Update on EPA activities on Develop Ground Validation Sites Across the United States Air Quality Network

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Recommendation 1: Consistently perform intensive campaigns dedicated to the validation of the capability of the Geo-AQ missions to observe the diurnal cycle of the target species. Such campaigns are conducted at several supersites within each Geo-AQ mission domain where a comprehensive suite of correlative reference measurements is made and a comprehensive set of auxiliary data from a variety of sources is exploited.

PAMS Requirement #1:

- State-of-the-art regulatory grade, QA-QC hourly NO_x, NO_y, “true” NO_2, CO, ozone speciated VOC, formaldehyde (hourly or 8 hour), 1-in-3 day PM2.5 speciation
- Hourly boundary layer or mixed layer height measurement. Where available ceilometer return signal archived
- Meteorology measurements

PAMS Requirement 2:

- “required states with ozone non-attainment areas [and all states in the ozone transport region] to develop and implement Enhanced Monitoring Plans (EMPs)”
- The inclusion of the EMP element is intended to provide monitoring agencies flexibility to implement monitoring that is needed to address data gaps in their particular area
- NJ, NY, CT and WI all included PGN Pandora in their EMP to help bridge surface/column info for AQ managers.

EMPs: An opportunity to bridge scales

Distributed sensor networks
Characterizing emissions near the source

Reference Monitoring Sites
Rigorous and detailed chemical measurements

Satellite-based monitoring
Hourly maps of pollutant transport

REPORTS: The final rule is effective on December 26, 2015.

[Environmental Protection Agency (EPA)]

AIR & WATER QUALITY STANDARDS FOR OZONE
[Regulations.gov]

The following topics are discussed in this preamble:

Executive Summary
1. Background
A. Legislative Requirements

The final rule is effective on December 26, 2015.
Phase I and II PGN Deployments Initial Focus on “Ozone Transport Region” in NE U.S. due to O3 non-attainment issues

2020 Ozone Threshold 75 NAAQS with 2008 Ozone Nonattainment Areas

TROPOMI L2 Validation in the U.S. Mid-Atlantic Region; S5P Validation Project 28695
EPA PGN sites contributing to S5P evaluation and validation
THANK YOU!

EPA-PGN contribution would not be possible without much assistance from:

- Luftblick and ESA
- NASA Pandora Project
- NYDEC, NJDEP, CTDEEP, WDNR state air quality agencies

Queens College, NY PGN site - September 2019