

DRAFT
Version 5
September 6, 2005

New Guidance Document on Tribal Ambient Monitoring

MOTIVATION, NATURE, AND PURPOSES OF THE NEW DOCUMENT

These are addressed in Section I of the outline/partial draft below. **TIMING**

The goal is to have the document final by April 2006, which is when EPA will finalize the National Program and Technical Guidance for the air program for FY2007.

It would be ideal if the first draft of the document – even if only partially complete – can be available for presentation and discussion at the October 4-6, 2005 annual meeting of the National Tribal Air Association in Uncasville, Connecticut.

PROPOSED PROCESS FOR DEVELOPMENT

The document will be developed by a work group consisting of OAQPS staff, Regional Office tribal air coordinators who are able to devote their time, and interested tribal air professionals. It is hoped that participants from all three groups stay with the process from beginning to end, rather than have a changing set of participants from meeting to meeting. However, each meeting/call will be open to any interested tribal professional.

Julie McClintock of OAQPS will facilitate the development process and ensure good communication among participants, assisted by other experienced tribal coordination staff in OAQPS including Annabelle Allison, Laura McKelvey, and Sara Terry.

The Ambient Air Monitoring Group in OAQPS will coordinate the writing and editing. A team of volunteer authors has been identified for each section of the first draft, in most cases including both EPA and tribal participants. The list of authors is in a separate document.

Regular meetings/calls will be held from now until December. Some calls will involve all participating EPA and tribal staff. Some calls will be for tribal participants with EPA staff included only to the extent needed for purposes of clarifying EPA-provided information or proposals. EPA staff will also work internally with each other on action items and writing assignments as needed in between the meetings/calls with tribal staff.

EPA will put out information about the calls on the Tribal Air call, the OAR tribal website (www.epa.gov/tribal) and the tribal list serve.

We will share the first clean draft of the document with a wider group at the NTAA meeting in October and at other Tribal meetings. Consultation steps with tribal leaders will be taken when we have a final draft prepared.

Guidance Document on Tribal Air Monitoring

OUTLINE AND PARTIAL DRAFT
SEPTEMBER 6, 2005

I. Purpose and Audience

A. Background on EPA's Tribal Air Monitoring Program

EPA's tribal air policy emphasizes that as sovereign governments, tribes set their own air program goals. Therefore, EPA's goal for the tribal air program is appropriately to help the tribes understand their air quality problems and to establish and meet their air quality goals, rather than to set goals or timetables for the tribes.

Tribes are diverse in their air quality problems, challenges, and capabilities. In addition, tribes often also face non-air risks to the health of their members -- as well as other challenges and disadvantages -- that are different from those facing non-tribal communities. Because of the diversity in situations and goals from tribe to tribe, EPA has taken the approach of delegating to the Regional Office level the tasks of assisting tribes in identifying their goals and the task of managing the available resources to help meet those goals. Because Regions understand individual tribal situations, effective decisions about funding and in-kind assistance are best made at the Regional Office level. Regional Offices have taken the initiative on helping tribes set air quality goals and design ambient monitoring to support them. Regions have prioritized requests from tribes when they collectively exceed the tribal air management grant funds available to the Regional Office. Regional Offices also negotiate, award, and manage grants to individual tribes. Regional Offices provide in-person, telephone, and written guidance and assistance to the tribal governments at all these stages. Technical training on the actual operation of monitors is available to tribes through the Tribal Air Monitoring Support (TAMS) Center, which is supported by a grant from EPA Headquarters. To date, Regional Offices and individual tribes have entered into grants that have dedicated a portion of the available tribal air management resources to plan, establish, and operate approximately [insert #] ambient air monitoring stations in Indian country.

In the course of this deliberately highly decentralized process, Headquarters and Regional Offices have prepared a limited body of strategic guidance on tribal air monitoring, i.e., guidance on deciding whether to monitor, what type of monitoring to do, and how EPA will prioritize requests for funding assistance. This guidance is rather general in nature, reflecting the need to accommodate the diversity of tribal situations. In addition to this limited body of strategic guidance, tribes have access to the large body of EPA guidance on monitoring technologies, quality assurance, and data management. While originally prepared for use by state and local government agencies, this technical guidance is equally applicable to monitors in tribal settings.

