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DEPARTMENT OF ENVIRONMENTAL PROTECTION
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DAVID B. STRUHS
Commissioner

July 27, 1998

John DeVillars
Regional Administrator
US Environmental Protection Agency - Region I
JFK Federal Building
Boston, Massachusetts 02203

Dear Mr. DeVillars:

I am pleased to submit to the US Environmental Protection Agency (EPA) an amendment to the Massachusetts State Implementation Plan (SIP) for Ozone. This submittal, made pursuant to the requirements of Sections 110 and 182 of the Clean Air Act Amendments of 1990, includes various planning, administrative and technical documentation, and constitutes an attainment submittal for the one-hour ozone standard.

This SIP revision is made in response to the Clean Air Act requirements that States submit a SIP revision complying with Sections 172(c) and 182(b) and 182(c) of the Clean Air Act. Massachusetts has been designated non-attainment for ozone, with a classification of "serious" state-wide (56 FR 56694). Massachusetts must submit a plan identifying how it will attain the one-hour ozone standard. As you know, Massachusetts submitted progress reports to EPA regarding the status of its attainment modeling on November 15, 1994, December 30, 1994, May 31, 1995, February 12, 1997, and March 31, 1997. We also made submittals to comply with the requirements of EPA's March 2, 1995 policy entitled "Ozone Attainment Demonstrations" on May 31, 1995 and February 12, 1997, and participated in the Ozone Transport Assessment Group from May, 1995 through June, 1997.

EPA published guidance in January, 1998 (Memorandum from Richard D. Wilson, Acting Assistant Administrator for Air and Radiation to the Regional Administrators, "Guidance for Implementing the 1-Hour Ozone and Pre-Existing PM 10 NAAQS") delineating the necessary elements for serious non-attainment areas. It also indicates that States may use a weight of evidence approach in demonstrating attainment.

This information is available in alternate format by calling our ADA Coordinator at (617) 574-6872.

DEP on the World Wide Web: <http://www.magnet.state.ma.us/dep>



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Finally, the package includes a demonstration that this SIP revision has been submitted under and conforms with the administrative requirements of section 110(a) of the Clean Air Act. This amendment is submitted under the authority granted by Massachusetts General Laws Chapter 111, sections 142A through 142M.

The Department of Environmental Protection (DEP) conducted public hearings under the provisions of Massachusetts General Laws Chapter 30A on this revision on June 1 and 2, 1998. The comment period ended on June 5, 1998. Written comments were received from the EPA other interested parties. Comments raised during the public review process have been summarized, and are contained in this SIP revision package, along with DEP's response to those comments.

Therefore, pursuant to the procedures and deadlines established Section 110(k) of the Clean Air Act and the EPA procedures for SIP review (56 FR 42216), I am submitting this amendment of the Massachusetts SIP for your approval. Should you or your staff have any questions regarding this submittal or wish any further information, please contact Barbara A. Kwetz, Director of the Bureau of Waste Prevention's Division of Planning & Evaluation, at 292-5593.

Very truly yours,

David B. Struhs
Commissioner

enclosures

cc: Linda Murphy, US EPA, Region I
David Conroy, US EPA, Region I

w/o enclosures:

Trudy Cox, Secretary, Executive Office of Environmental Affairs
Ed Kunc, Deputy Commissioner, DEP
James Colman, Assistant Commissioner, DEP
Barbara A. Kwetz, Division of Planning & Evaluation, BWP, DEP
Steven DeGabriel, Division of Business Compliance/BWP, DEP
Hank Southworth, Division of Consumer & Transportation Programs/BWP, DEP

TABLE OF CONTENTS

Items contained in this submittal include:

Executive Summary

Attachment 1: Summary of Commitments, including a schedule for completing each commitment

Attachment 2: Background and Technical Support Document for the Attainment Submittal, including:
Ozone Modeling Support for the New England Domain
CALGRID Modeling Protocol for the New England Domain

Attachment 3: Errata Sheet correcting the Background and Technical Support Document, based on comments received during the public hearing process

Attachment 4: Documentation of Public Notice and Comment, including:
Notice of Public Hearing
Summary of Comments from the Public Hearings and Responses to Comments
Hearing Officer's Certification

EXECUTIVE SUMMARY

The Massachusetts Department of Environmental Protection (DEP) performed modeling using CALGRID and analyzed air quality and emissions data using results of the modeling. The weight of evidence indicates that Massachusetts is making progress towards attainment of the one-hour ozone standard. Using this approach, and assuming that, at minimum, a regional NO_x control strategy is implemented to ensure significant reductions in NO_x over the Eastern United States, it is plausible that Massachusetts will monitor attainment of the one-hour ozone standard. This assessment is based on the assumptions listed below (implementation dates are in parentheses). Assuming the following programs are implemented, and combined with the weight of evidence approach, Massachusetts believes that all necessary measures will be adopted in-state to reduce pollutants that contribute to violations of the one-hour ozone standard. Massachusetts will assess the progress and implementation dates of the final Ozone Transport SIP Call, the federal measures contained in the assumptions behind the SIP Call, including on- and off-road mobile programs, determine their impacts on Massachusetts' projected emission in 2003 and 2007, determine their impacts on air quality in Massachusetts, and assess whether an attainment date earlier than 2007 is feasible. For the purposes of transportation conformity, Massachusetts will establish a mobile source emissions budget for 2003.

