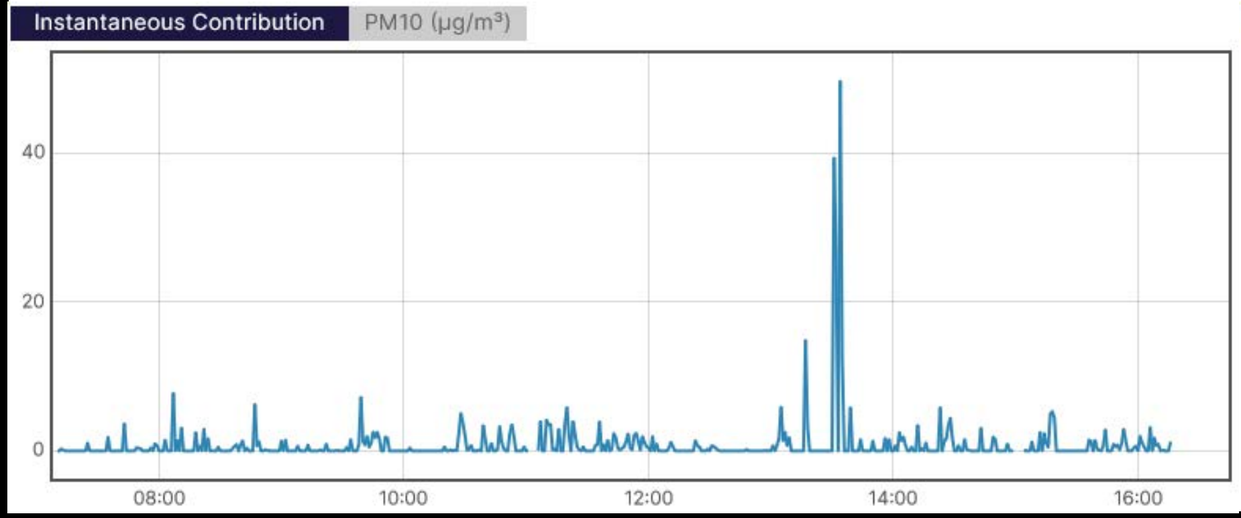


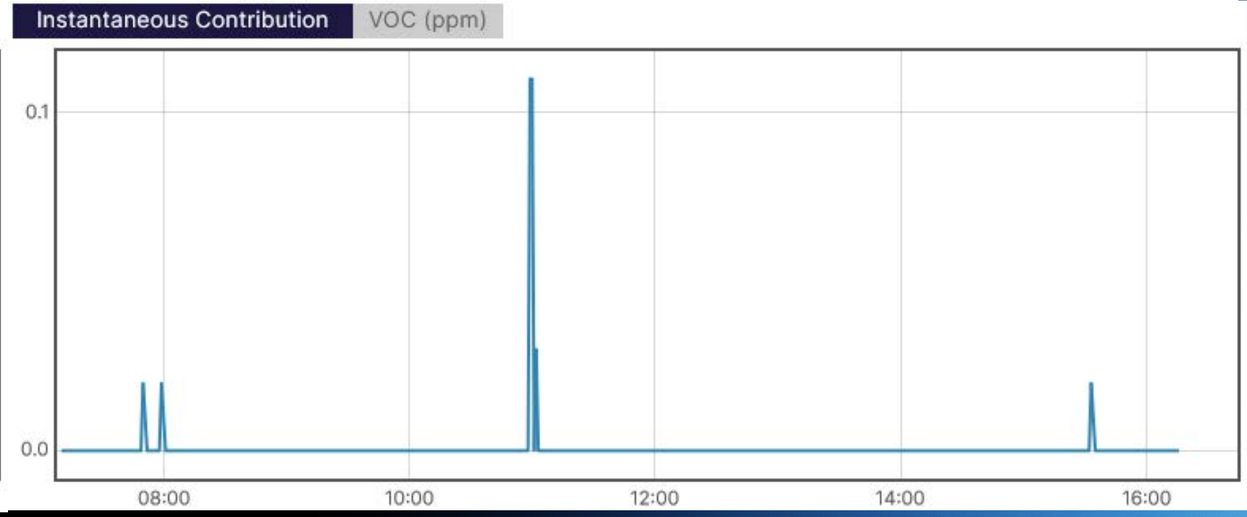






Now It’s Running