B. Purpose of this Guidance Document

This guidance document is not intended to modify any existing EPA policies on tribal air quality management. The intended purposes of this guidance document are to help implement existing EPA policies better in order to accomplish the following:

- ensure that tribal goals for tribal air monitoring projects are clearly stated and documented in grant agreements (or other suitable forms) before resources under EPA management are applied, that progress in meeting those goals is tracked, and that tracking results are used to make adjustments when appropriate.
- implement the principles that the tribes are regulatory partners and that EPA's decision-making on tribal matters is usually best placed at the organizational level closest to the affected tribe.
- provide information and insights that will be useful to Regional Offices in applying existing criteria to prioritize available funds for tribal air quality management including monitoring. This guidance document is not meant to establish new criteria for funding decisions. The existing guidance on criteria for award of tribal air management funds was issued by Assistant Administrator Jeffrey Holmstead in January 2005.
- serve as a useful information resource for tribes as they determine their need for monitoring.
- serve as a useful information resource for the tribes as they prepare work plans and formal grant applications and as Regional Offices made decisions on grants, since it will contain commonly accepted principles and terminology for both the grant applicants and the grant reviewers.
- offer a one-stop resource for locating background and technical information that is relevant to planning and conducting tribal air monitoring efforts. It should help tribal professionals locate what is useful when they need it.
- assist tribes to understand monitoring data.
- help integrate and coordinate tribal and state/local/national monitoring strategies and activities.

recognize the need for flexibility to address the unique needs of individual tribes.

C. Audience

The intended audiences for this document are tribal environmental professionals and EPA Regional Office and Headquarters staff who are involved in resource allocations, tribal air grant award and management, program evaluation, strategic planning of monitoring networks, or technical support to monitoring programs. State monitoring officials may also benefit from

reading this document, as it may improve their understanding of tribal goals and how EPA strives to help tribes meet their goals. This should allow them to collaborate more efficiently with tribes whenever collaboration serves state and tribal objectives.

D. Relationship to EPA's Strategic Plan, Budget, and Program Assessment Process

EPA's Strategic Plan for 2003-2008 contains this statement regarding EPA's commitment to work with tribes:

EPA is committed to working with tribes on a government-to-government basis to develop the infrastructure and skills tribes need to assess, understand, and control air quality on their lands. We will increase air monitoring in Indian country, and, in consultation with tribes, we will establish needed federal regulatory authorities and help tribes develop and manage their own air programs in a manner consistent with EPA Indian Policy and tribal traditions and culture. We plan to complete a policy determining when Federal Implementation Plans are appropriate for bringing Clean Air Act programs to Indian country. We will support tribal air programs by providing technical support, assistance with data development, and training and outreach, and we will help tribes participate in discussions of national policy and operations and in regional planning and coordination activities. Where tribes choose not to develop their own programs, we will implement air quality programs directly.

In developing its annual budget plans, EPA considers whether sufficient resources are available to support tribal air monitoring that is necessary and appropriate to protect air quality in Indian country or to provide important data that helps meet state, local, or national monitoring data needs. Each year, EPA's budget request to Congress requests a certain amount of funding for use in giving to grants to tribes to support air quality management. For the last several years, Congress has appropriated about \$11 million for this purpose. It has become apparent that increasing numbers of tribes are interested in establishing monitoring stations, and that not all interested tribes will be able to obtain EPA financial support for ambient air monitoring if resources for tribal air quality management remain steady. Many if not all Regional Offices report that already they are not able to meet all requests to provide grant funds for tribal air monitoring. Other than reporting this situation, this guidance document is not intended to examine or make recommendations regarding the overall level of EPA funding and in-kind support to tribal air quality management. EPA considers this and other budget issues through other processes. The experience of working across Headquarters and Regional Office and with tribal professionals in the course of preparing this guidance document [will/has] better informed EPA staff about the tension between resources and needs, and will inform EPA budget decision-makers in future years.

The Office of Management and Budget (OMB) on a regular basis assesses EPA's Air Program to determine how well each part of the Air Program is managed in terms of having appropriate, and well defined goals; applying resources towards those goals; providing guidance to partners who help meet the goals; having systems in place to observe how well the goals are met; and making adjustments in the program when necessary to reach those goals. In addition to

meeting OMB expectations, this “goals and feedback” model is just good common sense because it helps make sure that limited resources are used in ways that best meet the right goals. Programs that are found by OMB to have serious weaknesses in management are asked to make corrections and face the possibility of funding reduction in future year budget proposals to Congress.

