

EPA-APPROVED REGULATIONS IN THE TEXAS SIP—Continued

State citation	Title/subject	State approval/submittal date	EPA approval date	Explanation
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<b>Subchapter F: Standard Permits</b>				
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Section 116.610 .....	Applicability .....	03/07/01	[Insert date of <i>FR</i> publication] [Insert <i>FR</i> page number where document begins].	The SIP does not include subsection 116.610(d).
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Section 116.615 .....	General Conditions .....	03/07/01	[Insert date of <i>FR</i> publication] [Insert <i>FR</i> page number where document begins].	
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[FR Doc. 06-7411 Filed 9-5-06; 8:45 am]  
 BILLING CODE 6560-50-P

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 52**

[EPA-R06-OAR-2005-TX-0018; FRL-8216-1]

**Approval and Promulgation of Air Quality Implementation Plans; Texas; Revisions to the Ozone Attainment Plan for the Houston/Galveston/Brazoria Nonattainment Area**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** EPA is approving revisions to the Texas State Implementation Plan (SIP) as it applies to the Houston/Galveston/Brazoria (HGB) ozone nonattainment area. These SIP revisions result from more recent information on ozone formation in the HGB area indicating that a combination of controls on nitrogen oxides (NO<sub>x</sub>) and highly reactive volatile organic compounds (HRVOCs) should be more effective in reducing ozone than the measures in the previously approved 2001 HGB attainment demonstration plan which relied almost exclusively on the control of NO<sub>x</sub>. Approval of these revisions incorporates these changes into the federally approved SIP.

The approved revisions include a 1-hour ozone standard attainment demonstration, motor vehicle emissions budgets, a demonstration that all

reasonably available control measures have been adopted for the HGB area and revisions to satisfy the enforceable commitments contained in the previously approved SIP. These revisions present a new mix of controlled strategies in order to achieve attainment. These revisions include changes to the industrial NO<sub>x</sub> rules, reducing the stringency from a nominal 90 percent to 80 percent control and revisions to the Texas Inspection and Maintenance (I/M) rules that drop three counties from the I/M program.

As part of the approved revisions to the HGB attainment demonstration, Texas has adopted new control measures which EPA has approved or is approving concurrent with this action. The new control measures are increased control of HRVOC emissions and control of emissions from portable gasoline containers. Also, in separate actions in today's **Federal Register**, EPA is concurrently approving the following emissions trading programs that relate to the HGB attainment demonstration: revisions to the Mass Emissions Cap and Trade Program for the HGB area, the Highly Reactive Volatile Organic Compound Emissions Cap and Trade Program for the HGB area, the Emissions Credit Banking and Trading Program, and the Discrete Emissions Credit Banking and Trading Program.

The SIP revisions to the HGB attainment demonstration addressed in this rulemaking along with the HRVOC rules and emissions trading programs being concurrently approved, will provide for timely attainment of the 1-hour ozone standard in HGB as demonstrated through the modeling

analysis. Additionally, Texas has shown that these revisions will not interfere with any applicable requirement concerning attainment and reasonable further progress, or any other applicable requirement of the Clean Air Act. (Section 110(l) demonstration).

**DATES:** This rule is effective on October 6, 2006.

**ADDRESSES:** EPA has established a docket for this action under Docket ID No. EPA-R06-2005-TX-0018. All documents in the docket are listed on the [www.regulations.gov](http://www.regulations.gov) Web site. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through [www.regulations.gov](http://www.regulations.gov) or in hard copy at the Air Planning Section (6PD-L), Environmental Protection Agency, 1445 Ross Avenue, Suite 700, Dallas, Texas 75202-2733. The file will be made available by appointment for public inspection in the Region 6 FOIA Review Room between the hours of 8:30 a.m. and 4:30 p.m. weekdays except for legal holidays. Contact the person listed in the **FOR FURTHER INFORMATION CONTACT** paragraph below or Mr. Bill Deese at 214-665-7253 to make an appointment. If possible, please make the appointment at least two working days in advance of your visit. There will be a 15 cent per page fee for making photocopies of documents. On the day

of the visit, please check in at the EPA Region 6 reception area at 1445 Ross Avenue, Suite 700, Dallas, Texas.

The State submittal, which is part of the EPA record, is also available for public inspection at the State Air Agency listed below during official business hours by appointment:

Texas Commission on Environmental Quality, Office of Air Quality, 12124 Park 35 Circle, Austin, Texas 78753.

**FOR FURTHER INFORMATION CONTACT:** Erik Snyder, Air Planning Section (6PD-L), Environmental Protection Agency, Region 6, 1445 Ross Avenue, Suite 700, Dallas, Texas 75202-2733, telephone 214-665-7305; fax number 214-665-7263; e-mail address [snyder.erik@epa.gov](mailto:snyder.erik@epa.gov).

**SUPPLEMENTARY INFORMATION:**

Throughout this document, wherever “we”, “us”, or “our” is used, we mean the EPA.

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**I. Final Action**

*A. What Is the Background for This Action?*

On October 5, 2005, we proposed approval of the revisions to the SIP as it applies to the HGB ozone nonattainment area (70 FR 58119). The proposal provided a detailed description of these revisions and the rationale for our proposed actions, together with a discussion of the opportunity to comment. The proposed HGB attainment demonstration revisions relies upon four separate actions that EPA proposed for approval on October 5, 2005: Highly Reactive Volatile Organic Compound Emissions Cap and Trade Program for the HGB

Ozone Nonattainment Area (70 FR 58138), Discrete Emission Credit Banking and Trading Program (70 FR 58154), Emissions Banking and Trading Revisions for the Mass Emissions Cap and Trade Program for the HGB Ozone Nonattainment Area (70 FR 58112), and a Emission Credit Banking and Trading Program (70 FR 58146). The public comment period for these proposed actions closed on November 4, 2005.

One adverse comment letter and one comment letter supporting our action were received. The proposed SIP revision also relies upon a separate action that EPA proposed for approval on April 7, 2005 (70 FR 17640) that included HRVOC rules requiring sources to monitor and control HRVOCs. For more information, see the Technical Support Documents or the proposal notices for the attainment demonstration or the five other notices. This SIP revision also relies upon a separate action that included measures controlling emissions from portable gasoline containers that EPA approved on February 10, 2005 (70 FR 7041).

