May 2006

8-hour Ozone Flex Program

Introduction

The 8-Hour Ozone Flex (8-O_3Flex) program is a voluntary agreement between Federal, State/Tribal and local communities to encourage 8-hour ozone attainment areas nationwide to reduce ozone emissions as needed to maintain the National Ambient Air Quality Standard (NAAQS) for ozone. This program will support and reward innovative, voluntary, local strategies to reduce ground-level ozone, thereby improving air quality and helping areas maintain attainment. In addition, the program will allow States and locals to receive "credit" for these efforts in the State/Tribal Implementation Plans, and help them avoid a violation of the 8-hour ozone standard. The 8-O_3Flex program could be considered the third generation of flexible, ozone attainment initiatives, as its predecessors include the Flexible Attainment Region (FAR) and the 1-Hour Ozone Flex program, which focused on taking proactive steps to reduce emissions of ozone-generating pollutants to improve an area's air quality. Areas that participated in the 1-Hour Ozone Flex program are: Austin and Corpus Christi, TX; Little Rock, AR; Shreveport-Bossier City, LA; and Tulsa, OK. Readers may notice components of the earlier flexible ozone attainment programs herein.

This document provides guidance on the 8-O_3Flex program, including general applicability, regulatory issues and the agreement development process. This program guidance has been discussed and reviewed by stakeholders that include EPA, State and local government as well as environmental groups.

Throughout this document are references to websites and guidance documents that support the 8-O_3Flex program. Should one experience difficulty accessing any of these resources, or have additional questions on the 8-O_3Flex program, please contact Carrie Paige, EPA Region 6, at (214) 665-6521, paige.carrie@epa.gov or Barbara Driscoll, EPA Office of Air Quality Planning and Standards, (919) 541-1051, driscoll.barbara@epa.gov.

General Applicability

1. What is the purpose of this guidance?

The purpose of this guidance is two-fold: to provide a structure and framework for local actions that reduce ozone emissions and thus maintain the 8-hour ozone NAAQS; and to provide a means for local communities to take the initiative in maintaining and improving their air quality. This guidance is our response to requests for an 8-O_3Flex program, similar to the previous 1-hour ozone flex program.

2. What is the 8-O_3Flex program?

The 8-O_3Flex program is a collaborative, voluntary program intended to preserve or maintain 8-hour ozone attainment areas and reverse deterioration of air quality in 8-hour ozone attainment

areas that are nearing nonattainment. The program includes contingency measures that will reduce local emissions of ozone precursors, implemented through an intergovernmental agreement (Memorandum of Agreement) between EPA, the State/Tribe, and the local community. The 8-O_3Flex program may allow future State Implementation Plan (SIP) credit for new ozone reduction efforts. The program may assist an area in maintaining existing ozone control measures, and help an area avoid redesignation to nonattainment for the 8-hour ozone NAAQS.

3. Sections 110 (a)(1) and 175A of the Clean Air Act (the Act) require maintenance plans with contingency measures. How does the 8-O_3Flex program differ from these maintenance plans?

Section 110(a)(1) of the Act requires that each State adopt and submit to EPA within three years after the promulgation of a NAAQS (in this case, the 8-hour NAAQS for ozone), a plan which provides for implementation, maintenance and enforcement of the 8-hour ozone NAAQS for all areas within the state. The EPA has not required that these plans include specific, detailed contingency measures for attainment areas, unless the area had also at the time of its 8-hour designation been designated as either (1) nonattainment for the 1-hour ozone NAAQS; or (2) attainment for the 1-hour ozone NAAQS with an approved 1-hour ozone maintenance plan. Should the area fall into either of these categories, they would not be eligible to participate in the 8-O_3Flex program, as discussed below. Areas eligible to participate remain subject to the requirements of Section 110(a)(1) of the Act.

Section 175A of the Act requires maintenance plans for areas that are applying for redesignation from nonattainment to attainment of the NAAQS for any air pollutant. Areas applying for redesignation to attainment for the 8-hour ozone NAAQS are not eligible for the 8-O_3Flex program, as explained below.

4. What areas are eligible to participate in the 8-O_3Flex program?

Areas eligible to participate in the 8-O_3Flex program are those designated as attainment or unclassifiable/attainment for the 8-hour ozone standard, as published on April 30, 2004 (69 FR 23858) and were neither designated at the time of 8-hour designations nonattainment for the 1-hour ozone NAAQS nor designated attainment for the 1-hour ozone standard with an approved 1-hour ozone maintenance plan. In addition, the areas cannot have been redesignated to nonattainment for the 8-hour ozone standard; their current design values must show attainment of the 8-hour ozone standard; and these areas must have air monitors in place that meet the requirements of 40 CFR 58 Appendix A, or the QA Handbook for Air Pollution Measurement System, Volume II (http://www.epa.gov/air/oaqps/qa/index.html). Any area interested in developing an 8-O_3Flex agreement should engage with appropriate stakeholders, State/Tribal agencies and EPA about the prospect.

a. Are 8-hour ozone nonattainment areas eligible to participate in the 8-O_3Flex program?