1. Federal programs already implemented:

Reformulated Gasoline (January 1, 1995)

Reformulated Gasoline for Off-Highway Equipment (January 1, 1995)

Federal Motor Vehicle Control Program (FMVCP) - - Pre-Clean Air Act New Engine Performance Standards (On-going)

Tier I New Engine Performance Standards (January 1, 1994)

New Engine Performance Standards for Off-Highway Equipment

2. Federal programs the U.S. Environmental Protection Agency committed to during the OTAG process:

Architectural and Industrial Maintenance Coatings Phase I (January, 1998)

Architectural and Industrial Maintenance Coatings Phase II (January 2003)

Consumer/Commercial Products Phase I (January, 1998)

Consumer/Commercial Products Phase II (January, 2003)

Autobody Refinishing Controls Phase I (January, 1998)

Autobody Refinishing Controls Phase II (January, 2003)

Reformulated Gasoline Phase II (2000)

Phase II Small Engine Standards (2007)

Marine Engine Standards (1998)

Heavy Duty Highway 2 gram Standard (Equivalent to a 4 gram Standard in 2007) (2004)

Heavy Duty Non-Road Diesel Standard (2004)

Locomotive Standard with Rebuild (1997)

3. State programs already contained in the SIP and implemented:

Reasonably Available Control Technology (RACT) for Sources \geq 50 ton VOC, 310 CMR 7.18 (January 1, 1994/May 31, 1995)

Reasonably Available Control Technology (RACT) for Sources \geq 50 ton NO_x, 310 CMR 7.18 (May 31, 1995)

Reformulated Architectural and Industrial Maintenance Coatings, 310 CMR 7.25 (October 1, 1995)

Reformulated Traffic Markings, 310 CMR 7.25 (October 1, 1995)

Reformulated Consumer and Commercial Products, 310 CMR 7.25 (October 1, 1995)

Automotive Refinishing Controls, 310 CMR 7.18 (August 1, 1995)

Stage II Vapor Recovery Systems at Gasoline Stations, 310 CMR 7.24 (April 1, 1991-1994)

Low Emission Vehicle Program, 310 CMR 7.40 (January 1, 1995)

Traffic Flow Improvements (On-going)

4. State programs contained in the SIP and not yet implemented:

Enhanced Inspection and Maintenance (March, 1999)¹

NOx Allowance Program 310 CMR 7.27 (May, 1999)

5. State programs not yet contained in the SIP and not yet implemented:

The more stringent of: (1) Phase III (2003) utility budget of the Ozone Transport Commission's NOx Memorandum of Understanding or (2) EPA's Final Ozone Transport SIP Call (Fully implemented by May, 2003)

The NOx component of the municipal waste combustor regulations pursuant to Sections 111(d) and 129 of the federal Clean Air Act (December, 2000)

6. Regional program not yet implemented:

EPA's Final Ozone Transport SIP Call for 22 States

¹ Massachusetts is presently hiring a contractor to work as a partner with the Registry of Motor Vehicles and DEP to develop, implement and be responsible for the effectiveness of the Enhanced Inspection and Maintenance program. The contractor will be an integral part of program design decisions. In addition, DEP believes that repair industry and public input into those decisions is critical, and will provide opportunities for public input both during the development of and prior to the selection of those program decisions. This program model drives the timing of the revised Enhanced Inspection and Maintenance regulations and the revision to the Inspection and Maintenance SIP.

ATTACHMENT 1

SUMMARY OF COMMITMENTS

Massachusetts makes the following commitments as revisions to the Massachusetts State Implementation Plan. Massachusetts commits to:

1. attain the one-hour ozone standard as expeditiously as possible, but no later than November, 2007, conditioned upon full implementation of all measures contained in the assumptions behind EPA's final Ozone Transport SIP Call, due to be published in September, 1998. Full implementation means that all federal measures contained in the final Ozone Transport SIP call have been implemented, and all upwind states are complying with their respective budgets;
2. by October, 1998, submit a mobile source emissions budget for the purposes of conducting transportation conformity reviews;
3. by November 15, 1999, set a utility sector NO_x budget equal to the more stringent of the NO_x Ozone Transport Commission's Memorandum of Understanding for NO_x Reductions Phase III, or the EPA's final Ozone Transport SIP Call due to be published in September, 1998. Massachusetts will incorporate this budget into 310 CMR 7.27 by November, 1999, and will implement the budget by May, 2003;
4. by November, 1999, assess the projected emissions of VOC and NO_x for the year 2007, to determine whether current in-state projections are in agreement with assumptions used in the Attainment Submittal;
5. by November, 1999, assess the progress and implementation dates of federal measures contained in the assumptions behind EPA's final Ozone Transport SIP Call, including on- and off-road mobile programs, to determine their impacts on Massachusetts' projected emission in 2003 and 2007;
6. by November, 1999, using the results of the assessment in #4. above, assess potential mobile source budgets for 2007 for the purposes of conducting conformity reviews, and, if necessary, submit revisions to the conformity budget;
7. by November, 2001, assess the progress and implementation dates of state and federal measures contained in the assumptions behind EPA's final Ozone Transport SIP Call, determine their impacts on air quality in Massachusetts, and assess whether an earlier attainment date is feasible;

8. on an ongoing basis, synchronized with the timing and final reporting requirements of EPA's Ozone Transport SIP Call, assess whether additional in-state controls could provide for more expeditious attainment of the one-hour ozone standard, and are technologically and economically feasible;

9. make the following submittals to the Massachusetts State Implementation Plan:

a. by November, 1998, the following case-specific VOC RACT submittals:

1. Gillete
2. Globe Manufacturing
3. Polaroid
4. Rex
5. Barnett

b. by November, 1998, the following case-specific NO_x RACT submittals:

1. Turners Falls Limited Partnership (Indeck Energy)
2. Lee Lime Corporation facility in Lee, Massachusetts

c. by November, 1998, the following negative declarations:

1. SOCFI Reactor Vessel
2. SOCFI Distillation operations
3. Shipbuilding facilities

d. by January, 1999, the following revision to 310 CMR 7.19: RACT limits for municipal waste combustors.

e. a revised Enhanced I/M SIP: DEP expects to issue draft regulations to replace 310 CMR 60.02 by August 15, 1998, and expects promulgation of those regulations by December 31, 1998. Submittal of a revised Enhanced Inspection and Maintenance SIP is scheduled after the regulations are adopted, and by March 31, 1999.

f. by March, 2000, a demonstration that all programs contained in the Massachusetts 15% and post-1996 Rate-of-Progress (9%) plans have been implemented at the effectiveness necessary to meet Rate-of-Progress requirements.

g. by January, 1999, revisions to Massachusetts' Stage II regulations (310 CMR 7.24) are expected to be promulgated and submitted.

ATTACHMENT 2

IS THE

BACKGROUND AND TECHNICAL SUPPORT DOCUMENT

FOR THE ATTAINMENT SUBMITTAL

(which can be found on the MA DEP Website)

ATTACHMENT 3

**ERRATA SHEET CORRECTING THE
BACKGROUND AND TECHNICAL SUPPORT DOCUMENT,
BASED ON COMMENTS RECEIVED DURING THE
PUBLIC HEARING PROCESS**

**Errata Sheet
correcting the**

**BACKGROUND and TECHNICAL SUPPORT DOCUMENT for the
MASSACHUSETTS ATTAINMENT SUBMITTAL**

Based on Comments Received During the Public Hearing Process

The following changes are to be made to Appendix A, entitled Ozone Modeling Support Document for the New England Domain , within the Background and Technical Support Document for the Massachusetts Attainment Submittal:

- 1) The first paragraph in section d. on page 15 should be replaced with the following paragraph:**

“The 1999 modeling emission files were originally developed with the assumption that Enhanced I/M programs would be in place in Connecticut, Rhode Island, Massachusetts, and in portions of New Hampshire and Maine. However, except for Connecticut, Enhanced I/M programs have been delayed and will not likely be implemented until 1999. A second set of 1999 emission files were prepared for the New England Domain without Enhanced I/M program emission reductions. These files were used in conjunction with 2007 OTAG boundary conditions to more accurately estimate the ozone reductions of control programs being implemented in the New England Domain between 1999 and 2007.”

- 2) The first paragraph on page 18 should be replaced with the following paragraph:**

“An additional adjustment was made to the 1999 emission modeling files to correct an over-estimate of Massachusetts 1999 off-road VOC emissions. The original estimate of 333.7 tpsd was replaced with 168.9 tpsd for 1999 off-road VOC emissions, which is the value MADEP reported in its Massachusetts post-1996 Rate-of- Progress Plan (9% Plan).”

- 3) **The 3rd sentence in the first paragraph of section e. on page 18 should be replaced with the following sentence:**

The first step was to project emissions using growth factors to account for increases or decreases in economic activity for the appropriate industrial, commercial and residential sectors.