The most recent round of review of the NAAQS air quality program by OMB has made EPA managers and staff more conscious about the importance of being able to document that the tribal assistance portion of the Air Program meets OMB measures and goals, guides participants to meet those goals, tracks progress, and make adjustments when needed. This guidance document on tribal air monitoring is a new part of such documentation.

It should be noted that unlike most EPA programs, the goals of the tribal air monitoring program have been set by the Regional offices and tribes with general guidance from Headquarters and OAQPS. A result is that people inside and outside of EPA who are not personally involved in working with tribes on monitoring projects need the benefit of reporting systems to be able to be aware of and assess what is being accomplished with available resources. The preparation of this document represents one cycle of such assessment and reporting, in that current and recent tribal air monitoring programs are reviewed in Section IV.

E. The Tribal Perspective

This is an EPA document conveying EPA guidance and reflecting EPA policies. It was developed by a workgroup that included tribal environmental professionals. EPA has opened the development of this document to all interested tribal environmental professionals to assist us to make a document that takes into account tribal input and is meaningful to tribes, as well as to EPA. As this is an EPA document, EPA will make the final call on the contents. However, to ensure that tribal views are represented, particularly if they are not the same views as those represented in this document, we are at various points in the document delineating text blocks which will offer comment or reaction from the tribal perspective. These passages are provided by tribal environmental professionals and NTAA and do not represent EPA policy or guidance, but may be useful to some or all readers of this document.

II. Guidelines for EPA Support for Tribal Air Monitoring

This section states the guidelines that EPA applies in its air monitoring work with tribes. The purpose of listing them here is to promote understanding and observance of the principles by EPA staff, and to help tribes anticipate and understand the basis for future EPA actions. Most of these principles flow from the Clean Air Act, the EPA Indian Policy, the Tribal Air Rule, and other existing law and EPA rules and policies on budget, quality assurance, ambient monitoring, etc. The wording of these principles was the subject of the first few conference calls among the project participants. Individual EPA Regional Office may have their own guidelines or grant criteria. In the course of developing this guidance document, Regional Offices reviewed their guidelines to ensure they did not conflict with those stated here.

- a. EPA has a responsibility to relate to each tribe on a government-to-government

basis, and should act in the tribe's best interest. To the extent possible, EPA should also take into account the tribe's preferences. EPA is obligated to consult with tribes at an appropriate level. Input from tribal environmental professionals was obtained starting at an early point in the development of this guidance/strategy. However, EPA's consultation responsibilities may require continued discussions between tribal leaders and appropriate EPA staff or management

- b. Tribes set their own air quality goals. EPA strives to assist them in doing so and in determining how monitoring can help clarify and/or accomplish those goals.
- c. Monitoring supported by EPA grant funds should always be for the identified purpose of characterizing and/or managing specific known or suspected short term and/or long term risks to environmental values that depend on maintaining or restoring good air quality, including:
 - i. Human health risks (including informing exposed persons about the level of their exposure)
 - ii. Ecological risks
 - iii. Cultural resources and values, including those related to visibility.
- d. EPA and each tribe receiving funding to conduct monitoring should reach a clear understanding, before operations commence, of the duration of the funding or the timing and process for future decisions regarding continuation of the funding. There needs to be periodic re-evaluation of the need for and value of ongoing monitoring, for example on a three- to five-year cycle.
- e. EPA should support tribal capacity building, for example, by helping to develop the capabilities of tribal staff. Contractor support may be necessary and appropriate in some situations, but generally is not the preferred approach to carrying out monitoring. In the area of ambient monitoring, capability includes development of monitoring objectives, development of quality assurance plans, installation and operation of the monitors, execution of quality assurance plans, data handling, and understanding the implications of the observed ambient concentrations. EPA should seek to allow a tribe sufficient support and opportunity to progress through these stages.
- f. EPA has limited resources in its enacted budget to help pay for tribal air quality management in general. EPA is therefore unable to support all monitoring in Indian country that may have value to the affected tribes.
- g. There needs to be consistency/fairness across tribes, but also flexibility to hear and if appropriate to address unusual or unexpected tribe-specific situations.
- h. Decisions affecting specific tribes should be made at a level where individual situations can be appreciated.
- i. EPA should encourage all parties to take advantage of all available data on ambient air quality where technically relevant. Operating monitors may provide useful information on air quality some distance from their location and information on transport into and out of state and tribal lands.
- j. Tribes should have equal opportunity to participate in programs that are not inherently tied to state/tribe distinctions, and to benefit from resources used to support those programs, where such access is consistent with program goals.

