

Update on the Planned Fine Particle Monitoring Collocation

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Fine Particle Monitoring Collocation

- Objectives
 - Generate information needed to assess comparability of particle speciation data collected by remote area monitoring networks in the U.S. and Canada
 - Assess comparability of data from the two networks to promote appropriate uses of the joint data sets
 - Identify opportunities for improving comparability and conducting additional collaborative monitoring and data analysis activities



Fine Particle Monitoring Collocation

- Approach
 - Install & operate an IMPROVE speciation sampler at a Canadian remote area monitoring site on the same monitoring schedule as used by the Canadian network
 - Install & operate a nephelometer as used by IMPROVE at the same monitoring site
 - Conduct comparability assessment analyses and distribute data and assessment results



Fine Particle Monitoring Collocation

- Status & Plans

- Meteorological Service of Canada CARE atmospheric observatory site at Egbert Ontario was selected (January, 2005)
- IMPROVE program will install, train local operators and provide all required analytic & data support to operate the sampler (April, 2005)
- Meteorological Service of Canada will provide the operator, power and security for the sampler and for a nephelometer
- U.S. Forest Service will loan EC a complete nephelometer system for use at Egbert



Current Egbert CARE Site Measurements

CAPMoN

-Filter Pack Air/NH4	Cl, NO3, SO4, NH4, Na, K, Ca, Mg, SO2, NHO3 daily
-Precipitation	Cl, NO3, SO4, NH4, Na, K, Ca, Mg, PH daily
-PM Speciation	Cl, NO3, SO4, NH4, Na, K, Ca, Mg, SO2, NHO3, NH3, EC/OC every 3 days
-Dichot	total mass 2.5, 10 micron every 3 days
-Ozone	continous
-Nox, PAN	continous

NAPS

-VOC Multi-Canister Sampling	Volitile Organic Compound ever 3 days
-PAH	PUF Hi-vol sampling every 6 days
-Aldehydes	Carboyl sampler every 6 days



Current Egbert CARE Site Measurements (continued)

Sky Conditions

Hourly Sunshine Data

Meteorological/Hourly Data

Meteorology/Daily Climate (RCS Station)

U.S.A. Climate Reference Network

Precipitation - Standard Gauge

Manual Climate

Metals - ICP - MS

TEOM 10

TEOM 2.5

CASNET/NDDN

AEROCAN

Total Gaseous Mercury - 15 Min Avg

Total Gaseous Mercury - 1 Hr AVG

Mercury in Precipitation

CPC

Upper Air - Met/Ozone

NMHC

View of the Egbert CARE Site Monitoring Platform



View from the Egbert Platform – shows rural setting



View from CARE Platform – shows research station in the background



Fine Particle Monitoring Collocation

- Next steps
 - Conduct comparability assessment
 - Merging the data sets – RPO-funded VIEWS may begin inclusion of available Canadian particle data
 - Identify who will do the assessment – joint or separate teams?
 - Decide upon a data analysis approach – consider approaches from previous collocation studies
 - Time-frame – a minimum of a year before sufficient data are available to initiate an assessment
 - Consider establishing additional collocation sites, or additional instrumentation at Egbert