- 4) **The fourth paragraph in section e. on page 18 should be replaced with the following paragraph:**

The NO_x and VOC 2007 SIP Call modeling emission file totals for each New England state are presented in Figures 4 - 15, in the third column entitled "SIP Call". For comparison, 1999 CAA emission file totals for each state are shown in the second column, labeled "1999". The fourth column, labeled "2007 CAA," contains OTAG estimates of emissions reflecting implementation of CAA mandatory programs by 2007, and state-specific controls needed to meet rate-of-progress requirements.

- 5) **On page 24, the title for Figure 9, at the top of the page, should be changed from: "Figure 9: Massachusetts NO_x Emission Summaries," to:**

"Figure 9: Massachusetts VOC Emission Summaries"

ATTACHMENT 4

**DOCUMENTATION OF
PUBLIC NOTICE AND COMMENT**

**BUREAU OF WASTE PREVENTION
DIVISION OF PLANNING & EVALUATION**

**SUMMARY OF COMMENTS AND RESPONSE TO COMMENTS
FROM PUBLIC HEARINGS
ON THE REVISIONS TO THE
MASSACHUSETTS STATE IMPLEMENTATION PLAN FOR OZONE:
ATTAINMENT DEMONSTRATION SUBMITTAL
(Hearings Held June, 1998)**

**REGULATORY AUTHORITY:
M.G.L. c. 111, Sections 142A through 142M
July, 1998**

ORGANIZATIONS AND INDIVIDUALS WHO SUBMITTED TESTIMONY

- | | |
|----------------------|---|
| (1) David Conroy | Environmental Protection Agency (EPA), Region I |
| (2) David Marshall | Conservation Law Foundation |
| (3) Jeff McGillivray | No affiliation |
| (4) Leo Sicuranza | New England Power |

**SUMMARY OF COMMENTS AND RESPONSE TO COMMENTS
FROM PUBLIC HEARINGS ON THE REVISIONS TO THE
MASSACHUSETTS STATE IMPLEMENTATION PLAN FOR OZONE:
ATTAINMENT DEMONSTRATION SUBMITTAL**

I. Introduction

The Department of Environmental Protection (DEP) appreciates the input and suggestions from the parties who testified at the public hearings held June 1 and 2, 1998, on the proposed Massachusetts SIP revision to the State Implementation Plan (SIP) for ozone. This document summarizes the comments received during the comment period, and provides the DEP responses to those comments. In cases where several comments addressed the same topic, the Department has summarized them, and provided a single response.

II. Categories of Comments

Comments were divided into the following ten categories:

- *General Comments*
- *Use of “Weight of Evidence” Approach*
- *Emissions Trading*
- *Modeling*
- *Phase III OTC NO_x MOU Implementation*
- *Transport Issues*
- *Emissions Budgets*
- *NO_x Reductions*
- *Summary Recommendations*
- *Other*

III. Comments and Responses

A. General Comments

Comment: The downward trends in the number of ozone exceedances and ozone design values are likely to continue as additional NO_x reductions are made. (3)

Response: DEP concurs with the commenter.

Comment: Location of reductions is critically important. (3)

Response: DEP agrees, and will continue to examine the magnitude and extent of reductions needed to reach attainment.

Comment: This is not an adequate attainment submittal. More must be done, both in Massachusetts, and in areas upwind of Massachusetts. (2)

Response: DEP followed EPA guidance in developing the weight of evidence analysis to assess the reductions necessary for Massachusetts to reach attainment. The weight of evidence indicates that it is plausible that, with implementation of EPA's Ozone Transport SIP Call (SIP Call), in concert with full implementation of current commitments for in-state controls, Massachusetts may monitor attainment of the one-hour standard, including in downwind areas. If, in the future, DEP determines that additional reductions are necessary, Massachusetts will take necessary steps to address ozone non-attainment and transport. Massachusetts expects that any other jurisdictions where additional reductions controls are needed will meet their responsibilities as well.

Comment: The proposed SIP revisions demonstrate that attainment is plausible with upwind reductions. (4)

Response: As stated in the proposed submittal, DEP agrees that it is plausible for Massachusetts to monitor attainment with sufficient upwind and in-state reductions.

Comment: Attainment should be demonstrated by 1999, and not the year 2007. (2)

Response: Until EPA requires upwind states to make sufficient reductions in emissions, DEP believes that Massachusetts will not be able to attain the one-hour standard. EPA's proposed Ozone Transport SIP Call of November, 1997, uses 2007 as the date when states must meet their emissions budgets. Although some controls in the

SIP Call will be implemented earlier, many programs (mobile source controls, heavy duty diesel standards) will not be fully effective until sufficient fleet turnover occurs. Massachusetts will examine the impacts of the delayed effects of these federal programs on its attainment status, and assess reasonable options.

Comment: The benefits from further reductions in point sources are marginal, and greater results are achieved from reducing low level emissions. (4)

Response: DEP disagrees. Since Massachusetts' low level (i.e., mobile, area and off-road sources) NOx inventory is greater than its high level (i.e., stationary point sources) inventory, equal percentage reductions show greater impacts (i.e., more tons are reduced) from low level reductions. Low level and high level reductions are about equally effective on a ton-for-ton basis; the spatial extent of the benefits, however, is different.

