Air Monitoring Method Options

ALISO SETTLEMENT SEP

AIR MONITORING IN PORTER RANCH

SEPTEMBER 16, 2020

SCAQMD Activities Status Report for Aliso Canyon

Known Priority Considerations of Air Monitoring

- Pollutants of Primary Concern
  - Methane
  - Benzene
- Real Time / Near Real Time
- Public Data Display
- Notification of Elevated Levels
- Length of Time for Air Monitoring

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Monitoring Station Measurements: Overview

- Continuous monitoring at fixed locations
- Near real time monitoring at a specific place; Track progress over time
- Wide range of air pollutants
- High data quality
- Can be connected to a public notification system

Monitoring Station Measurements: Example

- *During the SS-25 leak, three South Coast AQMD fixed monitoring stations and additional monitoring locations operated by CARB*

- A combination of continuous and integrated measurements

Continuous Methane
Triggered VOC
Triggered Sulfur
24-hr Integrated VOC
Passive VOC

Continuous Methane
Triggered VOC
Continuous H_2S
24-hr Integrated VOC
Passive VOC

Continuous Methane
Triggered VOC
Continuous H_2S
24-hr Integrated VOC
Passive VOC

Fenceline Measurements (Open Path): Overview

- Continuous monitoring at fixed location
- Monitors along a path on fenceline, rather than single point
- Wide range of air pollutants
- Detection capability less than point monitors but may be faster
- Can be connected to public notification system

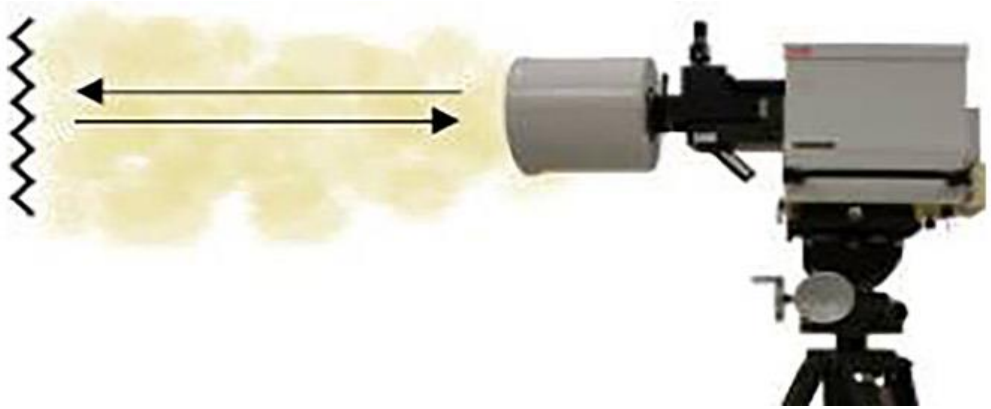
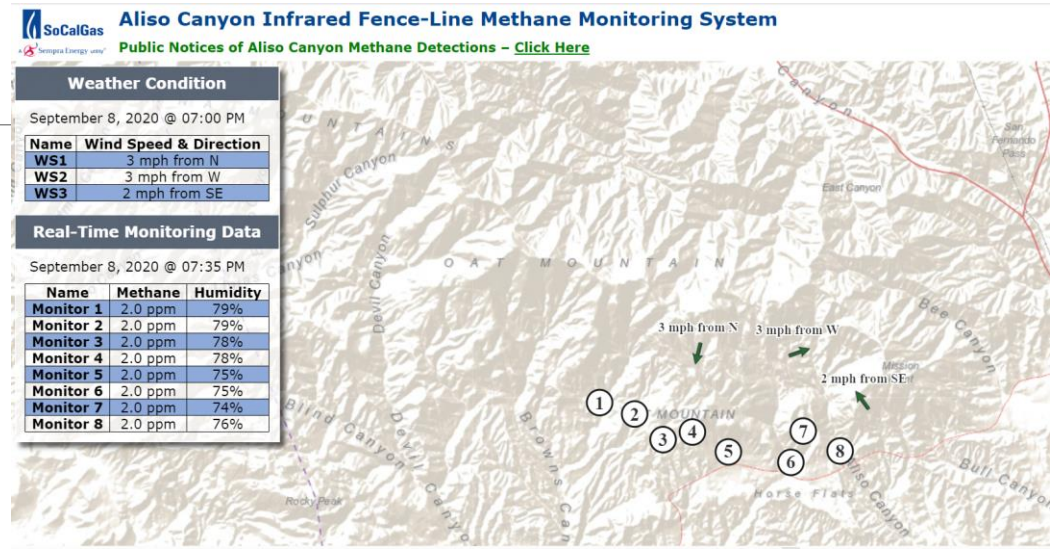