The following submissions from Texas which requested revision of the HGB SIP were considered for this action:

*January 28, 2003:* This submission responded to the State’s settlement agreement to provide an accelerated evaluation of whether the industrial NO<sub>x</sub> controls could be substituted with controls on HRVOCs. Based on the study, the commission adopted rules substituting controls on NO<sub>x</sub> emissions from industrial sources with new controls on HRVOCs. Texas also adopted a number of minor revisions to the general VOC rules. Finally, the State also provided a demonstration that Texas Emission Reduction Program (TERP) emission reductions would be sufficient to achieve 25 percent of the NO<sub>x</sub> reductions needed to demonstrate attainment, *i.e.*, about 14 tons per day (tpd).

*October 16, 2003:* This submission delayed compliance for the I/M program in Chambers, Liberty and Waller Counties. (Docket EPA-R06-OAR-2005-TX-0035.)

*October 6, 2004:* This submission repealed the I/M program in Chambers, Liberty and Waller Counties. (Docket EPA-R06-OAR-2005-TX-0035.)

*November 16, 2004:* This submission repealed a ban on morning operations of lawn service contractors.

*December 17, 2004:* This submission met the State’s commitment to provide a mid-course review SIP. Based on the updated analysis, the State further tightened controls on HRVOCs in Harris county and revised or repealed a

number of NO<sub>x</sub> control measures including, the vehicle idling prohibition, the speed limit strategy, the voluntary mobile emissions program and the commitment to achieve NO<sub>x</sub> reductions beyond the initial 25 percent provided in January 2003 (*i.e.*, revoked the State’s enforceable commitment to achieve 42 tpd of the NO<sub>x</sub> reductions that was included as part of the prior attainment demonstration).

*B. What Action Is EPA Taking?*

We are approving the following revisions to the 1-hour ozone attainment plan for the HGB area:

- TCEQ’s revised demonstration, submitted December 17, 2004, that the 1-hour ozone standard will be achieved in 2007, as required by the Texas State Implementation Plan, even though the ozone 1-hour NAAQS was revoked in June 2005.

- The revised motor vehicle emissions budgets associated with the revised attainment demonstration. The revised 2007 budgets are 89.99 tons per day (tpd) for volatile organic compound emissions and 186.13 tpd for NO<sub>x</sub> emissions.

- TCEQ’s revised demonstration that all reasonably available control measures have been adopted for the HGB area.

- Revisions to satisfy the enforceable commitments contained in the previously approved SIP (November 14, 2001, 66 FR 57160). With respect to its original enforceable commitment to reduce NO<sub>x</sub> emissions, TCEQ has instead substituted reductions in HRVOCs for a portion of these NO<sub>x</sub> reductions and shown that the HRVOC reductions provide equivalent air quality benefits in reducing ozone levels.

- Revisions to the industrial NO<sub>x</sub> rules submitted January 28, 2003, which included several miscellaneous changes and the reduction in stringency from a nominal 90 percent to 80 percent control.

- Revisions to the Texas I/M rules that drop three counties from the I/M program. In addition, several miscellaneous changes are approved.

- Repeal of the vehicle idling rule.
- Repeal of the Small Spark Engine Operating Restrictions.

- Revisions to the Speed Limit Strategy.

- Revisions to the voluntary mobile emissions program.

Our proposal to approve the revisions was published in the **Federal Register** on October 5, 2005 (70 FR 58119). Table 1 lists the revised elements of the HGB ozone SIP we are approving in this action.

TABLE 1.—REVISED ELEMENTS OF THE HGB OZONE SIP BEING APPROVED BY EPA

Element	Date submitted to EPA	Comments
1-hour standard attainment demonstration revisions.	12/17/04	Please see our proposed action and technical support document for more information.
Revised motor vehicle emissions budgets for 2007.	12/17/04	Revised budgets are 89.99 tpd for volatile organic compounds and 186.13 tpd for NO <sub>x</sub> .
Reasonably available control measures demonstration.	12/17/04	Please see our proposed action and technical support document for more information.
Revisions to satisfy the enforceable commitments contained in the previously approved SIP (November 14, 2001, 66 FR 57160).	12/17/04	Please see our proposed action and technical support document for more information.
Revisions to the industrial NO <sub>x</sub> rules which included several miscellaneous changes and the reduction in stringency from a nominal 90% to 80% control.	1/28/03	Revisions to 30 TAC Chapter 117, Sections 117.10, 117.105–117.108, 117.113–117.116, 117.119, 117.131, 117.135, 117.138, 117.141, 117.143, 117.149, 117.203, 117.205–117.207, 117.213–117.216, 117.219, 117.223, 117.301, 117.309, 117.311, 117.313, 117.319, 117.321, 117.401, 117.409, 117.411, 117.413, 117.419, 117.421, 117.463, 117.465, 117.473, 117.475, 117.478, 117.479, 117.510, 117.512, 117.520, and 117.534. Repeal of 30 TAC Chapter 117, Sections 117.104, 117.540, and 117.560.
Revisions to the Texas I/M rules that drop three counties from the I/M program and make several miscellaneous changes.	10/6/04	Revisions to 30 TAC Chapter 114, Sections 114.1, 114.2, 114.50, 114.52, and 114.53.
Repeal of the vehicle idling rule .....	12/17/04	Repeal of 30 TAC Chapter 114, Sections 114.500, 114.502, 114.507, and 114.509.
Repeal of the Small Spark Engine Operating Restrictions.	11/16/04	Repeal of 30 TAC Chapter 114, Sections 114.452 and 114.459.
Revisions to the voluntary mobile emissions program.	12/17/04	Please see our proposed action and technical support document for more information.

Texas has adopted a revised attainment demonstration that includes the following new control measures:

- Hourly (short-term) limit and Annual Cap on HRVOC emissions.
- Improved requirements for HRVOC Leak Detection and Repair Program for fugitive emissions and flare monitoring.
- Requirements for portable gasoline containers. (EPA approved February 10, 2005.)