No. The 8-O_3Flex program is not intended for areas designated nonattainment, even those that include counties that meet the 8-hour National Ambient Air Quality Standard (NAAQS) for ozone. Such counties are encouraged to work with the State in considering and developing

strategies under the applicable SIPs required by the Act to achieve attainment of the 8-hour ozone standard.

b. Are areas that have been redesignated to attainment eligible to participate in the 8-O_3Flex program?

No, the 8-O_3Flex program is not intended for areas that have been redesignated to attainment for the 8-hour ozone standard, as those areas already have maintenance and contingency plans. This program is also not intended for areas that are required to or have already adopted detailed contingency plans as part of their 110(a)(1) maintenance plans.

c. Are Early Action Compact (EAC) areas eligible?

The EAC areas that are currently designated attainment for the 8-hour ozone NAAQS and meeting the eligibility requirements listed under question 4 above are eligible to participate in the 8-O_3Flex program. The 14 EAC areas that are currently receiving a deferral of the effective date of nonattainment designation are not eligible. If these "deferred" areas are designated attainment in April 2008, then these areas would be eligible.

If an eligible EAC area chose to participate in the 8-O_3Flex program, the existing EAC requirements would continue to apply, in addition to new requirements resulting from participation in the 8-O_3Flex program. For example, the EAC protocol required an analysis for future attainment maintenance through 2012 or "Maintenance for Growth." Such requirements in the approved EAC plans would continue to remain in place. Details of the section on Maintenance for Growth can be found in the June 19, 2002 guidance, "Protocol for Early Action Compacts Designed to Achieve and Maintain the 8-hour Ozone Standard" and the specific SIP requirements are in the final EPA-approved rulemaking for each EAC area[1].

5. What is the timing for participation in the 8-O_3Flex program?

We encourage attainment areas to participate in the 8-O_3Flex program as early as possible, but will not require an area to commit to the program by a specific date. There is currently no expiration date for enrollment in the program. We recommend that an area commit to the program for a five-year term, with the option to renew at the end of the first term and each successive term. On-going program evaluation, in the form of periodic reports (page 11), will be required of each area. With the exception of catastrophic events, failure to abide by the agreement will result in an area's forfeiture of participation in the program.

6. How does an area apply for participation in the 8-O_3Flex program?

We recommend that areas submit a commitment letter or local resolutions to EPA at least four months preceding their plans to have such an agreement approved by the local/State government

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[1]The EAC protocol, as well as the proposed and approved FR notices are posted on the EAC webpage: http://www.epa.gov/ttn/naaqs/ozone/eac/

and EPA. Areas should submit an 8-O_3Flex Memorandum of Agreement (MOA), including inventory and chosen control measures, to EPA, within one year of submitting the commitment letter. The EPA will review the submittal to ensure the requirements of the program are met. Approval is achieved when the local/State participants and EPA agree with the submitted program plans and sign the MOA[2].

To minimize the potential for ozone concentrations in excess of the 8-hour standard, areas should evaluate voluntary and mandatory control options, and implement them to the extent possible for the ozone season immediately following the commitment letter. For the 8-O_3Flex program, areas must choose at least one measure (voluntary and/or mandatory) with quantifiable emission reductions for implementation within the first year of signing the MOA.

Regulatory Issues

7. Does the 8-O_3Flex program establish new or avoid existing regulatory requirements?

No, this program neither creates nor avoids regulatory requirements. Until applicable measures are incorporated into the SIP or imposed under state or local authorities, the program does not result in enforceable requirements on any party. If measures are imposed in the SIP or under state or local authority, they are binding under the SIP or state or local authority. Should an area fail to meet program requirements after signing the MOA, the immediate consequence would be the area's forfeiture of participation in the program. We encourage interested communities to carefully consider participation, reviewing pertinent issues including, but not limited to, projected industrial and population growth, trends and concerns regarding air quality, and support of such a program by the State/Tribal and local community. As a voluntary program, an area can choose to end its participation at any time.

Areas in the 8-O_3Flex program will commit to design and implement contingency measures that will be effective in preventing violations of the 8-hour ozone standard. Or, these measures will promptly bring an area back into attainment should a violation of the O_3 NAAQS occur. Participants in the program commit to a firm schedule for implementation of the contingency measures.

Regulations that apply to an area would still apply under the 8-O_3Flex program. The 8-O3Flex program does not shield an area from being redesignated nonattainment for the 8-hour ozone standard if the area is in violation of that standard. Should a violation occur, EPA would consider factors in section 107(d)(3)(A) of the Act. These include "air quality data, planning and control considerations, or any other air quality-related considerations the Administrator deems appropriate," including time to allow the implemented contingency measures to work. As long as the 8-O_3Flex agreement and control measures in the MOA are being fully implemented, EPA

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[2]The Memorandum of Agreement (MOA) is an intergovernmental agreement between the EPA, State/Tribe, and local community. The document specifies actions the signatories have agreed to implement to reduce ozone precursor emissions and thereby improve local air quality. The MOA is not a federally enforceable document.

would consider that circumstance in exercising its discretion in making a decision to redesignate the area to nonattainment.