Comment: Because of alleged engine modifications, heavy-duty diesel emissions are probably underpredicted. (2)

Response: DEP understands the commenter's concern regarding the underprediction of diesel emissions. This issue is being dealt with on a national level, and the ramifications are currently being assessed. Massachusetts intends to stay abreast of the issue, and any emission reductions from its resolution will be welcome.

Comment: Massachusetts will have to implement stricter controls for eight-hour ozone attainment than this submittal suggests. (3)

Response: This attainment submittal only deals with the existing one-hour ozone standard. Attainment of the eight-hour ozone standard will be addressed in the future.

B. Use of "Weight of Evidence" Approach

Comment: The commenter agrees with the "weight of evidence" approach to demonstrating ozone attainment. (3,4)

Response: DEP concurs, and appreciates the support.

Comment: The "weight of evidence" approach is not convincing. It contains three specific problems:

1) ambient monitoring data - if the weather had been hotter, then ozone may have been higher. There is no indication that ozone has really decreased;

- 2) NO_x data - without continuous emissions monitors (CEMS), data accuracy may be different from that with CEMS;
- 3) design values - analysis needs to be done to prove that design values are indicative of permanent reductions. Attainment of the one-hour ozone standard is measured on the expected exceedances, not design values. (2)

Response: DEP disagrees with the commenter. First, the weight of evidence approach is suggested by EPA guidance, and is in accordance with current efforts to assess performance of environmental programs through use of monitored environmental indicators. Second, although CEMS were not in widespread use in 1990, the 1990 inventory was closely examined during initial implementation of the Ozone Transport Commission's NO_x Memorandum of Understanding (OTC NO_x MOU), and is the best available data at this time. Third, although the commenter is correct that expected exceedances (which account for missing data) are the indicator of attainment, if a monitor has good data capture, and a design value less than 0.125, its expected exceedances should be one or less. Therefore, the design value can be a good surrogate.

Comment: It is very reasonable to conclude that lower ambient ozone concentrations will result in the future, once the Enhanced Inspection and Maintenance Program and stationary controls on NO_x are implemented, when compared to ozone concentrations experienced in the absence of these emission control programs. (1)

Response: DEP acknowledges the comment, and agrees with the commenter.

C. Emissions Trading

Comment: Emissions trading should be weighted by location, time of year, time of day, and temperature. (3)

Response: DEP cautiously disagrees with the commenter. During the development of the NO_x Allowance Trading program, EPA and utility modeling indicated that many other factors (e.g., plant availability) are more important than the use of NO_x allowances on any specific day. However, DEP will conduct an audit of its NO_x allowance program to ensure that any shifts in physical or temporal emission profiles are not causing environmental harm.

D. Modeling

Comment: Additional modeling is needed to determine the impact on western and southeastern Massachusetts, of small areas near New York City, compared with larger areas south and west (of the New York City). (3)

Response: Modeling that assesses small, incremental emission differences in small geographic areas upwind may merit some consideration in the future, since modeled ozone concentrations may be sensitive to such emission changes. However, given the scale of the ozone problem, the need for considerable reductions from upwind and in-state, the outstanding commitments for reductions through the OTC MOU, and the current DEP modeling platform - where the emission areas in question lie outside the New England Domain - such additional modeling can not be undertaken until development of a platform containing a domain with greater southward extension.

Comment: Modeling results may underpredict ozone levels because OTAG Run I is a better approximation of the effects of the original SIP Call than the revised SIP Call budget - therefore the model would overpredict reductions from the NOx SIP Call. (2)

Response: DEP agrees that the modeling based on OTAG Run I may underpredict ozone levels transported into Massachusetts from upwind areas. Massachusetts' emissions significantly contribute to elevated ozone levels in eastern Massachusetts, and downwind of Massachusetts. The original SIP Call NOx emission estimates for Massachusetts used in the modeling (620 tons per day) are higher than the revised SIP Call budget (523 tons per day), so ozone levels may have been slightly overpredicted in the downwind areas.

E. Phase III OTC NOx MOU Implementation

Comment: Since Phase II of the OTC NOx MOU is not enough to demonstrate attainment, Massachusetts should commit to either EPA's final SIP Call or Phase III of the OTC NOx MOU. (1)

Response: DEP agrees. In the Summary of Commitments contained in Massachusetts' final Attainment Submittal, DEP hereby commits to implement the more stringent of EPA's final SIP Call or the OTC NOx MOU. "Stringent" is defined as the lower total budget for an identical universe of sources.

Comment: Any commitment to Phase III should be conditional and require equivalent upwind reductions. (4)

Response: DEP disagrees. The evidence clearly indicates that reductions at least as stringent as Phase III will be needed in Massachusetts. DEP, however, fully expects EPA and the other OTC states to follow through on their commitments under EPA's final SIP Call or the OTC NOx MOU. DEP encourages other states in the OTC to commit to adopt the more stringent of the two programs for their states.