We approved the measure controlling emissions from portable gasoline containers on February 10, 2005 (70 FR 7041). The SIP revisions addressed in this rulemaking in conjunction with the new HRVOC rules, will provide for timely attainment of the 1-hour ozone NAAQS as demonstrated through the modeling analysis. In addition, Texas has shown that these revisions will not interfere with any applicable requirements concerning attainment and reasonable further progress, or any other applicable requirement of the Clean Air Act, (Section 110(l)).

*C. What Other SIP Elements Did We Need To Take Final Action on Before We Could Approve the Revised Attainment Demonstration?*

In our proposed action we explained that we could not finalize approval of the revised attainment demonstration for HGB until we finalized approval of several related actions. These actions are discussed below. In a separate rulemaking published in this issue of

the **Federal Register** we are approving the new measures to control HRVOC emissions as part of the basis for this approval of revisions to the HGB attainment SIP. In this action, when we refer to this program as “the HRVOC rule” or “the HRVOC control program”, we are speaking of the entire rule package entitled “Control of Highly Reactive Volatile Organic Compound Controls”. (Docket ID No. EPA–R06–OAR–2005–TX–0033.)

The HRVOC rules were adopted by TCEQ based on recent findings that certain highly reactive chemicals (ethylene, propylene, 1,3 butadiene and butenes) contribute disproportionately to the ozone problem in the HGB area. EPA previously issued a proposed approval of the HRVOC rules on April 7, 2005 (70 FR 17640).

In separate rulemakings published in today’s **Federal Register** we are approving additional measures related to the Revised 1-hour ozone Attainment Demonstration for HGB. These rules include the HRVOC Emissions Cap and Trade Program for the HGB ozone nonattainment area, Discrete Emission Credit Banking and Trading Program (conditional approval), Emissions Banking and Trading Revisions for the Mass Emissions Cap and Trade Program for the HGB ozone nonattainment area, and an Emissions Credit Banking and Trading Program. These actions are further discussed in Section II.B. of this notice.

**II. What Revisions to the State Implementation Plan Are Being Approved Here or in Other Concurrent Actions?**

*A. One Hour Attainment Demonstration*

As required by the Clean Air Act, Texas has used photochemical grid modeling in its demonstration that the control strategy for the HGB area will achieve attainment of the 1-hour ozone NAAQS by 2007. Also, as allowed for under EPA policy, TCEQ has introduced other evidence, referred to as weight of evidence, to supplement the modeling analysis. The modeling provided in the mid-course review SIP revision builds on modeling performed for the January 2003 SIP revision which TCEQ submitted in support of reducing the stringency of the industrial NO<sub>x</sub> rules and adopting measures for the control of HRVOCs.

This SIP revision actually relies on two sets of modeling analyses. First, it relies on modeling performed by the TCEQ that is intended to simulate the routine emissions that occur in the HGB area and determine the level of routine emissions that can be allowed in the area yet still provide for attainment. Second, the SIP relies on modeling that was provided through a collaborative effort (known as project H13) of the Houston Advanced Research Center, the TCEQ, the University of Texas and the University of North Carolina. The project H13 report was entitled,

“Variable Industrial VOC Emissions and Their Impact on Ozone Formation in the Houston Galveston Area,” April 16, 2004. This second modeling effort was used to estimate the impact of non-routine emission events on ozone levels. This two-pronged approach is consistent with observations that indicate that Houston’s air quality problems stem from the combination of two phenomena, normal routine emissions and large non-routine releases of HRVOC emissions. For a more complete description of the modeling procedures and EPA’s evaluation of these procedures, see the Technical Support Document (TSD) in the Docket for this action (RO6–OAR–2005–TX–0018) and the FR proposal notice October 5, 2005 (70 FR 58119).

### B. New Control Measures

TCEQ has adopted the following new control measures since the previously approved SIP revision:

- Hourly (short-term) limit and Annual Cap on HRVOC emissions.
- Improved requirements for HRVOC Leak Detection and Repair Program for fugitive emissions and flare monitoring.
- Requirements for portable gasoline containers. (EPA approved February 10, 2005).

#### 1. Hourly (Short-Term) Limit and Annual Cap on HRVOC Emissions

As discussed in the proposal notice (70 FR 58119) and Technical Support Document (TSD), Texas relied primarily on two sets of modeling in developing its control strategy. One set of modeling, performed by TCEQ, is largely a traditional model formulation that examines the routinely variable emissions which occur in the HGB area. Through this modeling, TCEQ established that NO<sub>x</sub> emissions would not have to be reduced as much as previously planned and routine emissions of highly-reactive VOC emissions would have to be reduced. Through the second set of modeling, examining the impact of large non-routine releases of HRVOCs, it was established that the frequency and magnitude of large non-routine releases of HRVOCs should also be reduced.

Using both sets of modeling, TCEQ developed a key feature of the HGB attainment strategy: Routine HRVOC emissions are targeted and reduced through an annual cap-and-trade program, while the non-routine emissions from emission events, maintenance, start-up and shutdown are controlled through a short-term limit of 1200 lbs/hour. In a related rulemaking in today’s **Federal Register**, EPA is concurrently approving the Highly-

Reactive Volatile Organic Compound Emissions Cap and Trade Program to control routine emissions of HRVOCs (see EPA–R06–OAR–2005–TX–0033). Unique to the HGB attainment strategy, exceedances of the short-term limit are not counted toward compliance with the annual cap but are still subject to enforcement as a violation of the short-term limit.

Again, EPA recognizes that the approach of providing this partial exclusion for emissions above the short-term limit is a departure from practices in other cap and trade programs such as the acid rain program and our guidance. We currently believe this approach is only warranted in consideration of the Houston area’s unique situation that combines an extensive petrochemical complex and the availability of the extensive data and analysis that were generated by the intensive ozone study, TxAQS 2000 and in conjunction with a short-term limit. Consideration of this novel approach is warranted in order to balance the need to reduce both routine and upset emissions of HRVOC, but also recognizes that large upset emissions are difficult to control in the petrochemical industry and one significant event could result in a facility consuming more than a month’s emission allotment.