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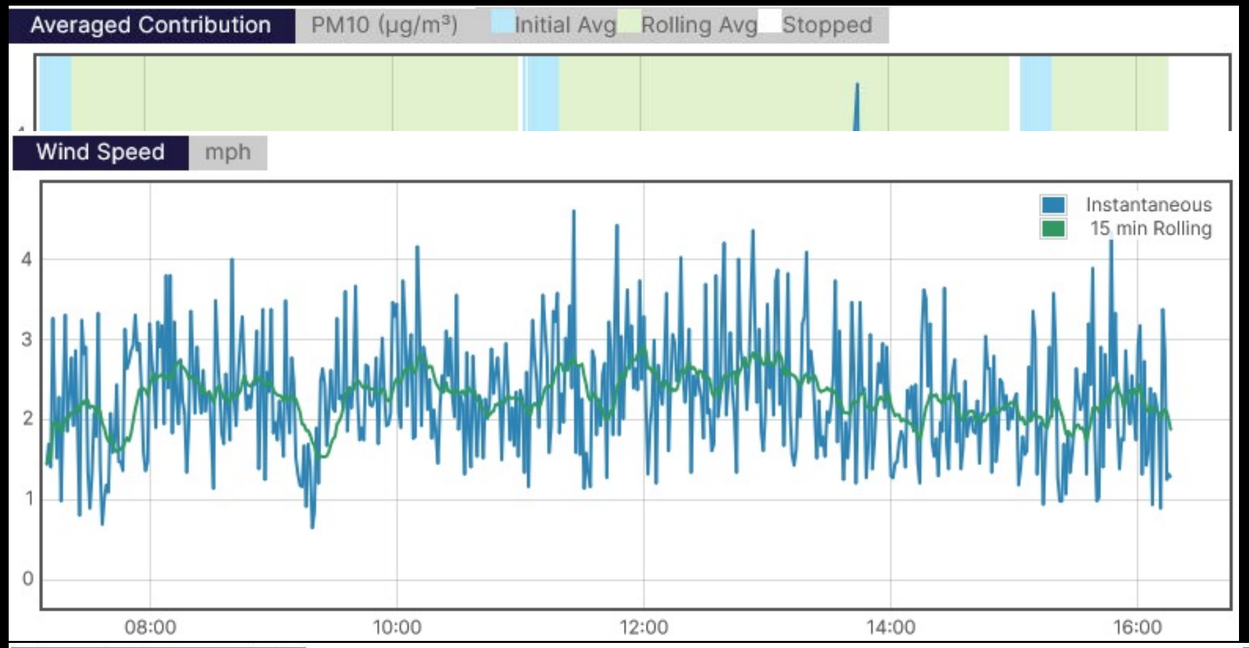