F. Transport Issues

Comment: Upwind reductions necessary for attainment must occur no later than May of 2003 and in-state reductions should not be made without upwind reductions. (4)

Response: DEP agrees with the commenter that upwind reductions should be put in place as expeditiously as possible. While reductions would best be planned for in concert with other states, Massachusetts' efforts to attain the standard should not be contingent solely on the efforts of others.

Comment: Reductions within Massachusetts are more important than reductions upwind of Massachusetts in allowing New Hampshire and Maine to reach attainment. (2)

Response: Reductions within Massachusetts will certainly be important in ensuring the downwind areas of Maine and New Hampshire reach attainment. However, DEP believes that reductions upwind of Massachusetts are equally important to reduce ozone and precursor transport into New England.

Comment: Reductions that are over 50% more stringent than the EPA's proposed SIP Call will be needed in some areas upwind from Massachusetts to achieve the eight-hour ozone standard. (3)

Response: While the commenter may be correct in his assessment, this Attainment Submittal only addresses what is needed to attain the one-hour ozone standard. The eight-hour ozone standard will be addressed under the timetables set by EPA.

G. Emissions Budgets

Comment: Attainment or SIP Call budgets should be assigned to areas considerably smaller than Massachusetts as a whole, because the location of emission reductions is important. (3)

Response: Budgets under EPA's final SIP Call will be assigned to the entire state by EPA as a first step to address transport. If DEP determines that reductions in specific areas, over and above those needed to meet the SIP Call, are needed to address transport or attain the ozone standard, it will examine them at that time.

Comment: Motor vehicle source budgets for the 15% and post-1996 SIP are too generous. The DEP should identify the earliest year attainment is projected and establish VOC and NOx motor vehicle budgets for that year. (1)

Response: At this point in time, DEP is assuming a 2007 attainment date. For purposes of conformity, DEP commits to establishing a mobile source emissions budget for 2003. DEP also commits to assess and whether or not an earlier attainment date is realistic and feasible, and, if necessary, will establish new VOC and NOx budgets for conformity purposes at that time. DEP will work with EPA on these tasks, as discussed in the Commitments Section of this submittal.

H. NOx Reductions

Comment: NOx reductions within Eastern Massachusetts are critical to reach attainment (2)

Response: DEP agrees that NOx reductions in Massachusetts and other upwind areas are absolutely critical to reach attainment and address ozone transport. DEP believes that further significant reductions in VOC will not significantly affect Massachusetts attainment status.

Comment: NOx needs to be reduced in New England and upwind states by about 60% or more below EPA NOx SIP Call. (2)

Response: DEP does not agree with the commenter that a specific target level of 60% below SIP Call emissions has been specifically demonstrated to be necessary for attainment. In using the weight of evidence approach in its final submittal, DEP finds that modeling alone is not sufficient to determine the exact level of reductions necessary to attain the standard. However, DEP agrees that further reductions are necessary. DEP therefore commits to implement the more stringent of EPA's final SIP Call or the OTC NOx MOU. In addition, DEP commits to assess over time whether that level of reductions is sufficient for the one-hour ozone standard, and then investigate what further level of reductions are technically achievable, economically feasible and equitable, to continue to address attainment of the one-hour standard in Massachusetts and downwind areas.

Comment: Additional heavy-duty diesel controls and cleaner fuels could provide a large part of the additional 60% NOx reduction in the over-all mobile sector. (2)

Response: DEP is preempted from mandating new engine standards, but can investigate achieving a faster introduction of newer, cleaner diesels in Massachusetts. DEP will also investigate other options, including economic incentive programs to achieve additional reductions, and welcomes additional suggestions.

Comment: A 0.06 lb./MMBtu level of NO_x is a reasonable target rate for New England state electric power generation over a five year transition period. (2)

Response: DEP thanks the commenter for the suggestion, and will consider it as it investigates additional reductions in its discussions with stakeholders in Massachusetts.

I. Summary Recommendations

Comment: Deficiencies in the VOC Reasonably Available Control Technology (RACT) program, the NO_x RACT program, the Enhanced Inspection and Maintenance program and the 15% and post-96 Rate of Progress (ROP) plans need to be rectified, or demonstrated that they are on an “expeditious” schedule, before attainment demonstration requirements are considered complete. (1)

Response: DEP is committed to addressing EPA’s specific technical concerns with individual permits and programs on an expeditious schedule. DEP needs to work with EPA to ensure that the individual VOC and NO_x RACT determinations are processed and approved in a timely manner.