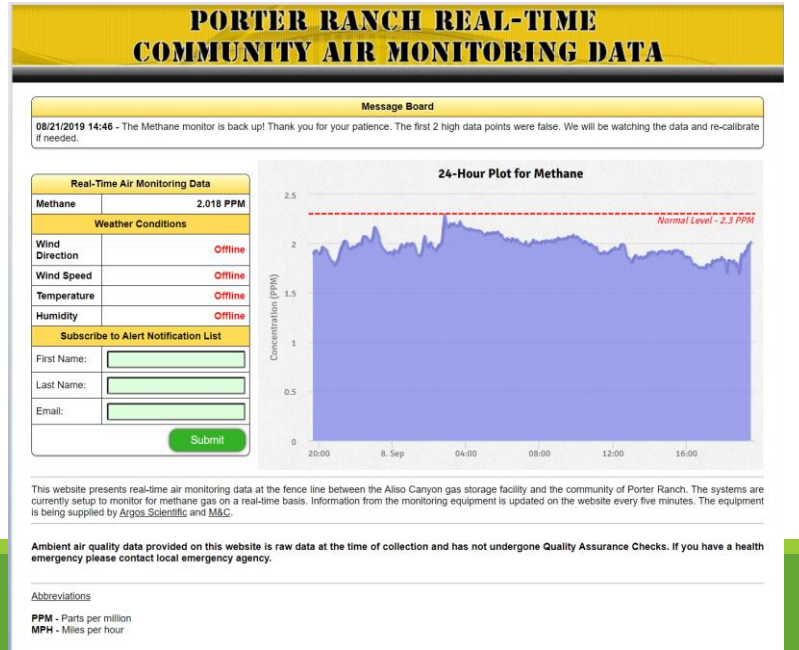
Image Credit: newabb.com

Fenceline Measurements (Open Path): Example

- SoCalGas has been operating a fenceline system for measuring methane at different locations north of Porter Ranch