#### 2. Improved Requirements for HRVOC Leak Detection and Repair Program for Fugitive Emissions and Flare Monitoring

TCEQ has implemented a number of new requirements for leak detection and repair of components in HRVOC service. The changes include, among other things, the following improvements:

- Inclusion of connectors in the program.
- Inclusion of other non-traditional potential leak sources such as heat exchanger heads and man-way covers.
- Elimination of allowances for skipping leak detection periods for valves.
- Requirements for third party audits to help insure that effective leak surveys and repairs are conducted.
- Requirements that “extraordinary” efforts be used to repair valves before putting them on the delay of repair list.

For purposes of estimating emissions for compliance with the Short-term and annual caps, TCEQ adopted rules requiring companies to assume specific flare destruction efficiencies for properly operating flares and for when a flare operates outside the parameters of 40 CFR 60.18. EPA is approving the estimates used for flare destruction efficiency for use in the attainment demonstration because the estimates are based on the best information available.

We, however, remain concerned about the uncertainty created in the attainment demonstration by having a significant source of emissions which cannot be directly measured.

We note that some operating parameters for flares such as steam and air assist ratios are not covered specifically by 40 CFR 60.18 but some studies have indicated these parameters can impact flare efficiency. Because of the prevalence of flares in the HGB area, we believe Texas should strongly consider, for both flares in HRVOC service and general VOC service, requirements for monitoring steam and air assist ratios to insure that operators maintain these parameters, not covered by 40 CFR 60.18, in a range to insure optimum combustion. We also encourage TCEQ to pursue new technology such as the Fourier Transform Infrared Spectrophotometer which would eventually allow the direct measurement of destruction efficiency in the field.

For a full discussion of the improvements to these programs, see the Proposal Notice and Technical Support Document for this action. EPA is approving the emission reductions that have been projected for the improved leak detection and repair rules. Our approval is based on the improvements to the fugitive rule and Texas’ commitment to perform a rule effectiveness study and use improved emission inventory techniques to estimate future emissions to confirm the effectiveness of the program.

#### 3. Requirements for Portable Gasoline Containers

TCEQ has adopted standards for portable fuel containers sold in the State which provide requirements to prevent leaks and spills. EPA approved the TCEQ rules on February 10, 2005 (70 FR 7041). TCEQ projected 2.9 tons/day of VOC emission reductions that are included in the revised attainment demonstration modeling.

### C. What Control Measures Have Been Revised or Repealed?

Texas has revised a number of control strategies that were included in the previously approved SIP. A brief description of the revisions that EPA is approving follows. More details are provided in the proposal notice (70 FR 58119) and Technical Support Document (TSD) materials.

*Industrial NO<sub>x</sub> Controls:* Texas revised its NO<sub>x</sub> rules to reduce the controls from a nominal 90 percent control to 80 percent control. We are approving the revisions to industrial NO<sub>x</sub> controls in the HGB area.

*Vehicle Inspection and Maintenance Program in Three Rural Counties:* TCEQ has dropped the requirement for I/M in Waller, Liberty and Chambers Counties. We are approving the removal of the I/M program in these three counties.

*Removal of Small, Spark-Ignition Engine Operating Restrictions:* TCEQ has dropped this requirement which would have prohibited commercial lawn services from operating during the morning hours. We are approving the removal of these operating restrictions on small, spark-ignition engines.

*Speed Limit Strategy from a 55 mph Maximum Speed Limit to a 5 Mile Reduction in Speed Limits from Previous Levels:* The Texas legislature repealed TCEQ's authority to implement speed limits for environmental purposes. Texas Department of Transportation had already reduced speeds in the HGB area by 5 mph from 70 mph to 65 mph and from 65 to 60. These reductions in speed limits of 5 mph remain in place, but the reductions that would have been achieved by reducing speed limits on all roads further to 55 mph will not be achieved.

*Removal of the Vehicle Idling Restriction:* This measure that would have prohibited prolonged idling of heavy duty diesel vehicles has been repealed. We are approving the repeal of this rule.

*Revision to Delay the Compliance Date for Gas Fired Water Heaters and Small Boilers:* This rule is not being repealed, but its compliance date has been delayed from December 31, 2004 to January 1, 2007. This rule requires new water heaters sold in Texas to achieve lower NO<sub>x</sub> emission rates.

We are not approving changes to the rules for control of water heaters at this time. It is a Statewide rule and the changes to the rule impact other areas of the State and we have not yet analyzed the above issues in areas of the State other than Houston. We note only that the changes to the water heater rules do not impact the approvability of the Houston mid-course review SIP revision.

*Revisions to the Voluntary Measures:* Texas has revised the voluntary mobile emissions program (VMEP) portion of the SIP. The VMEP portion of the SIP that was approved in 2001, and was projected to achieve 23 tpd of emissions reductions through various voluntary and often innovative measures. TCEQ has recalculated the benefits as yielding 7 tpd of NO<sub>x</sub> emission reductions. We are approving the revisions to the VMEP.

#### *D. Reasonably Available Control Measures*

A brief description of the Reasonably Available Control Measures (RACM) revisions follows, for more details see the proposal notice (70 FR 58119) and Technical Support Document (TSD) materials.

In EPA's November 14, 2001 notice approving the plan for the HGB nonattainment area, EPA approved the analysis showing the plan was implementing all Reasonably Available Control Measures. The NO<sub>x</sub> reduction requirements of that plan were so substantial no additional RACM measures could be identified in time for adoption as a part of that plan and the State had to make an enforceable commitment to adopt additional NO<sub>x</sub> measures which were expected to be feasible in the near future. Now, based on the findings of the mid-course review, Texas has determined that the NO<sub>x</sub> reductions necessary for attainment, while still substantial, are not as great and that control of HRVOCs is a more effective way of reducing ozone. Both NO<sub>x</sub> and HRVOC controls, necessary for attainment, will be fully implemented the last year of the strategy. In the last year of the strategy, the point source controls alone will achieve an estimated 39 tpd of NO<sub>x</sub> reductions (based on review of the TCEQ's Mass Cap-and-Trade Registry). Reductions in on- and off-road emissions will also occur. Therefore, to advance attainment, additional reductions on the order of 39 tpd would have to be achieved before the ozone season of 2006. In Section 5.4 of the State Implementation Plan, Texas explains why even with the repeal and revision of the measures, Texas believes the RACM requirement is still being met. What follows is a brief summary of EPA's evaluation of each of the revisions being approved.