Comment: DEP should investigate additional NO_x reductions from stationary sources in areas which will give the most benefit. (1)

Response: DEP concurs that additional future reductions from stationary sources may be feasible and necessary, and has therefore committed to the more stringent of the SIP Call or OTC MOU budgets. However, in the future, stationary point sources will comprise a smaller and smaller percentage of the overall inventory; DEP will examine all emissions sectors when determining where additional controls are warranted.

Comment: Massachusetts has performed admirably in setting RACT levels for oil and gas-fired units which nearly achieve a level of 0.15 lb./MMBtu NO_x. (1)

Response: DEP appreciates the comment, and agrees that the NO_x RACT levels set in Massachusetts’ and other Northeast States’ regulations are an appropriate determination of RACT. DEP suggests that these regulations be used as a model for applying RACT in other areas of the United States. DEP will investigate further reductions from this category in the future.

Comment: Because of the March, 1999, Enhanced Inspection and Maintenance Program implementation date, Massachusetts should revise its 15% Rate of Progress and post-1996 Rate of Progress plans to show achievement of reductions needed for attainment by 1999. (1)

Response: DEP appreciates EPA's concerns, and remains committed to making the necessary revisions to the 15% Rate of Progress and post-1996 Rate of Progress plans to more accurately reflect reductions by 1999. DEP is currently working with EPA on this effort, and hopes to complete this as expeditiously as possible.

Comment: If an attainment date past 1999 is to be justified, then Massachusetts should show how 3% per year emissions reduction in VOC or NOx would be achieved out to the new attainment date. (1)

Response: DEP does not yet agree with the commenter that ROP requirements apply to areas that have not been re-assigned to the next classification. Given the complexity of the situation that: (1) upwind reductions will not occur before 1999; (2) State's responses to the SIP Call are not due until October, 1999; (3) reductions from promised Federal measures have been significantly delayed; (4) some measures (mobile and off-road) proposed in the SIP Call will not have their full effects until 2007 and beyond; and (5) Massachusetts needs all of those measures, as well as possible in-state reductions not yet determined, then DEP agrees to assess the speed at which those measures could occur, and chose a realistic attainment date based on that assessment. DEP will then assess what emissions reductions in VOC and NOx will occur out to that attainment date.

Comment: A commenter questions whether the 84% reduction assumed in the modeling for Stage II emissions is occurring in the field, and recommends that DEP move ahead with plans to revise its Stage II regulation to ensure the effectiveness of the program. (1)

Response: DEP appreciates EPA's concerns, and remains committed to making the necessary revisions to its Stage II regulations by January, 1999. DEP is currently working with EPA on this effort, and hopes to complete this as expeditiously as possible.

J. Other

Comment: A commenter refers to page 6 of the attainment submittal, and believes that, given the projected March, 1999 start date of the Enhanced Inspection and Maintenance Program, the following statement is misleading: "the emission reduction programs reflected in Table 1 are sufficient to satisfy all Rate-of-Progress requirements through Massachusetts' attainment date of 1999." The commenter further stated that figures 19, 20 and 21 on pages 28 and 29 should more accurately depict "the actual

emission trends by recalculating 1996 emissions without the impact of an enhanced I/M program” (1)

Response: DEP believes that it has presented the necessary caveats in the document to support these statements. DEP believes that full implementation of the Enhanced Inspection and Maintenance Program is necessary for attainment of the one-hour standard in Massachusetts.

Comment: A commenter questions the validity of DEP’s statement that a “substantial emissions reduction for all pollutants occurred from 1990 to 1996, even though there has been significant growth in population and economic activity in Massachusetts,” given that the Enhanced Inspection and Maintenance Program has not been implemented. (1)

Response: While there was a general upward trend in consumer and service activity in Massachusetts from 1990-1996, there has also been a considerable decline in VOC and NO_x emissions in several industrial and commercial sectors. This can be mostly attributed to control measures adopted and implemented in Massachusetts, such as RACT for 50 ton VOC and NO_x sources, reformulated architectural and industrial maintenance coatings, reformulated consumer and commercial products, automobile refinishing controls, reformulated gasoline, and cleaner cars. DEP expects additional, significant reductions in VOC, NO_x and CO when the Enhanced Inspection and Maintenance Program is implemented in 1999. In addition, there has been an overall 41% reduction in SO₂ emissions. This is attributable to reductions in electric utility emissions, which comprise a major portion of that inventory.

Comment: A commenter stated that the statement “regarding the addition of emissions to the 1999 modeling files to reflect the fact that Enhanced I/M programs will not be in effect by 1999,” should be edited to reflect that Connecticut’s Enhanced Inspection and Maintenance Program will be achieving substantial emission reductions by the end of 1999. (1)

Response: DEP has edited the document to address the concerns of the commenter.

Comment: A commenter stated that the statement in the first paragraph of page 18 of Appendix A should be modified from “an overestimate of 333.7 tpsd” to “an incorrect emission value of 333.7 tpsd”. In addition, the suggestion is made to change the last words of this paragraph from “15% Reasonable Further Progress Plan” to say “the Massachusetts post-1996 Rate-of-Progress plan.” (1)

Response: DEP has edited the document to address the concerns of the commenter.