8. Will areas receive SIP credit for emission reductions?

To the extent authorized by the Act and per established guidelines and criteria, yes. Many States and localities will initiate controls to maintain the 8-hour ozone standard and want to receive "credit" for these efforts if and when complete State/Tribal Implementation Plans need to be submitted to EPA for approval. EPA supports flexible approaches that account for the complex nature of ozone formation and has provided SIP credit for communities that adopt quantifiable measures for ozone reduction plans that may be required in the future[3].

There are two memos that support EPA's commitment to allowing SIP credit for voluntary emission reductions, and additional memos that provide guidance on incorporating voluntary measures into SIPs. Two memoranda from John Seitz, dated October 12, 2000, and January 29, 2001, state that EPA will do all it can within its authority to support States, Tribes and local entities which obtain near-term, or early, emission reductions. When considering voluntary measures for adoption into the SIP, please refer to the memo from Richard Wilson, dated October 24, 1997, and its attached guidance on incorporating voluntary mobile source emission reduction programs in SIPs, as well as the memo from John Seitz, dated January 19, 2000, and its attached Stationary Source Voluntary Measures Policy. Finally, a memo from Steve Page and Margo Oge, dated August 16, 2005, provides guidance on Incorporating Bundled Measures into a SIP. These documents are available electronically at http://www.epa.gov/ttn/oarpg/t1pgm.html and, http://www.epa.gov/otaq/transp/publicat/pub_volu.htm. See Attachment B for a list of guidance documents; this list is not exhaustive of all guidance on SIP credit.

Agreement Development Process

9. What are the steps in developing an 8-O_3Flex agreement?

Step 1 - Commitment Letter

The 8-O_3Flex agreement process is initiated by sending a commitment letter from the local community and State/Tribal air quality agency to EPA. The letter should express the local area's commitment to develop an 8-O_3Flex agreement and willingness to coordinate with the State/Tribe and EPA. The letter should be signed by the highest appropriate local officials, with the authority to implement the program and assist in leveraging staff and program funds, as needed. Resolutions or other official documents can be helpful in demonstrating local commitment. The more definitive and specific the letter, the easier it will be for EPA to assess the likelihood of a successful program. A letter may serve as the blueprint for mobilizing area resources and support. The letter should identify the strategy for developing and implementing

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[3]The criteria for SIP credit generally require that the measures be enforceable, quantifiable, surplus and permanent. Additional criteria may be required to be met, depending on the measure and applicable guidance.

the area's Action Plan. We also recommend including a realistic schedule for soliciting stakeholder support and involvement, and for the development of the Action Plan.

For areas seeking funding, we recommend http://www.grants.gov, which enables organizations to electronically find and apply for competitive grant opportunities from all Federal grant-making agencies. This website provides access to over 900 grant programs offered by the 26 Federal grant-making agencies, and some of these may be useful in the context of this program.

Step 2 - Secure Stakeholder Participation

It is important to identify, contact, and secure the participation of key stakeholders. This is most commonly accomplished by the formation of a local air quality committee consisting of representatives from local government, industry, environmental and citizens groups, and other interested parties. Stakeholders may need to be added as emissions sources and control strategies are identified.

Step 3 - Coordinate Agreement Development

The MOA is intended to form a structure for efforts and actions to improve air quality in a well-defined geographic area, and is not a Federally enforceable document. However, the control measures an area chooses to implement may require that businesses, industries, and citizens comply with ordinances, codes, or other binding State or local regulations. The geographic area covered within the MOA should be based on the location and nature of sources, or other factors important to the community. Since EPA recognized that the process will likely offer opportunities for discussion and debate, we encourage all participants to allocate adequate time to reach consensus on the content and working of the final MOA. Stakeholders will have different knowledge, strengths and time constraints. Local officials can determine the best review process for their stakeholder group or local air quality committee.

State/Tribal and EPA representatives can provide valuable technical information for local communities. Local plans should complement current or potential future State/Tribal or Federal efforts for the area. It may be helpful to have conference calls or meetings with the State/Tribal and EPA representatives to discuss specific portions of the draft proposal before a final draft is submitted for review. The EPA will review and provide comment on the draft agreement and will work with local technical or policy committees and the State/Tribe.

10. What are the agreement components?

Each agreement submitted to EPA should include the following elements:

- Executive Summary
- Action Plan
- Contingency Measures
- Coordination and Public Participation
- Schedules/Reporting
- Signature Page and Date

A. Executive Summary

In the executive summary, please include information about the area to be covered by the MOA, including a rationale for choosing the geographic boundaries. At a minimum, the geographic area should include the urbanized attainment area[4]. Please submit a map showing the geographic boundaries. It is important to include brief information about the participating and signatory groups and agencies, and the general commitments and objectives of the MOA. The executive summary should also include the agreement's duration as well as the conditions for modification or early termination of the agreement.

A summary of the background information on the air quality in the area should be included in this section. Please include indications of the status of air quality in the area and the suspected or confirmed sources of pollutants which may contribute to ozone formation.

Please include an air quality data summary, including the number and location of ozone monitors, the number and extent of ozone concentrations above the standard, the types of air dispersion modeling conducted, if any, and observed trends in emissions and ozone concentrations.