*Industrial NO<sub>x</sub> Controls:* TCEQ has relaxed the NO<sub>x</sub> rules for a number of NO<sub>x</sub> point source categories. The original controls achieved a nominal 90% reduction in point source emissions, with some categories reducing more than 90% and some less than 90%. The new rules, being approved here today, achieve a nominal 80% control. It is a convenient short hand to refer to the control levels as 90% or 80% even though this does not accurately state the level of reduction for individual source categories. TCEQ has argued that the 90% controls would not advance attainment because the current 80% control levels are scheduled to be implemented in 2007 and it would not be reasonable to expect

that a more stringent 90% control could be implemented faster to advance attainment. EPA previously agreed that the most expeditious schedule for the 90% controls would be by 2007. EPA continues to believe that to be the case so that implementation of 90% controls would not advance attainment. Even at the 80% control level, the TCEQ rules are still similar in stringency to the control levels implemented in California which have generally been considered the most stringent in the country.

*Repeal of the I/M Program in 3 Rural Counties:* Texas has chosen to reduce the scope of its I/M program from eight counties to five counties. The three counties that are being dropped are Chambers, Liberty and Waller Counties which are the most rural counties in the nonattainment area. The program was scheduled to be implemented in 2005. Using Mobile6, Texas has estimated that the program would achieve 0.87 tpd of emission reductions which is a smaller reduction estimate than the Mobile 5 estimate included in the 2000 SIP and is less than 0.2% of the projected emissions for the area in 2007. Because of the small amount of emission reductions, implementation of I/M in these three counties would not be expected to advance attainment and therefore should not be considered RACM.

*Removal of Small Spark Operating Restrictions:* This measure would prohibit lawn and garden service contractors for operation in the morning hours from 6 am to 10 am. This measure was due to be implemented in 2005. Texas decided that attainment could be reached without the implementation of this measure. The measure was estimated to achieve the equivalent of 7.7 tons/day of NO<sub>x</sub> emission reductions. As such, its implementation would not advance the attainment date. Therefore, EPA believes the morning lawn service ban should not be considered a reasonably available control measure for the HGB area.

*Speed Limit Strategy:* The previously approved SIP provides for the speed limits in the eight county area to be reduced to 55 mph. Later, TCEQ decided to delay the implementation of the 55 mph until 2005, but would implement speed limits that are 5 mph lower than the previous speed limits, lowering 70 mph speed limits to 65 mph and 65 mph limits to 60 mph starting in 2001. In the 2004 SIP revision, TCEQ decided to make permanent the interim limits and forgo lowering the speed limits to 55 mph. Based on Mobile6, lowering speeds all the way to 55 mph would be expected to reduce emissions 2-3 tons/day. This is a lower estimate

of emission reductions than predicted by Mobile5 in the 2000 SIP revision. This small amount of emission reduction would not advance attainment in the Houston area and therefore this measure is not considered RACM.

*Vehicle Idling Restriction:* Texas is dropping a rule that prohibits idling of heavy duty vehicles for more than five minutes in the Houston area. The measure was estimated to reduce NO<sub>x</sub> emissions by 0.48 tpd. Texas decided that attainment could be reached without the implementation of this measure. This small amount of emission reduction would not advance attainment for the area and therefore should not be considered RACM.

*Delay in Compliance for the Water Heater Rule:* In this case, TCEQ still intends to implement the rule, but has delayed compliance until 2007. Since the adoption of the current rule, two American National Standards Institute (ANSI) standards (the flammable vapor ignition resistance standard and the lint, dirt, and oil standard); the United States Department of Energy (DOE) energy efficiency standard; and the EPA insulation foam ban have been implemented. The ANSI lint, dirt, and oil standard and the flammable vapor ignition resistance standard were effective on July 1, 2003, and were established for gas-fired water heater safety reasons. The DOE energy efficiency standard was effective on January 20, 2004. The EPA foam ban was effective on January 1, 2003, and affects gas-fired water heaters, as water heater manufacturers have historically used hydrochlorofluorocarbon as a blowing agent for creating foam insulation. The implementation of these standards has delayed the progression of the water heater technology and design. Therefore, a design that meets the 10 ng/J emission limit in the Texas rule will not be available for sale in the market by the January 1, 2005 compliance date.

Because the new federal standards affect the design of new water heaters and have made it impractical for the industry to meet Texas's NO<sub>x</sub> limits for water heaters in a timely manner, EPA agrees that this measure is being implemented as expeditiously as is technically practicable. In other words, earlier implementation is not technically practicable and therefore, since it would be infeasible, it would not advance attainment.

We have reviewed these changes in RACM that are summarized above and discussed these changes in greater detail in our TSD. We are approving these changes to RACM as part of the

approval of this attainment demonstration revision approval and determining that TCEQ has satisfied the RACM requirements.

#### *E. Section 110(l) Analysis*

A brief description of the 110(l) analysis follows, for more details see the proposal notice (70 FR 58119) and Technical Support Document (TSD) materials. Section 110(l) of the Clean Air Act says:

Each revision to an implementation plan submitted by a State under this Act shall be adopted by such State after reasonable notice and public hearing. The Administrator shall not approve a revision of a plan if the revision would interfere with any applicable requirement concerning attainment and reasonable further progress (as defined in section 171), or any other applicable requirement of this Act.

As previously discussed, Texas has developed a revised strategy which relies on fewer reductions of NO<sub>x</sub> and more reductions of VOC. Texas determined that the revisions will not interfere with attainment or reasonable further progress or any other applicable requirement under the Act and after careful review, EPA agrees. Texas has completed the revised attainment demonstration with respect to the 1-hour standard which is being approved today. Attainment demonstrations for the 8-hour standard are not required until June 2007.