- Argos Scientific fenceline system operated one pathway since SS-25 leak





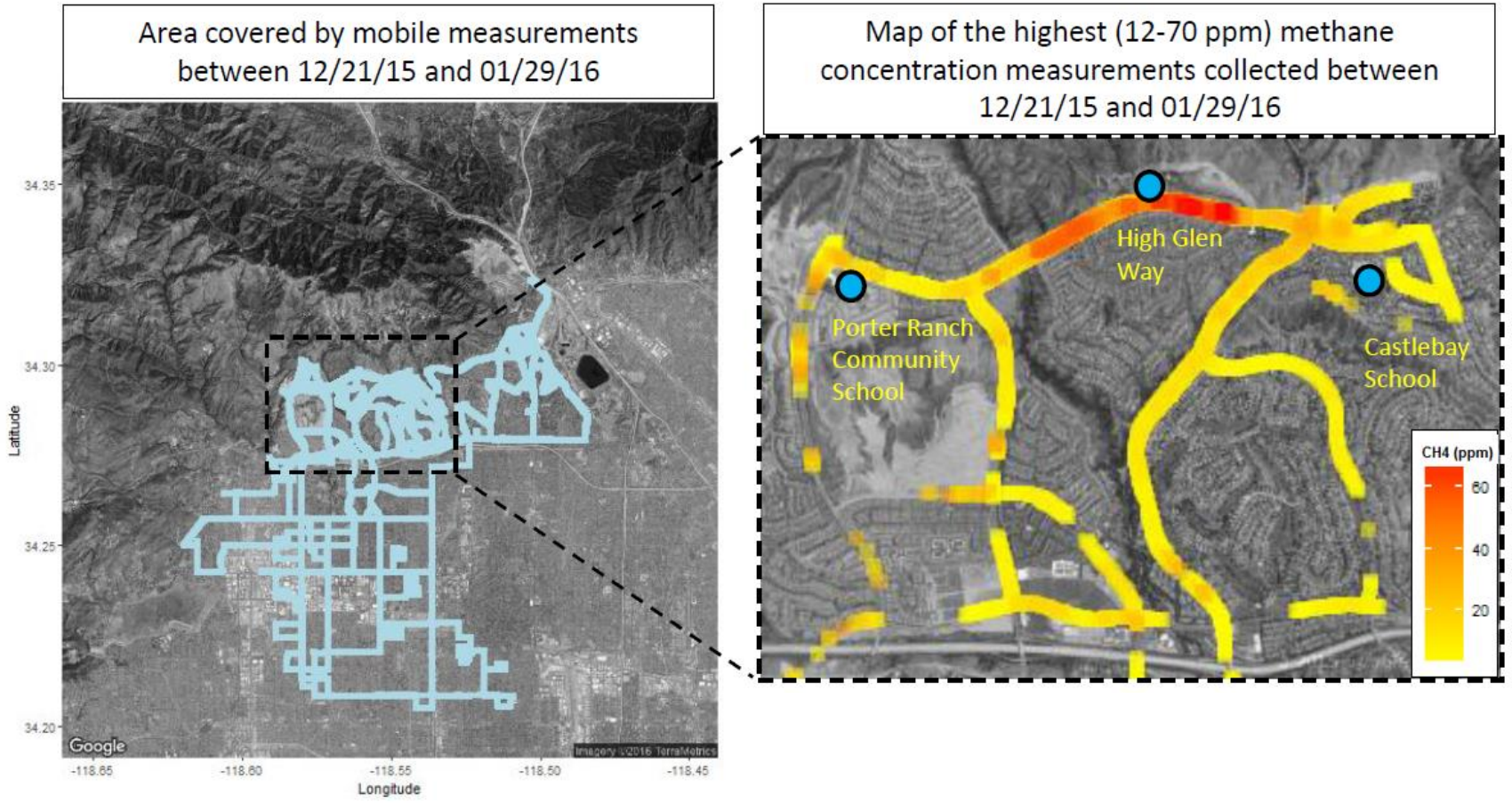
Mobile Platform Measurements: Overview

- Monitors on a ground-based mobile platform
- Wide-area monitoring survey, community scale; Identify hotspots/ potential sources
- Less number of pollutants measured
- Provides snapshot and detects methane very well
- Not connected to near real time public notification

South Coast AQMD mobile platform

Aclima mobile platform

Mobile Platform Measurements: Example



- An open path analyzer mounted on a vehicle was used to conduct mobile methane measurements in Porter Ranch
- Mobile platforms can be outfitted with additional gas and particle monitors