- k. Grant procedures and grant performance must comply with applicable laws and regulations.
- l. EPA will work with tribes to ensure that there is timely EPA and public access to data collected with federal funds. EPA will need to explain the significance and need for this access to tribes generally and to each grant recipient. EPA should help tribes understand the significance of their data quickly so tribes are never less aware than others of the data and the data's implications.
- m. This EPA guidance does not limit any tribe's right to monitor for whatever air pollutants it chooses in its own portion of Indian country.

III. Background for Planning Tribal Air Monitoring

[This section will contain background on the Clean Air Act, other relevant laws, regulations, and policies, and other information that is not specifically about tribal air monitoring. It is intended to assist tribal professionals who are not already familiar with this material, so that they can participate more easily and effectively with EPA staff. To save space and time, this section will likely consist of thumbnail sketches and pointers to other documents for fuller descriptions. In order to be brief and understandable to tribal professionals unfamiliar with the history and complexity of air pollution law, policy, history, and technology, the thumbnail sketches will be simplified and will not convey all provisions or nuances. They will assist tribal staff in understanding the more detailed references and in discussion these topics with EPA specialists and more experienced tribal professionals.

- a. EPA's strategic plan under the Government Performance and Results Act, the EPA budget and operating plan, etc.
- b. Relevant CAA provisions, the EPA Indian Policy, the Tribal Air Rule, and the draft document "Implementing the Clean Air Act in Indian Country"
- c. The January 27, 2005 Holmstead memo on criteria for award of tribal air grants
- d. Tribal Environmental Agreements
- e. The existing state/local/other monitoring networks: types, purposes, history, funding
- f. The AMTIC website
- g. The draft National Ambient Air Monitoring Strategy and related rulemaking
- h. QA requirements, example QAPPs, resources for developing QAPPs
- i. Data systems for ambient air measurements (AQS, other)
- j. Availability of ITEP and TAMS support
- k. Availability and role of "benchmarks" for health and ecosystem effects
- l. National Emissions Inventory
- m. National Air Toxics Assessment
- n. Air quality modeling methods and tools, in particular how they may be able to give insight into air quality in Indian country when ambient monitoring is not available.
- o. Indoor air issues including radon and mold
- p. The New Source Review and PSD programs and their relationship to monitoring needs
- q. Clean Air Act section 110(a)(2)(D) – the interstate transport provision that also

addresses transport between states and tribes

- r. The GAP program
- s. Visibility provisions of the Clean Air Act, mandatory and non-mandatory Class I areas]

IV. Tribal Air Quality Issues, Relevant Ambient Air Monitoring, and Current and Recent Tribal Air Monitoring Activities Directed Towards These Issues

[This section will provide background on ambient air quality issues that can or may exist in Indian country. For each issue, the section will explain the possible role that ambient monitoring can play in assessing the air quality situation facing a tribe, improving air quality, or preventing air quality degradation. The basic technology and operating requirements for the appropriate type of monitor(s) will be explained (or links to such descriptions elsewhere will be provided). Finally, recent and current tribal monitoring programs that were undertaken to address the particular issue will be reviewed including their air quality findings to date and whether and how the data from the monitoring program has yet played a role in shaping the tribe's air program.]

[The following is the starting list of air quality issues:

Nonattainment with health-based National Ambient Air Quality Standards (ozone, current PM2.5 NAAQS, possible future PM2.5 NAAQS, PM10, possible future PMcoarse, lead, SO2, NO2, CO)

Impairment of visibility when viewing landmarks and vistas within or near reservation.

Hazardous air pollutants that may cause cancer.

Hazardous air pollutants that may have long-term noncancer health effects.

Hazardous air pollutants that may have short-term noncancer health effects.

Near-roadway exposures to a complex mixture of pollutants from motor vehicles

Air quality degradation that contributes to exposure via food or water]

[For each air quality issue, the following outline is suggested:

Name of air quality issue/contaminant (from above list)

Emitted pollutants that contribute to the ambient problem, and sources of those pollutants that typically are important contributors to those pollutants. This information will help tribes determine whether they are likely to have a locally created air quality problem of this type, or a transported problem from upwind lands.