Information on the sources (i.e., point, area, nonroad and mobile) and the total amounts of emissions should be summarized here. It is important to note the extent and availability of information about nitrogen oxide (NOx) and volatile organic compound (VOC) emissions which contribute to ozone formation in the area. Specify the types of sources of these pollutants and extent to which each type or specific source contributes to the release of the total emissions in the area. It is also important for major sources in adjacent counties (especially those subject to the NOx SIP Call and/or the Clean Air Interstate Rule) to be identified since the control of emissions transported from these sources is important for attainment in the 8-O_3Flex area.

B. Action Plan

In the Action Plan, please describe the specific air quality planning, discretionary control measures and/or mandatory control measures that local governments commit to undertake as a result of the 8-O_3Flex program. The description for each measure will state how, where, when, and by whom the measure will be implemented. At a minimum, the Action Plan should be designed to keep ozone levels below the current 8-hour ozone standard. More stringent air quality targets can be agreed to by the signatories and interested parties. The Action Plan should work to achieve the 8-hour ozone standard or more stringent target as expeditiously as practicable to provide maximum benefits.

We expect that the action plan will include a description of technical tools. A key planning resource that must be part of the agreement is the emissions inventory for NOx and VOCs. And,

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[4]An urban area generally consists of a large central place and adjacent densely settled census blocks that together have a total population of at least 2,500 for urban clusters, or at least 50,000 for urbanized areas. An urban area can be in a metropolitan or non-metropolitan area.

although not required, air dispersion modeling would also be helpful. These items can be used to identify or assess and analyze the sources of emissions in the area. Such information will inform which control strategies may be effective in reducing ozone formation. Voluntary measures that may be undertaken by the general public or specific entities should be identified. The effectiveness of these measures may vary depending on the extent of participation or other circumstances. In the Action Plan, please include details about the means of ensuring the implementation of any mandatory measures selected by the local area, such as regulations, agreed orders, and verification mechanisms. Also include a discussion of mechanisms or approaches for assessing the effectiveness of voluntary measures.

EPA encourages use of the latest planning assumptions and emissions models available to evaluate and accurately estimate the benefits that control measures provide. Examples of assumptions include estimates of current and future population, employment, activity, projections and growth factors, and vehicle age and fleet mix. For mobile source emission estimations, the currently available emissions model is MOBILE6.2 (http://www.epa.gov/otaq/m6.htm). For nonroad mobile sources, the currently available model is the draft NONROAD2004 (http://www.epa.gov/otaq/nonrdmdl.htm).

All measures should be new, not previously implemented, and above and beyond what is required under State/Tribal or Federal law prior to the MOA period. The Action Plan must include a mechanism for identifying triggers (e.g., a violation, increase in emissions, etc.) and when such measures will need to be implemented (for detailed discussion on contingency measures, see page 10). There should also be a commitment to revise or update measures in the MOA accordingly if State/Tribal or Federal law changes during the MOA period. To the extent possible, the amount of NOx and/or VOC emission reduction anticipated from each measure or combination of measures should be estimated.

Again, areas in the 8-O_3Flex program should develop or update emission inventories, and design and implement contingency measures that will be effective if violations of the 8-hour standard occur. Photochemical modeling would be helpful in this effort but is not required. If modeling is not used by the 8-O_3Flex area, the Action Plan should explain what means were used to select the control measures in the Action Plan. Failure to abide by the terms of the MOA could lead to deterioration in air quality and EPA exercising its discretion to redesignate the area to nonattainment for the 8-hour standard if a violation occurs. Failure to abide by the terms of the MOA will result in the area's forfeiture of participation in the program.

Attachment A contains more detailed information about the emissions inventory, modeling, control measures and selection, as well as triggers for implementing a control measure. A general overview follows:

1. Emissions Inventories

All participants must have or must develop a baseline emission inventory for NOx and VOCs, to identify the level of emissions that would represent attainment for the area and from which to monitor growth. This emission inventory should be based on actual, typical summer day emissions of NOx and VOCs. In developing contingency measures for the Action Plan, emission

reductions from efforts or controls should be identified and readily quantifiable. Emission reductions from some measures may be difficult to quantify (e.g., voluntary measures due to unknown levels of participation) but it may be possible to specify a range of anticipated emission reductions from each or a combination of these "hard to estimate" measures. A percentage, range, or a time-adjusted sequence of total emission reductions should be included in the agreement. Each 8-O3Flex area is required to follow EPA's protocol for developing an emission inventory; the protocol and additional information on emission inventories is available at http://www.epa.gov/ttn/chief/.

2. Modeling

While not required for participation in the 8-O3Flex program, air dispersion modeling predicts the effectiveness of a proposed control strategy or a proposed control measure in reducing local ozone concentrations. Therefore, modeling would be used as a tool in this context (rather than as an attainment demonstration.) Before beginning any optional modeling effort, an area should contact the State or EPA for suggestions on what types of modeling needs to be conducted, and if models for the area already exist. A review of any existing modeling could add credence to the selection of control measures and conserve both time and money. If the area intends to perform modeling, it should follow EPA or State approved modeling protocol; the EPA modeling protocol is available at http://www.epa.gov/scram001/tt25.htm.

3. Control options

Once the types and amount of the emissions and associated sources are generally known, a list of potential air quality improvement and/or emission control options can be developed. These options may include public awareness, notification, and participation in local programs; control devices or procedures for stationary sources; or mobile source control options. These options should be different from any action required by State/Tribal or Federal law prior to or during the agreement term. Other options may include voluntarily adopting State/Tribal or Federal measures like those designed and mandated for ozone nonattainment areas. These measures could be implemented on a voluntary basis and adapted as necessary.

