

NCore Readiness Self-Assessment for State/local/Tribal Agencies

Agency Name _____ Date Prepared _____ By _____

A. NETWORK DESIGN

- a. Proposed NCore Station #1 ___ NEW SITE ___ EXISTING SITE AQS # _____
- b. Proposed NCore Station #2 ___ NEW SITE ___ EXISTING SITE AQS # _____
- c. Proposed NCore Station #3 ___ NEW SITE ___ EXISTING SITE AQS # _____

Item	Criteria	Status	Next Steps
1	Urban or Rural	Largest MSA(s) covered by urban station.	
2	Scale of Representation	Neighborhood ___ Urban ___ Regional ___ Other ___	Neighborhood scale or larger highly recommended.
3	Population Oriented	Yes ___ No ___	Population oriented monitoring highly recommended.
4	Proximity to local emissions sources	No biasing local sources within 500 meters for urban stations. No biasing sources or large urban population centers within 50 km for rural stations.	
5	Suitability for meteorological measurements	Distance from obstructions is 10x height of obstruction above station. See Volume IV: Meteorological Measurements Version 1.0 (Draft)	
6	Information (including site photographs) provided for AMTIC NCore web site	Photographs in 8 cardinal directions needed.	
7	Station Coordinates	Determined by GPS	
8	Site visited by EPA in past 3 years	Meets applicable Appendix D and E criteria.	New sites should be visited by EPA before final NCore approval is requested

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	Item	Criteria	Status	Next Steps
9	Network leveraging	Collocation with other networks encouraged: STN__ Supplemental CSN__ NATTS __ CASTNET __ IMPROVE __ NADP __ PAMS __ Other __		
10	Applicable site fields updated in AQS including coordinates	Consider setting additional monitor type to "Proposed NCore" (station should also be categorized as SLAMS).		
LOGISTICAL CONSIDERATIONS				
11	Site access	Access for at least five years is suggested.		
12	Power requirements and availability	200A service suggested. 240vac service typically needed for a/c. Key power outlets protected by UPS units.		
13	Telecommunications	Minimum dial-up service. Broadband service suggested for polling of 1-minute data.		
14	A/C cooling capacity	Minimum 18,000BTU a/c capacity.		
15	Interior space	Sufficient for minimum of two 19" inner dimension, 6' tall instrument racks and related equipment and accessories, or equivalent shelf space.		

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16	Exterior space (roof and accompanying platforms)	Allow for: a) 1m spacing of low-volume PM sampler inlets – up to seven* required plus PEP audit sampler. b) 1m spacing between low-volume PM sampler inlets and gas manifold cane or Teflon tubing. Facilitate usage of TTP audit vehicle or trailer.		
17	10m tower compatibility	Required for meteorological equipment, NOy converter. Room to drop tower for calibrations and audits.		

*Notes

1. PM2.5 FRM sampler
2. PM10c FRM sampler for PM10-2.5 mass (dichotomous sampler could substitute for #1 and #2 if future FRM/FEMs available) or PM10-2.5 continuous
3. PM2.5 continuous sampler (does not have to be FEM/ARM)
4. PM2.5 speciation sampler (CSN or IMPROVE)
5. URG sampler for carbon channel (PM2.5 speciation) if using CSN samplers
6. Sampler for PM10-2.5 speciation (unless dichotomous sampler or PM2.5 speciation sampler (spare channels) is used)
7. URG sampler for PM10 carbon speciation (speculative need for PM10-2.5 carbon speciation by difference)

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B. REQUIRED PARAMETER/METHODOLOGICAL EVALUATION

- d. Proposed NCore Station #1 ___NEW SITE ___EXISTING SITE AQS # _____
- e. Proposed NCore Station #2 ___NEW SITE ___EXISTING SITE AQS # _____
- f. Proposed NCore Station #3 ___NEW SITE ___EXISTING SITE AQS # _____

	Parameter	Existing Measurements		Future Measurements		Notes
		Sampling Began	Method	Date Expected	New or Relocated	
1	Ozone					Year-round operation (not seasonal)
2	Sulfur dioxide					High sensitivity
3	Carbon monoxide					High sensitivity
4	Nitrogen oxides (NO _y)*					High sensitivity External converter mounted at 10m
5	PM _{2.5} mass					1-in-3 day FRM/FEM integrated
6	PM _{2.5} continuous					FEM or ARM preferred but not required
7	PM _{2.5} speciation					1-in-3 day (Met One & URG 3000N samplers) or IMPROVE
8	PM _{10-2.5} mass					Integrated samplers (FRM difference or dichot) or continuous monitor

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	Parameter	Existing Measurements		Future Measurements		Notes
		Sampling Began	Method	Date Expected	New or Relocated	
9	PM10-2.5 speciation					Details to be provided later (2008) on sampling requirements.
10	Wind speed and direction**					At 10 m
11	Ambient temperature**					At 2 m
12	Relative humidity**					At 2 m
13	Optional – Vertical wind speed, solar radiation, precipitation, barometric pressure, delta-T for 2-10m.					
14	Optional – Ammonia and nitric acid					Pilot project using denuders scheduled for 2008-2009.

Notes

* Although the measurement of NOy is required in support of a number of monitoring objectives, available commercial instruments may indicate little difference in their measurement of NOy compared to the conventional measurement of NOx, particularly in areas with relatively fresh sources of nitrogen emissions. Therefore, in areas with negligible expected difference between NOy and NOx measured concentrations, the Administrator may allow for waivers that permit high-sensitivity NOx monitoring to be substituted for the required NOy monitoring at applicable NCore sites.

** EPA recognizes that, in some cases, the physical location of the NCore site may not be suitable for representative meteorological measurements due to the site's physical surroundings. It is also possible that nearby meteorological measurements may be able to fulfill this data need. In these cases, the requirement for meteorological monitoring can be waived by the Administrator.

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C. SUPPORTING EQUIPMENT EVALUATION

- a. Proposed NCore Station #1 ___ NEW SITE ___ EXISTING SITE AQS # _____
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Item	Criteria	Status	Next Steps
1	Calibrator (field) Suitable for trace-level dilutions, see Appendix A audit concentrations. Capable of automated QC checks. Internal O3 generator – photometer preferred.		
2	Calibrator (lab or field) Suitable for generation of MDL-level concentrations		
3	Zero Air Source Compliant with TAD recommendations. Ultra-pure air cylinder recommended for occasional comparison to zero air source. Capacity for 20+ LPM of dilution air.		
4	Data acquisition system Digital-capable system		
5	Gas cylinder standards Suitable for trace-level dilutions, see Appendix A audit concentrations, EPA Protocol certifications. Special low-level standards needed for MDL concentrations (CO, SO2, NOy)		
6	Meteorological calibration devices Provide NIST traceability of required meteorological parameters.		
7	Sampling manifold Per Appendix E. Residence time <20 seconds, only glass or Teflon materials, probe and monitor inlets acceptable heights.		

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8	Auditing equipment	Independent calibrator, zero air source and gas standards compatible with trace level specifications. Independent meteorological and flow standards, it not already available.		
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D. ORGANIZATIONAL FACTORS

	Item	Criteria	Status	Next Steps
1	Training considerations	Key monitoring personnel have attended OAQPS provided monitoring workshops or equivalent training.		
2	Monitoring station documentation	NCORE station(s) described in Annual Monitoring Network Plan.		Must be included in plan due on or before July 1, 2009. Discuss siting with health researchers and other data stakeholders.
3	Section 103 funds received and obligated for equipment purchases			Work with EPA Regional contacts.