Prior to the time that attainment demonstrations are due for the 8-hour ozone standard, it is unknown what suite of control measures a State will choose to adopt for a given area to attain that standard. During this period, to demonstrate no interference with the 8-hour NAAQS, EPA believes it is appropriate to allow States to substitute equivalent emission reductions (to compensate for control measures being removed) which result in equal or greater air quality benefit than those reductions being removed from the approved SIP. EPA believes that preservation of the status quo in air quality during the time in which new attainment demonstrations are being developed for the 8-hour ozone NAAQS will prevent interference with the States' obligations to develop timely attainment demonstrations and to attain as expeditiously as practicable.

To show that the compensating emission reductions are equivalent, modeling or adequate analysis must be provided. The compensating emission reductions must provide actual, new emission reductions achieved in a contemporaneous time frame in order to preserve the status quo. In addition, the emission reductions must be permanent,

enforceable, quantifiable, and surplus to be approved into the SIP. EPA has determined that the revised HGB SIP has met each of these requirements. See the proposal notice (70 FR 58119) and Technical Support Document (TSD) materials.

*Contemporaneous:* While contemporaneous is not defined in the Clean Air Act, a reasonable interpretation is that the compensating control measures be implemented within one year of the time frame for the control measure being replaced. In this case, the new control measures being used as substitutes are being implemented in virtually the same time frames as the measures being replaced. The new measures have the following compliance dates: tighter controls on HRVOC fugitive emissions by March 31, 2004, monitoring for the HRVOC cap by 2005, compliance with the HRVOC cap starting in 2006, and gas can rule implementation in 2007. The measures being replaced, which are listed previously in this notice, with the exception of the vehicle idling ban, all had compliance dates in the approved SIP of 2005 or later. In particular the largest emission reduction change by far, the difference between 90 percent and 80 percent control on NO<sub>x</sub>, was not scheduled to be fully realized until 2007. The enforceable commitment measures only provided that the measures would be adopted by May 2004 and compliance would be achieved as expeditiously as possible but no later than the beginning of the ozone season in 2007. Therefore, it can be assumed the emission reductions from the NO<sub>x</sub> enforceable commitments, had they been implemented, would not have occurred before the 2005–2006 time frame, a time frame similar to that for the measures to control HRVOCs which Texas has adopted a substitute. With regard to the vehicle idling restrictions, the compliance date for this rule was May of 2001. It was projected to achieve 0.48 tpd of NO<sub>x</sub> emission reductions. It was discontinued effective December 23, 2004. The improved HRVOC fugitive controls which began implementation in March of 2004, more than offset the small reductions lost by the discontinuation of the motor vehicle idling program after December 23, 2004.

*Equivalent:* To demonstrate that the emission reductions were equivalent, the TCEQ used the photochemical model to demonstrate that the total collection of strategies in the current SIP revision is equivalent or better in 8-hour ozone reduction effectiveness as compared with the total collection of strategies in the SIP that was approved in 2001, including the reductions that

would have occurred due to measures to meet the enforceable commitments. Several 8-hour ozone metrics were calculated. EPA believes that the new strategy and the old strategy are approximately equivalent in 8-hour ozone benefit, with the new strategy slightly more effective in reducing the peak ozone values and the old strategy slightly more effective in reducing the predicted area of exceedances. Taking all of the metrics into consideration and recognizing the uncertainties in the modeling, we believe that Texas has demonstrated that the new strategy is equivalent to the old strategy in 8-hour ozone benefit.

*Permanent:* The emission reductions from the HRVOC rules are permanent as sources will have to maintain compliance with new measures indefinitely.

*Enforceable:* EPA has reviewed the enforceability of the substitute measures in separate rules.

The Portable Fuel Container Rule was approved: February 10, 2005, 70 FR 7041. EPA is also approving concurrently in a separate notice the fugitive emission controls and improved monitoring requirements for HRVOCs (proposal on April 7, 2005, 70 FR 17640). Finally, concurrent with this **Federal Register** notice EPA is approving the HECT program. In each of these rulemakings, EPA has evaluated whether the substitute rules are enforceable, considering such issues as whether the rules have adequate test methods, monitoring requirements, record keeping requirements and whether the State has adequate enforcement authority to ensure the limits are achieved. By our approval elsewhere in the **Federal Register** today, these substitute rules are federally enforceable and enforceable by the public through citizen suit.

In summary, we believe the substitute measures result in equivalent 8-hour benefit and that the new measures are contemporaneous, enforceable and permanent. Therefore, we believe approval of these revisions to the approved SIP will not interfere with attainment of the 8-hour standard.

The 1-hour standard was revoked on June 15, 2005 for the HGB area. The approved SIP, however, committed the State to adopt control measures of 56 tpd of NO<sub>x</sub>, unless the State could show that these NO<sub>x</sub> reductions were not needed for attainment of the 1-hour standard. We have discussed elsewhere in this notice (and in the proposal and TSD), EPA's evaluation of the revised 1-hour attainment demonstration and are approving these revisions.

Texas submitted, and EPA has approved, revisions to the rate of progress (ROP) plan (February 14, 2005, 70 FR 7407) based on the revised strategy. These revisions will ensure that 1-hour ROP is met for each three year period out to the 1-hour attainment date of November 15, 2007.

Other than for ozone, the HGB area currently meets all other National Ambient Air Quality Standards. The plan revisions being considered would not be expected to impact compliance with the CO, SO<sub>2</sub> or Lead NAAQS as these pollutants are not affected by these rules.

The revisions to the NO<sub>x</sub> rules do affect emissions of NO<sub>2</sub> and thus could potentially impact attainment with the NO<sub>2</sub> standard. The HGB area, however, meets the NO<sub>2</sub> standard at today's level of NO<sub>2</sub> emissions and the revised plan will reduce NO<sub>2</sub> emissions dramatically from existing levels and thus will not interfere with maintenance of the NO<sub>2</sub> standard.

Similarly, the HGB area currently meets the NAAQS for PM<sub>2.5</sub>. NO<sub>x</sub> and VOCs are precursors to the formation of PM<sub>2.5</sub>. Although the revised plan does not reduce NO<sub>x</sub> emissions as much as the previous attainment demonstration SIP revision approved by EPA in November 2001, the revised plan will result in additional NO<sub>x</sub> and VOC reductions beyond today's levels (emission levels at the time of this notice). Therefore, the revised plan will not interfere with the continued attainment of the PM<sub>2.5</sub> standard.