New State/Tribal or Federal requirements may impact the emissions in an area during the agreement period. EPA expects 8-O3Flex proposals to go beyond Federal and State/Tribal requirements in place or expected during the agreement period. Consequently, local areas should become informed of requirements that will become applicable to their sources or area during the anticipated agreement period as they evaluate potential air quality control measures. Even if Federal and State controls are expected to be sufficient to keep an area in attainment, local measures may provide the extra reductions needed to maintain the standard. A list of ideas and measures implemented by the Early Action Compact areas can be found at http://www.epa.gov/ttn/naaqs/ozone/eac/index.htm#EACsummary.

4. Selection of control measures

Emissions, modeling, source, and control information can be analyzed to select appropriate control measures that will help achieve desired emission reductions and prevent high ozone levels. Specific 8-O3Flex plans can tailor the use, combination, and timing of specific measures to meet local needs and may contain public notification and emission reduction provisions, either

as primary or contingency measures. The timing of control measures and the period of years that the MOA is in effect will be agreed upon by the signatories. EPA recommends that an area commit to the program for a 5-year term, with an option to renew it at the end of the term and each successive term. However, while EPA recommends that an area commit to the program for a five year term, contingency measures must be adopted and implemented as soon as possible, but no later than two years after the event that triggered the measure.

C. Contingency Measures

The Action Plan should contain control measures that are sufficient to prevent violations of the 8-hour ozone standard. In addition, it must include contingency measures designed to allow areas to respond to unplanned increases in local concentrations of ozone. The signatories will agree in advance on what will trigger a contingency measure, what action to take in response to each trigger and how to proceed to avoid a possible violation of the 8-hour ozone standard. Areas will respond to a violation of the standard by implementing one or more mandatory measures and these measures, once triggered, must be adopted into the SIP. Recorded concentrations above the ozone NAAQS may also trigger the state to include the contingency measures in the SIP. Depending on the area's most recent ozone design value, for example, the plan may direct implementation of one or more voluntary and/or contingency measures in response to two or three recorded concentrations that exceed the 8-hour standard; the goal would be to prevent the area's design value from reaching a violation of the standard. Numerous recorded concentrations that exceed the standard and result in an increase in the area's design value but do not cause the area to violate the standard, should be addressed in the contingency plan.

Each Action Plan will be unique, depending on the area's design value and other characteristics discussed in this document. Each plan will identify specific events that will trigger one or more contingency measures. The plan must describe when each action will be taken, a description (can be a list or menu) from which the contingency measures or SIP contingency measures will be chosen, and time frame in which that action will be adopted and implemented. As is the case for areas subject to the memo from Lydia N. Wegman, dated May 20, 2005, and its attached Maintenance Plan Guidance Document for Certain 8-hour Ozone Areas Under Section 110(a)(1) of the Act, the schedule for adoption and implementation of contingency measures should be as expeditious as practicable, but no longer than 24 months from the date of violation or other trigger.

Once a contingency measure is triggered, there should be no delay in the implementation of the measure. And once implemented, we would not recommend that a contingency measure be modified or discontinued, unless the area can demonstrate that such change(s) will not interfere with the continued attainment and maintenance of the 8-hour ozone NAAQS. For an analogous set of guidelines, the guidance on 110(a)(1) maintenance plans is posted at http://www.epa.gov/ttn/oarpg/t1pgm.html.

D. Coordination and Public Participation

A consensus of support for the proposed control measures in the 8-O_3Flex Action Plan is vital. Local officials can determine the best means to seek, obtain and respond to input from groups or individuals interested in, or affected by, the control measures proposed in the Action Plan. We recommend that the 8-O_3Flex Action Plan be developed by a local air quality committee that includes environmental and citizens groups, as well as representatives from local industry and government. The Action Plan should specify how signatories will coordinate efforts, share information, and review data.

Input on proposed control measures from environmental groups, citizens groups, industry representatives, the general public, the States/Tribes, and EPA should be given thoughtful consideration by the committee. Efforts to obtain consensus and consider all input will be part of this section of the Agreement.

E. Schedules/Reporting

Please include a schedule of activities and milestones for each measure in the Agreement so signatory and interested parties will know when proposed measures will be implemented. Significant actions that are necessary or may affect control measure implementation, such as required reviews/approvals, acquisition of equipment, etc., should be included in the schedule.

Initially, participants should develop a semi-annual program report for stakeholders containing the latest information on implementation of control measures, ozone monitoring data, and the success of current measures. If an areas's design value is maintained at 80 ppb or lower, or if an area's design value is not increasing or is on the decline each year, the area may request approval from EPA to submit reports annually, following submittal of the first semi-annual report. Semi-annual reports must be submitted for all other scenarios.

F. Signature Page and Date

All major contributors should sign the MOA. Signatories to the MOA will include at a minimum, local community leaders, the State environmental agencies, and the EPA. During the course of 8-O_3Flex agreement development, other parties significantly responsible for the implementation of the agreement may be added to the signatory list. The signature date of the MOA will be considered the start date of the agreement's term.