Monitoring needed to determine the existence, magnitude, and geographic extent of the problem. This should address monitor type, principle of operation, certification/approval

requirements if any for official status, location/siting principles, necessary period of monitoring to reach conclusions that can be used for air quality management, operating requirements including QA, approximate cost to acquire and operate, data generated, data management approaches/options including public notification aspects)

Monitoring needed to determine the on-reservation sources of the problem in order to guide tribal efforts to reduce the problem.

Monitoring needed to identify the role of off-reservation sources and/or to build a case or partnership for controlling those sources

Review of recent or current tribal monitoring programs that were undertaken to address known or suspected cases of this air quality issue/contaminant. Include tribe, dates, monitor types and number, tribal contact person, EPA Regional Office contact person, amount of data meeting QA requirements that has been obtained so far, information on access to that data, concentrations observed, current status (operating, discontinued), how the data from the monitoring program has contributed to tribal air quality goals, any clear implications or recommendations for near term adjustments in current monitoring projects, and lessons learned that can help guide future projects by this tribe or other tribes.

[It likely will be necessary for the EPA Regional Offices to each take responsibility for working with their tribes to categorize tribal air monitoring efforts they have supported with grant funds or otherwise have knowledge of, and to write the reviews of recent or current tribal monitoring programs. At this time, the lead author(s) and authorship team members should focus on writing an example review of one tribal monitoring program example for each air quality issue/contaminant.]

V. Implementation of Monitoring

[This section's goal is to provide a head start to tribes new to monitoring on getting a desired monitoring program into operation, aside from the process of applying for EPA funding support which is addressed in another section. It should cover documenting goals and data quality needed to meet the goals, preparing quality assurance project plans and carrying them out, equipment purchase, siting, training of operators, and data management and reporting.]

VI. The Role of Tribal Monitoring In the National Monitoring Strategy

[This section will explain the history, status, and content of the National Ambient Air Monitoring Strategy and the relationship between it and tribal monitoring programs.]

VII. Understanding Monitoring Data and Its Implications

[This section's goal is to provide a head start to tribes new to monitoring on the tools for and processes of organizing, summarizing, and analyzing the data so as to understand its implications for the tribe.]

VIII. Storage and Access to Monitoring Data

[This section will address the process of getting data into EPA's AQS system, what data should be entered and when, who has access to data once submitted to AQS, and how AQS can be used to retrieve tribal monitoring data in forms useful to the tribe itself.]

IX. Assessment of Ambient Air Quality in Indian country in the Absence of Air Monitoring

This section will give tips on how in some situations it is possible to characterize or bound some aspects of tribal air quality when monitoring has not been performed. This is intended to assist tribes which are not able to obtain funding for monitoring and may also help tribes decide whether ambient monitoring is the best use of available resources.

- a. Using very nearby monitors that are off tribal lands. This can be informative for ozone and PM_{2.5} depending on the geographical relationships and features of the situation. Proximity does not always mean representativeness, however.
- b. Larger scale spatial interpolation of data from several non-tribal monitors
- c. Predicting concentrations using air quality models. Meteorology, and estimates of emissions
 - i. Large scale (grid models)
 1. concept
 2. how to get this type of modeling done
 3. results that are already available from modeling performed by EPA and other organizations
 - ii. Local scale (dispersion/plume models)
 1. concept
 2. how to get it done
 3. results that are already available from modeling performed by EPA and other organizations (e.g., NATA and others)
 - iii. Caveats

Estimating upper/lower bounds on concentrations in Indian country based on analogy to non-tribal monitored settings. Tribal lands with similar source patterns as certain urban or rural areas on state land can learn something from monitored concentrations in those urban areas.

How to Request EPA Funding and Other Support

[This section is intended to give the first steps in applying for funding and tips for things to be careful about. In the early conference calls on this document-writing project, the point was made that this section may emphasize that it is appropriate for each tribe to request the resources actually needed to accomplish its monitoring goals, to create a more complete record regarding the sufficiency of resources made available.]

XI. Other Air Quality Management Program Elements

[This section is intended to give first steps and other information regarding development of emissions inventories and source reporting, adoption of source emissions standards, adoption and operation of permitting programs, etc. for the benefit of tribes that are considering or are in the early stages of involvement in such programs.]

XII. The Tribal Perspective

[This section may or may not be needed, depending on whether the tribal perspective can be adequately conveyed by the use of delineated text blocks within individual sections. The identified coordinator/authors for this section will also be responsible for coordinating the development of those text blocks in other sections.]