Section 110(l) applies to all requirements of the Clean Air Act. Below are requirements potentially affected by TCEQ's rule change and a brief discussion of EPA's analysis.

Reasonably Available Control Technology (RACT) requirements: EPA has previously approved the NO<sub>x</sub> and VOC rules in the HGB area as meeting the CAA's RACT requirements. The revised NO<sub>x</sub> rules remain substantially more stringent than the previously approved RACT requirements. The new HRVOC rules build on the previously approved RACT requirements. In addition, these revisions do not impact the major sources applicability cutoffs. Therefore, these revisions do not interfere with the implementation of RACT.

Inspection and maintenance programs (I/M): This revision drops three counties from the I/M program. These counties are not included in the urbanized area as defined by the Census Bureau. Thus, I/M is not required to be implemented in these counties and these revisions do not interfere with meeting the I/M requirements of the CAA.

*Air Toxics:* There are no Federal ambient standards for air toxics and these rules do not interfere with implementation of any federal MACT standards, therefore, these rule revisions do not interfere with compliance with any air toxics standards under sections 112 or 129 of the CAA. We note that air toxic levels of butadiene and formaldehyde are expected to decrease as a result of the revised plan, because the HRVOC rules directly regulate emissions of butadiene and ethylene. Formaldehyde is formed from ethylene in the photochemical reactions leading to ozone.

#### F. Enforceable Commitments

In the SIP approved in November 2001, there were enforceable commitments to achieve additional NO<sub>x</sub> reductions and enforceable commitments to incorporate the latest information into the SIP. This section contains a brief summary of the enforceable commitments which were approved in the November 2001 **Federal Register** and a short discussion of how they were met or are being revised.

*Commitment:* To perform a mid-course review (including evaluation of all modeling, inventory data, and other tools and assumptions used to develop this attainment demonstration) and to submit a mid-course review SIP revision, with recommended mid-course corrective actions, to the EPA by May 1, 2004.

*Discussion:* Texas provided, in the December 2004 submission, a mid-course review that included new modeling with new more recent episodes (including updated emissions) based on the Texas 2000 study. The State submitted control measures that, based on the demonstration, will result in attainment of the 1-hour standard as expeditiously as practicable. Therefore, EPA believes the commitment for a mid course review has been satisfied.

*Commitment:* To perform new mobile source modeling for the HG area, using Mobile6, EPA's on-road mobile emissions factor computer model, within 24 months of the model's release.

*Discussion:* The mid-course review modeling employed Mobile6 for the on-road mobile source inputs satisfying this commitment.

*Commitment:* If a transportation conformity analysis is to be performed between 12 months and 24 months after the Mobile6 release, transportation conformity will not be determined until Texas submits an MVEB which is developed using MOBILE6 and which we find adequate.

*Discussion:* This commitment was not applicable because transportation

conformity was not performed during the time period.

*Commitment:* To adopt rules that achieve at least the additional 56 tpd of NO<sub>x</sub> emission reductions that are needed for the area to show attainment of the 1-hour ozone standard, including the adoption of measures to achieve 25% (14 tpd) of the needed additional reductions (56 tpd), and to submit those adopted measures to EPA as a SIP revision by December 2002. To adopt measures for the remaining needed additional reductions and submit these adopted measures to EPA as a SIP revision by May 1, 2004.

*Discussion:* In the January 28, 2003 submission, TCEQ provided the demonstration that the TERP program meets EPA's requirements as an economic incentive program and will achieve the required 14 tons/day of emissions reductions. EPA has approved the TERP program in a separate **Federal Register** action which discusses how the TERP program meets the EIP requirements (August 19, 2005, 70 FR 48647). Through the attainment year of 2007, 38.8 tons/day of emission reductions are projected for the TERP program based on a \$5,000/ton cost effectiveness. The total obligation for emission reductions from TERP is 32.9 tpd. TERP originally replaced two measures: a morning construction ban (6.7 tpd NO<sub>x</sub> equivalent) and accelerated introduction of Tier II/III equipment (12.2 tpd). After allocating 18.9 tpd from TERP to replace these two measures, the program still is projected to produce an additional 19.9 tpd of reductions which is sufficient to provide the additional 14 tpd of emissions reductions needed to meet the enforceable commitment. Thus, EPA believes the enforceable commitment to achieve 25% of the 56 tpd of NO<sub>x</sub> reductions has been satisfied.

We note two developments with the program. The average cost effectiveness of TERP projects, to date, is \$5500/ton and the Texas legislature moved to cut some of the funding for the program in the last session. TCEQ may have to shift some of the TERP funding from other areas such as Corpus Christi or Victoria, which currently meet the 8-hour ozone standard, to the HGB area to insure that the emission reduction targets are met.

For the rest of the enforceable commitments to adopt and submit rules to achieve the remaining 42 tpd NO<sub>x</sub> reductions due by May 1, 2004, Texas determined that these additional NO<sub>x</sub> reductions would not be necessary for the area to attain. Instead, as discussed elsewhere in this document and the proposed approval notice (70 FR 58119), TCEQ has instead adopted and has

begun implementing a strategy to reduce emissions of HRVOCs. EPA believes that the new strategy will attain the one-hour standard. This is further discussed in other sections of this notice, the proposal notice, and the TSD.

*Commitment:* That the rules will be adopted as expeditiously as practicable and the compliance dates will be expeditious.

*Discussion:* TCEQ adopted its measures for the control of HRVOC first in 2002 and has revised them three times since then. The compliance dates in the rules are based on the need to develop monitoring plans, quality assurance/quality control programs, install the monitors, and develop control plans based on the monitoring results. EPA believes that the implementation of these new measures is as expeditious as practicable.

*Commitment:* That the State would concurrently revise the Motor Vehicle Emissions Budgets (MVEBs) and submit as a revision to the attainment SIP if additional control measures reduce on-road motor vehicle emissions. Texas stated that measures which could limit future highway construction, such as growth restrictions, may not be included.