Attachment A
O3Flex Action Plan Components
Details of **Emissions Inventory**, **Modeling**, and **Controls**

Emissions Inventory

One of the first steps in determining how to improve air quality in an area is to gather information on the sources and amounts of emissions. This process is known as emissions inventory (EI) development. The extent of the geographic area this inventoried will vary by community. The EPA recommends evaluating the Metropolitan Statistical Area/ Consolidated Metropolitan Statistical Area (MSA/CMSA) (or the county or parish if there is no MSA) and enlarging the area if necessary. Local EIs can help an area identify, target, and obtain achievable and beneficial emission reductions to prevent ozone formation.

Emissions are generated by stationary sources (industrial or commercial facilities), mobile sources (on and off-road vehicles, aircraft, ships and locomotives), and area sources (gas stations, dry cleaners, auto body paint shops, etc). Emissions of nitrogen oxides (NOx) and volatile organic compounds (VOC) contribute to ozone formation and should be the focus of EI efforts.

Information should be gathered on the number and types of emission sources in the area and the types and amounts of pollutants emitted. It is important to summarize the extent and availability of information on NOx and VOC emissions which contribute to ozone formation in the area. To the degree it is known, specify the types of sources of these pollutants and extent to which each type or specific source contributes to the release of the total emissions in the area.

The following steps outline the process:
Step 1: Determine if inventory information currently exists
The State/Tribe develops a formal EI for SIP/TIP development and may have information on the sources and emissions in the area. EPA may have additional information. Identify other information sources and compile all information.

Step 2: Determine the limit and extent of available information
The extent of EI information available varies from area to area. The State/Tribe or EPA should be able to provide guidance on the types of EI information that has been collected for your area and which may be beneficial to your local efforts.

Step 3: Gather additional information as necessary
In addition to specific local EI data from the State/Tribe or EPA, the following information may be of use to local emission inventory development:
Stationary source data:
- VOC/NOx sources/emissions not included in the State/Tribe emissions inventory
- determination/reporting of excess facility emissions during start-up, shutdown, malfunction
- development of a 2002 emission inventory to compile and utilize the most recent data available

Mobile source data:

- mobile source information included/not included in the State/Tribal EI
- off-road vehicle types, numbers, emissions, hours/frequency of operation
- on-road vehicle types, numbers, emissions, vehicle miles traveled (possible data sources include local Metropolitan Planning Organizations and the local Department of Transportation)

Finally, additional useful information regarding emissions inventories is available electronically through http://www.epa.gov/ttn/chief/.

Modeling

If an area chooses to perform air quality modeling, then in addition to general or specific modeling needs or recommendations from the State/Tribe or EPA (http://www.epa.gov/scram001/tt25.htm), a modeling protocol should be developed and followed. Other considerations will include:

A. Purpose of the Modeling

If used, Photochemical Grid Modeling should be SIP quality and developed according to the current ozone modeling guidance[5]. This modeling can help answer questions such as:
- Is it more effective for the 8-O_3Flex plan to concentrate on reductions of VOCs, NOx, or both?
- If indications point to a combination of reductions, what percentage of each - VOCs and NOx?
- What kinds of reductions are necessary to make a difference in ozone concentrations?
- Is there a relationship between VOCs and NOx that contributes to ozone formation?
- Which primary or contingency control measure will be most effective?

If used in this program, modeling would be a tool rather than a demonstration of attainment with the 8-hour ozone NAAQS. However, photochemical grid modeling may also be used to assess a control strategy for compliance with the 8-hour ozone NAAQS. In such a demonstration, there may be a need for assessing some future year(s) for a compliance demonstration and development of additional controls. Development of future emission inventories will be needed.

B. Data and Time Periods to be Modeled

To an extent, the purpose of the modeling will determine the emissions data that should be used, but other decisions need to be made such as:
- How many and which sources should be modeled?
- What types of pollutants and amounts of emissions from each source should be evaluated?
- Are the emissions inventory and other necessary data (i.e., meteorological data) available?
- Should modeling be done for the whole agreement term or specific periods, such as each year?

C. Election/Use of an Appropriate Model

There are different models available to predict air quality impacts. Consult with the State/Tribe and EPA regarding any existing models and which models would be appropriate for the purpose intended as well as the area, pollutants and sources to be evaluated. As stated earlier, a review of

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[5]US EPA (February 17, 2005) Draft Final Guidance on the Use of Models and Other Analyses in Attainment Demonstrations for the 8-Hour Ozone NAAQS, http://www.epa.gov/scram001/guidance/guide/, see "draft-final-o3.pdf" on website.

existing models could simplify the selection of control measures and conserve resources.

Control Measures

Control measures can include public notification and emission reductions, and can be either primary or contingency measures. Notification measures include activities to inform the public of the impact of their daily activities and to encourage them to participate in efforts to improve local air quality. Emission reduction measures are specific emission reduction commitments from specific facilities or industrial sources as well as broader measures applicable to the entire area, or which target a specific group of emission sources or category of emissions (i.e., sources with VOC emissions greater than 25 tons per year). Such measures may take the form of facility-specific commitments to install emission control devices, to shut down production units, or to change operating procedures, frequencies or time.