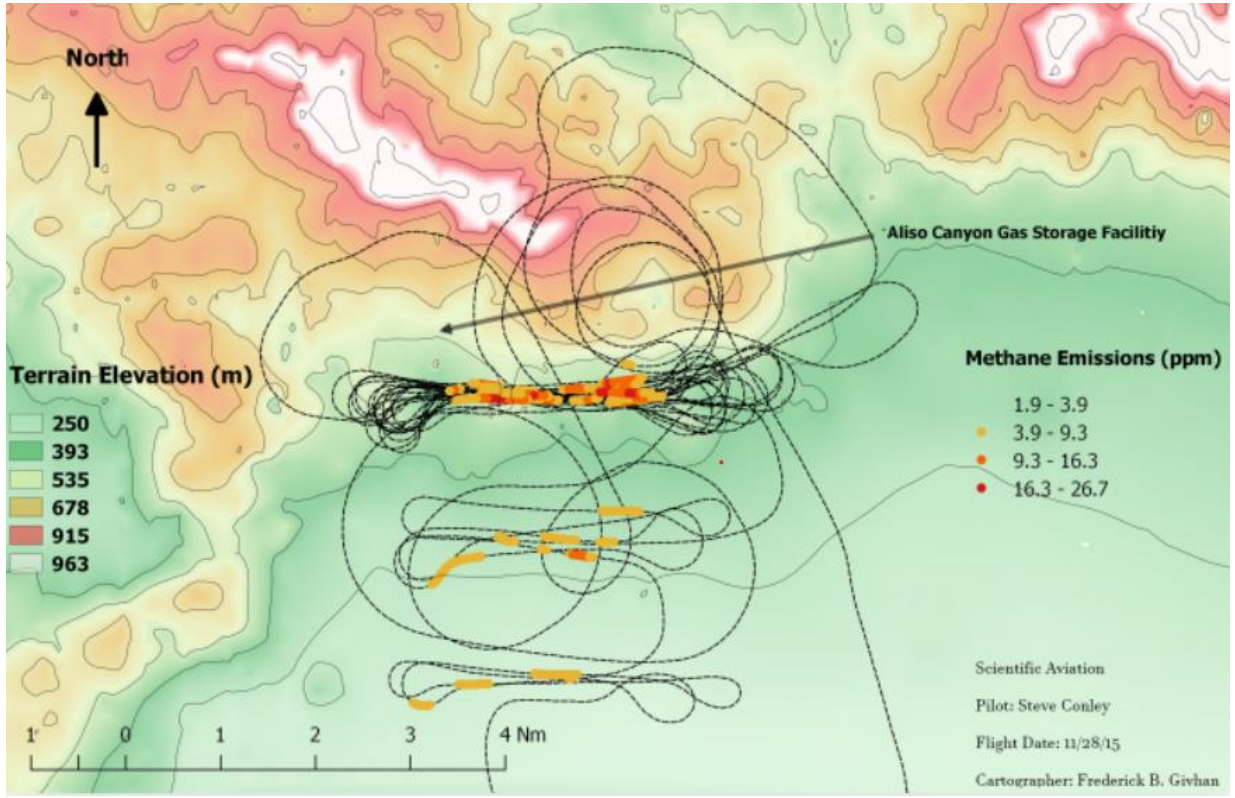
Aerial Platform Measurements: Overview

- Research instruments on board aircraft
- Survey large areas, regional scale, Detect plumes and emissions
- Wide array of gaseous pollutants
- Snapshot of the specific time of flight; scheduling
- Data analysis time longer; not connected to real time notification

Aerial Platform Measurements: Example

- Scientific Aviation and JPL conducted aerial measurements to determine the emission flux of methane from leaking well SS-25

- CARB continued to conduct aerial methane surveys (California Methane Survey, 2020)



Different Monitoring Strategy Comparison

	CH4	VOCs	Cost	Continuous (24/7)	High Time Resolution	High Spatial Resolution	Public Notification	Number of Months
Fixed Site: Monitoring Station	✓	✓	$$$	✓	✓	✗	✓	20
Fixed: Open Path System	✓	✓	$$$ (CH4 only) $$$$$ (CH4 and VOCs)	✓	✓	✗	✓	TBD
Mobile Platform	✓	✗	$$	✗	✓	✓	✗	Varies
Aerial Platform	✓	✗	$$$ (CH4 only) $$$$$ (CH4 and VOCs)	✗	✗	✓	✗	Varies

Additional Information

- South Coast AQMD Board approved reallocating one million dollars, originally intended to support a health study, to augment air monitoring efforts related to Porter Ranch
- South Coast AQMD will continue to serve in a technical advisory role to the project

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