Comment: The third paragraph on page 18 of Appendix A should be modified to include a description of the data presented under the heading “2007 CAA” in figures 4 through 15. (1)

Response: DEP has edited the document to address the concerns of the commenter regarding figures 4 through 15.

Comment: Documentation should be included in the State’s attainment demonstration which describes how Massachusetts projected its emissions to 2007 to derive the “SIP Call” emissions. (1)

Response: While minor clarifying language has been added, DEP believes that the discussion on page 18 of Appendix A provides an adequate explanation of the methodology used by States to project emissions to 2007. For Massachusetts, DEP projected its emissions from 1990 to 2007 in two phases: Massachusetts SIP growth factors were used to project emissions to 1999, and then growth factors used in the OTAG modeling effort were used to project 1999 emissions to 2007.

Comment: A commenter urges DEP to review the methodology for determining the loading and unloading of petroleum to and from marine vessels to determine a more accurate ozone season daily emission estimate. (1)

Response: DEP has examined the most recent available data concerning the movement of petroleum products into the port of Boston, and finds that its initial assessment of emissions is appropriate at this time. DEP would be happy to review these data with EPA in the future.

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF PLANNING & EVALUATION

N O T I C E

Notice is hereby given that the Department of Environmental Protection (DEP), acting in accordance with the provisions of M.G.L. chapter 111, Sections 142A through 142M will hold public hearings on proposed revisions to the Massachusetts State Implementation Plan for ozone. The proposed revisions include a plan of how the Commonwealth may attain the one-hour ozone standard. These hearings are being held to gather public comments on the revisions before they are submitted to the Environmental Protection Agency.

Public hearings will be conducted under the provisions of Chapter 30A of the Massachusetts General Laws on:

Monday, June 1, 1998 - Springfield - 10:00 AM
Springfield City Hall, Springfield, MA
Room 220 - 2nd Floor

Tuesday, June 2, 1998 - Boston - 10:00 AM
Massachusetts Department of Environmental Protection
One Winter Street, 2nd Floor
Summer Street Conference Room

Both public hearing sites are wheelchair accessible. For special accommodations for this event, contact Greg Elder at 617-292-5810. This information is available in alternative format upon request by contacting Bette Stewart, ADA coordinator at 617-292-6872, BAS/HR, 4th Floor, One Winter Street, Boston MA 02108.

Testimony may be presented orally or in writing at the public hearings. Written comments will be accepted until 5:00 PM on Friday, June 5, 1998. Please submit three copies of any written testimony. Written testimony must be submitted to:

Richard Driscoll
DEP/Division of Planning & Evaluation
One Winter Street, 8th Floor
Boston, MA 02108
Attention: Attainment Submittal Comments

Please ensure that comments are sent to the above address; comments sent to other offices at DEP may not be received in time to be included in the official hearing docket.

Copies of the proposed revisions and supporting background information will be available for inspection during normal business hours at the DEP's Info Line, One Winter Street, 2nd Floor, Boston, MA and the four Regional Service Centers of DEP. For more information, contact Richard Driscoll at (617) 292-5605.

By Order of the Department
David B. Struhs, Commissioner

CERTIFICATION

RE: Public Review process on the establishment of a proposed plan of how the State of Massachusetts will attain the one-hour ozone standard.

I hereby certify that:

Notices of the public hearing were published on the following dates in the following newspapers:

Boston Globe (Boston)	April 29, 1998
New Bedford Standard Times (New Bedford)	April 29, 1998
Springfield Union News (Springfield)	April 30, 1998
Worcester Telegram (Worcester)	April 29, 1998
Cape Cod Standard Times (Hyannis)	April 30, 1998

That the notices specified the date, time and place of the public hearings to be held on the proposed plan of how the Commonwealth may attain the one-hour ozone standard.

That the notices specified the locations at which the proposed SIP revision and supporting information were available for public inspection.

That the proposed revision and supporting information were available at the locations stated in the notice when the notices were published as well as at the locations of the public hearings on the date of said hearings.

That similar notices were mailed on or before to the Environmental Protection Agency, to any affected local or pollution control agencies, and to all known potentially interested parties.

I further certify that on the following dates and at the following locations, public hearings were conducted by the Department of Environmental Protection, pursuant to the above notices and in conformance with M.G.L. Chapter 30A and the provisions of 30 CFR 51.4(b):

June 1, 1998 - Springfield, Massachusetts - 10:00 AM
Springfield City Hall, room 220

June 2, 1998 - Boston, Massachusetts - 10:00 AM
Offices of the Department of Environmental Protection
2nd floor, Washington Street Conference room

ATTEST: _____

Gregory Elder
Hearing Officer
June 1 and 2, 1998