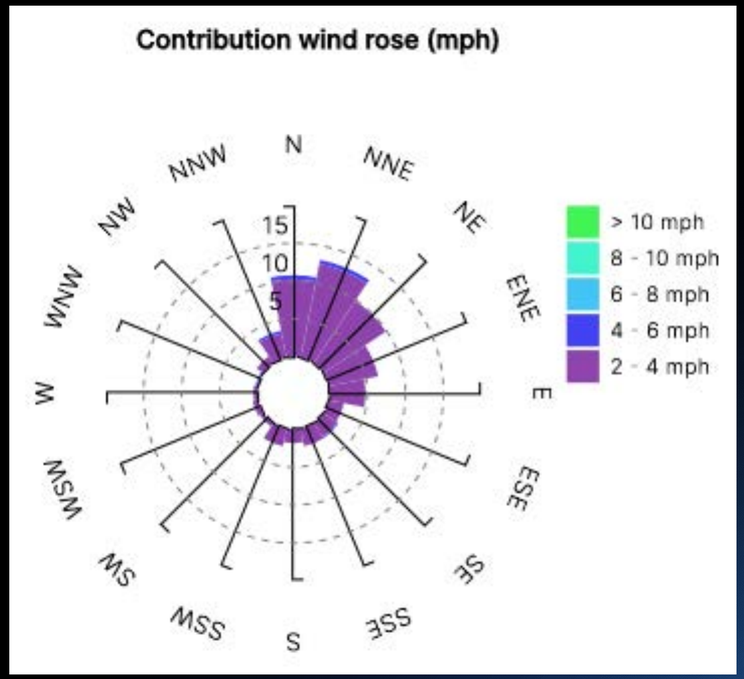

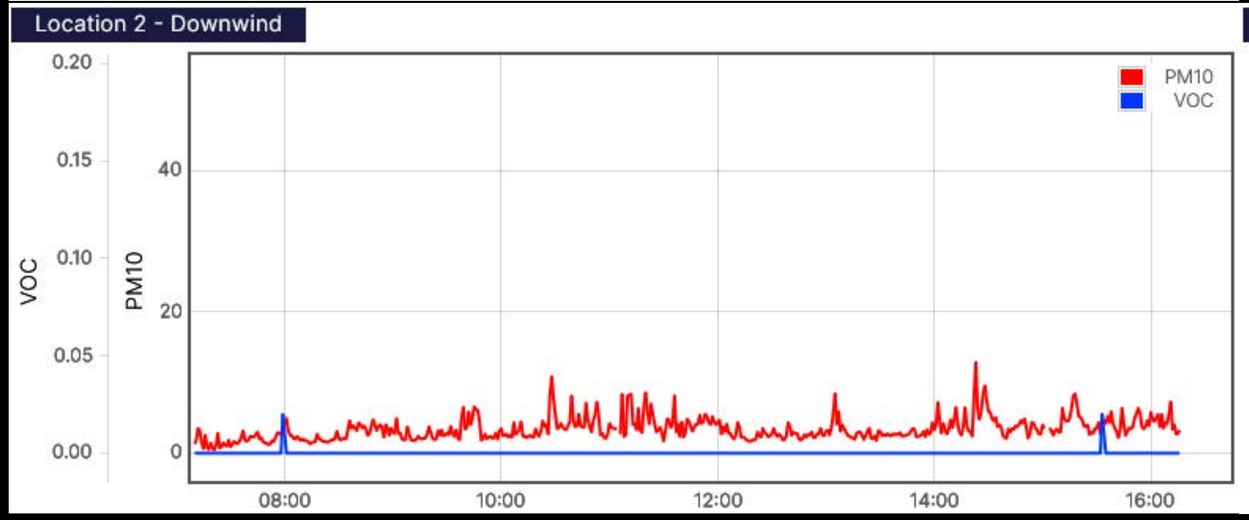

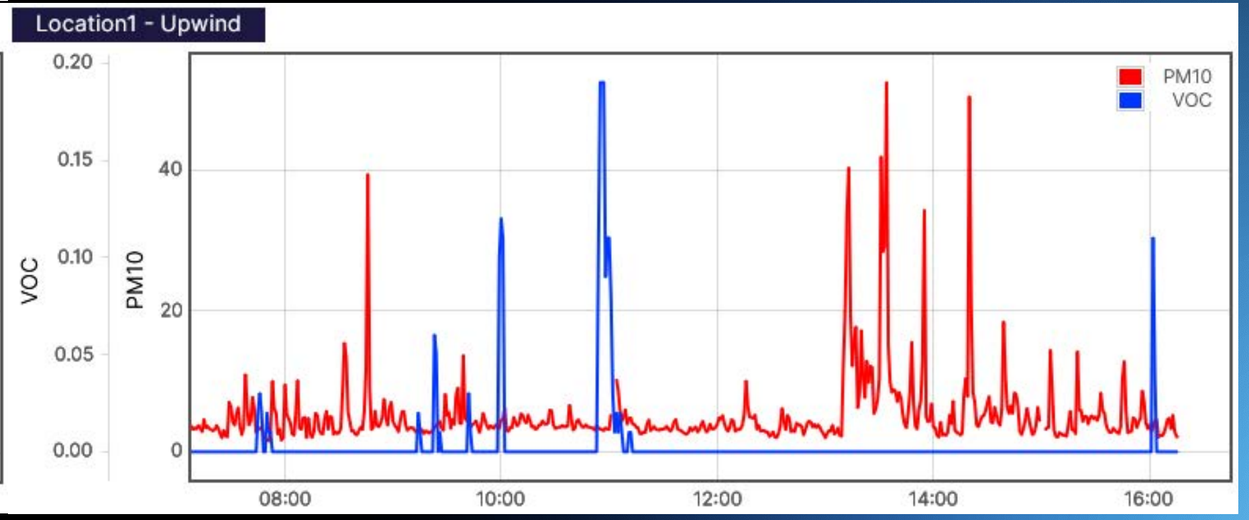

More Information About Site Contribution

- Blog Post - https://www.aeroqual.com/blog/introducing-aeroqual-site-remediation
- 40 Minute Webinar - https://www.aeroqual.com/events-webinars/introducing-aeroqual-site-contribution-webinar
- Support Docs - https://support.aeroqual.com/Guide/Site+Contribution+tool/288

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