Control technology information sources for a list of air quality improvement options. These include, for example, the Reasonably Available Control Technology/Best Available Control Technology/ Lowest Achievable Emission Rate (RACT/BACT/LAER) Clearinghouse (http://cfpub.epa.gov/RBLC/htm/bl02.cfm); the New and Emerging Environmental Technologies (NEET) database (maintained under a cooperative agreement with EPA/OAQPS (http://neet.rti.org); and the EAC website (http://www.epa.gov/ttn/naaqs/ozone/eac/). Consider contacting other States/Tribes or local communities, particularly those with similar sources and air quality issues, may be contacted for information on control measures they have considered or implemented. A list of some general categories of control measures follows, but the 8-O_3Flex areas are not limited to these categories for sources of controls. Additional information or emission control options for specific sources can be obtained by contacting the State/Tribe or EPA.

A. Public Awareness Activities
- Ozone awareness information
- Ozone action day activities and notifications

B. Commute/Transportation options
- Mass transit use incentives
- Car pooling/ridesharing
- Telecommuting
- Flexible work/commute hours
- HOV lanes
- Commuter choice programs
- Parking cash out
- Smart growth development
- Addition of bike lanes and bike storage

C. Stationary Sources Measures
- Vapor recovery at gasoline service stations (including marine servicing facilities)
- Discretionary implementation of measures required for nonattainment areas, such as:
    - adopting more stringent VOC/NOx control requirements than currently required

- implementation of EPA source emission control technique guidelines (CTGs)
- offsets for new source emissions or increases in emissions from existing sources
- specific emission reduction commitments from local commercial/industrial facilities
- broader mandatory stationary source control measures (i.e., limits, regulations, offsets) than currently in place in the area

D. Mobile Source Measures
- Availability, sale, and use of low Reid vapor pressure (RVP) fuels during ozone season, with due consideration to the impact on fuel distribution
- Automotive inspection and maintenance (I&M) programs
- Alternative fuel vehicles/fleets
- Restrictions in off-road vehicle equipment use hours
- Retrofit of diesel engines
- "Cash for Clunkers"
- Lawn/garden equipment buy-back programs (replace with electric or manual equipment)
- Truck stop electrification

E. Other Ozone Prevention Activities
- Restricting auto refueling, lawn mowing and landscaping equipment use hours
- Energy efficiency/renewable energy
- Land use planning

Control Measure Selection
Factors which may be considered in selecting control measures include, but are not limited to:

A. Determination of desired emission reductions
The types and amounts of emission reductions desired may impact the selection of controls. An area with predominantly mobile sources needing NOx emission reductions may need different control measures than an area with many large stationary sources of VOCs. Emissions inventory and modeling data may be beneficial in making these determinations. Considerations include:
- Is ozone formation in the area driven by NOx or VOC emissions or a combination of the two?
- To what degree do VOC or NOx emissions contribute to potential ozone exceedances?
- What are the primary types of VOC and NOx emissions sources in the area?
- Are there primarily mobile or stationary sources emitting most of the VOC or NOx in the area?
- Are there a few very large emitters of VOC or NOx, many smaller ones, or a combination?
- Are there additional air quality improvements, such as toxic emissions reductions, that result from implementation of the controls under consideration for this program?

B. Analysis of available control measures
Even if the desired types and amounts of emission reductions are known, the availability and ease of implementation of emission control options may impact selection of a particular measure. Considerations include:
- Is an appropriate control technology/measure available?
- What is the effectiveness of achieving emission reductions?

- What are the timeframes necessary to implement the measure and see results?
- Can contingency measures provide sufficient protection from further exceedances?
- What is the cost in either dollars or resources necessary to implement the measure?
- Challenges to "sell" the measure to specific companies, decision makers or citizens?

C. Selecting the proposed control measures

The State/Tribe and EPA can assist in evaluating data and in reviewing the modeling for control options. Cooperative discussions with other stakeholders can help determine the most appropriate control measures. Other States/Tribes or local communities with similar sources and air quality issues, could be contacted for additional ideas or measures to consider.

Attachment B
EPA Guidance on SIP and NSR Credits from Innovative Programs

A. Websites

1. "Innovative Air Connections" http://www.epa.gov/ttn/airinnovations/

2. "Guidelines for States on Establishing SIP Credits from Heavy-Duty Engine Retrofit Projects"
http://www.epa.gov/dieselretrofit/aqsipcalc.htm

3. "Voluntary Diesel Retrofit Program -- SIP" http://www.epa.gov/dieselretrofit/aqsip101.htm

4. Heat Island Effect http://www.epa.gov/heatisland/

5. Voluntary Emission Reduction Program for Airport Ground Support Equipment
http://www.epa.gov/otaq/transp/vmweb/vmairgnd.htm

6. Guidance on Best Workplaces for Commuters Programs in SIPs and Conformity
http://www.epa.gov/otaq/transp/conform/policy.htm#bwc-conform

B. Documents

1. Mobile Source Voluntary Measures Policy" (10/27/97) http://www.epa.gov/oms/transp/trancont/vmep-gud.pdf

2. "Improving Air Quality with Economic Incentive Programs," EPA- 452/R-01-001 (1/01)
http://www.epa.gov/ttn/oarpg/t1/memoranda/eipfin.pdf

3. "Stationary Source Voluntary Measures Final Policy" (1/19/01) http://www.epa.gov/ttn/oarpg/t1/memoranda/coverpol.pdf
NOTE: The above guidance document has been subsumed in 4, below.

4. "Incorporating Emerging and Voluntary Measures in a State Implementation Plan (SIP)" (9/04)
http://www.epa.gov/ttn/oarpg/t1/memoranda/evm_ievm_g.pdf

5. "Guidance on Incorporating Bundled Measures in a State Implementation Plan" (8/16/05)
http://www.epa.gov/ttn/oarpg/t1/memoranda/10885guideibminsip.pdf

6 "Guidance on SIP Credits for Emission Reductions from Electric Sector Energy Efficiency and Renewable Energy Measures" (8/5/04) http://www.epa.gov/ttn/oarpg/t1/memoranda/ereseerem_gd.pdf

7. "A Toolkit for States: Using Supplemental Environmental Projects (SEPs) to Promote Energy Efficiency (EE) and Renewable Energy (RE)" (1/27/05) http://www.epa.gov/cleanenergy/pdf/sep_toolkit.pdf

8 "Locomotive and Truck Idling Reductions for NSR Offsets" (1/14/04)
http://www.epa.gov/ttn/oarpg/t1/memoranda/nsr-idling.pdf

9. "Reducing Idling Emissions: Quantifying and Using Long Duration Switch Yard Locomotive Idling Emission Reductions in State Implementation Plans and Transportation Conformity: Technical Guidance" (1/14/04)
http://www.epa.gov/ttn/oarpg/t1/memoranda/rie_guidsyl_tg.pdf

10. "Reducing Idling Emissions· Quantifying and Using Long Duration Truck Idling Emission Reductions in State Implementation Plans and Transportation Conformity: Technical Guidance" (1/14/04) http·//www epa.gov/ttn/oarpg/t1/memoranda/rie_gvldti_tg pdf

11. "Heavy-Duty Emission Reduction Retrofit/Rebuild Component" (June 1999) http //www epa gov/otaq/retrofit/documents/epafinalrep pdf

12. "SIP Development Guidance· Using Emission Reductions from Commuter Choice Programs to Meet Clean Air Act Requirements" (December 1998) http //www epa gov/oms/transp/comchoic/sipguide.pdf

13. "Effect of Cetane Number Increase Due to Additives on NOx Emissions from Heavy-Duty Highway Engines: Final Technical Report" (2/03) http //www epa.gov/otaq/models/analysis/r03002 pdf

14 "Guidance on Quantifying NOx benefits for Cetane Improvement Programs for Use in SIPs and Transportation Conformity" (7/04) http://www.epa gov/otaq/guidance/420b04005 pdf

15. "Granting Air Quality Credit for Land Use Measures: Policy Options" (9/99) http //www.epa gov/otaq/transp/trancont/lupol pdf

16. "Background Information for Land Use SIP Policy" (9/30/98) http //www.epa gov/otaq/transp/trancont/siprptv3 pdf

17. "Improving Air Quality through Land Use Activities" (1/01) http //www epa gov/otaq/transp/trancont/siprptv3 pdf

18 "Evaluation of Modeling Tools for Assessing Land Use Policies and Strategies" (8/97) http //www epa gov/otaq/transp/trancont/lum-rpt pdf

19 "Comparing Methodologies to Assess Transportation and Air Quality Impacts of Brownfields and Infill Development" (8/01) http //www epa.gov/dced/pdf/comparing_methodologies pdf

20. Carl Moyer Program - Example of State Retrofit Program http //www epa gov/dieselretrofit/excarbcarlmoyer htm

21. "Guidance for Implementation of Accelerated Retirement of Vehicles Program" (2/93) http //www.epa gov/otaq/transp/trancont/scrapcrd pdf

22. "Opportunities to Improve Air Quality through Transportation Pricing Programs" (9/97) http·//www epa gov/otaq/market/pricing pdf

23 "Technical Methods for Analyzing Pricing Measures to Reduce Transportation Emissions" (8/98) http://www epa gov/otaq/transp/anpricng pdf

24 "Guidance on Airport Emission Reduction Credits for Early Measures through Voluntary Airport Low Emission Programs" (9/04) http·//www.epa gov/ttn/oarpg/conform/aerc9-30-04final_and_cover_memo pdf

25 "Guidance for Quantifying and Using Emission Reductions from Best Workplaces for Commuters Programs in State Implementation Plans and Transportation Conformity Determinations" (10/05) http.//www epa gov/otaq/transp/conform/420b05016 pdf

C. Forthcoming EPA Guidance

1. "SIP Credit for Emission Reductions from Highway and Off-Road Diesel Vehicles and Retrofits" - Paul Bubbosh

2. "SIP Credit for Emission Reductions from Stationary Diesel Internal Combustion Engines" – Jaime Pagan

3. "Guidance on Quantifying and Using Emission Reductions from Voluntary Woodstove Changeout Programs in SIPs" -- Gary Blais http://www.4cleanair.org/members/committee/criteria/GuidanceforQuantifyingMay10draft.pdf