*Discussion:* Texas has revised the mobile source budget to account for TERP reductions and other adjustments to the mobile source emissions estimates.

*Summary:* Based on the above analysis, we have determined that TCEQ has satisfied the requirements of the enforceable commitments contained in the approved Houston/Galveston SIP.

*G. Motor Vehicle Emissions Budgets*

The MVEBs established by this plan and that EPA is approving are contained in Table 2. The development of the MVEBs are discussed in section 3.5 of the SIP and were reviewed in the TSD. We are approving the new MVEB because we find the budget to be consistent with the attainment plan.

TABLE 2.—2007 ATTAINMENT YEAR MOTOR VEHICLE EMISSIONS BUDGETS [Tons per day]

Pollutant	2007
VOC .....	89.99
NO <sub>x</sub> .....	186.13

**III. What Is EPA's Response to Comments Received on the October 5, 2005 Proposed Rulemaking for This Action?**

*A. What Comments Were Received?*

The following comment letters were received on the October 5, 2005 proposal:

(1) November 4, 2005 letter from John D. Wilson, Executive Director of Galveston-Houston Association for Smog Prevention for the Galveston-Houston Association for Smog Prevention, Environmental Defense (Texas Office), Lone Star Chapter of the Sierra Club, and Public Citizen (Texas Office). Comments from this group will be referred to as "(Wilson)".

(2) November 4, 2005 letter from Matthew L. Kuryla of Baker Botts LLP on behalf of BCCA Appeal Group. Comments from this group will be referred to as "commenter (BCCAAG)". Commenter BCCAAG included a list of BCCA Appeal Group members as follows: Air Products, L.P.; Dynegy, Inc.; Entergy Gulf States, Inc.; Enterprise Products Operating, L.P.; Exxon Mobil Corporation; Greater Fort Bend Economic Development Council; Lyondell Chemical Company; Reliant Energy, Inc.; Shell Oil Company; Texas Genco; Texas Instruments Incorporated; Texas Petrochemicals, L.P.; and Valero Refining-Texas, L.P.

*B. Response to Comments on Attainment Demonstration*

In general the commenter (BCCAAG) indicated that they support approval of the proposed attainment demonstration revisions and did not have any adverse comments on this SIP revision. They indicated that the revisions represent the most effective, technically and scientifically robust plan yet advanced for achieving air quality goals in the HGB airshed and the revised control strategy will bring the area into attainment. They continued by indicating that the revised plan is already reducing the number of days that ozone exceedances occur and the magnitude of the high and second high ozone value at regulatory monitors has decreased substantially in the last three years. Commenter (BCCAAG) supported the proposed approval indicating that the revised plan did meet RACM and the revised control strategy would reach attainment.

1. General Comments

*Comment GC1:* A commenter (Wilson) indicated that the proposed plan fails to adequately demonstrate that its implementation, maintenance, and enforcement will lead to attainment of



the 1-hour national air ambient quality standards (NAAQS) for ozone in the Houston-Galveston-Brazoria (HGB) area. State ambient monitoring results show that the HGB area already has failed the test for attainment of the 1-hour ozone standard by the statutory deadline of November 15, 2007, further demonstrating that the SIP revision is "substantially inadequate to attain" the ozone NAAQS by the deadline established in the Clean Air Act (CAA). Thus, as demonstrated in these comments, the EPA Administrator must find that:

- Texas has failed to satisfy the minimum criteria under section 110(k);<sup>1</sup> and
- The plan is substantially inadequate.

Then, based on these findings, the Administrator must require that the TCEQ submit a revised plan demonstrating attainment within no more than 18 months.<sup>2</sup>

Commenter (Wilson) also urged EPA to disapprove the attainment plan because they believe the plan does not include complete modeling, enforceable versions of all Reasonably Available Control Measures (RACM) and a control strategy sufficient to achieve attainment. The commenter (Wilson) went on to say because they believe the plan should be disapproved, EPA must commence promulgation of a Federal Implementation Plan (FIP).

*Response GC1:* In the following responses, we address the specific concerns raised by the adverse comments in more detail. We believe the revised plan provided by the State of Texas is fully approvable under the Act, as we have documented in this notice and will provide for attainment as expeditiously as practicable which is by November 15, 2007, and that the revised plan includes all reasonably available control measures. Therefore, we are finalizing our approval in this action. Furthermore, because we are fully approving the plan as meeting the requirements of 182(c)(2) and (d) of the Act, it is unnecessary to commence development of a FIP.

*Comment GC2:* Commenter (Wilson) indicated TCEQ has not provided modeling that shows attainment by 2007. The commenter also indicated that six monitors in the area have already had four to six exceedances of the 1-hour ozone NAAQS and the area has already failed to attain by November 17, 2007 based on monitoring data for 2005. The commenter also contended that two one-year extensions are

specifically restricted to the dates listed in Table 1 of Section 7511(a)(1), and that they do not apply to the Severe-17 area deadlines set in Section 7511(a)(2). Therefore, the commenter argues, these extensions cannot change the attainment date of Severe-17 areas such as Houston. The commenter also states that there is no demonstration of maintenance of the ozone standard below the 0.12 ppm one-hour standard beyond 2007.

*Response GC2:* EPA has taken the position that for nonattainment areas subject to the requirements of subpart 2 of Part D of the Act, the area needs to demonstrate that in the attainment year, the area will have air quality such that the area could be eligible for the two one-year extensions provided under Section 181(a)(5) of the Act. See 66 FR 57160, 57163–64 (November 14, 2001). EPA disagrees that Severe-17 areas such as Houston are not entitled to the extensions provided in Section 181(a)(5). It is our interpretation that the Severe category in Table 1 of Section 181(a)(1) encompasses both Severe-17 and Severe-15 areas. Table 1 sets an attainment date of 15 years for severe areas with a 1988 ozone design value between .180 and .280 ppm. However, Section 181(a)(2) of the Act modifies Table 1 to provide an attainment date of 17 years for severe areas with a design value of between .190 and .280 ("Severe-17 areas"). For those areas with a design value above .190, Congress plainly intended to allow two years longer to attain than the remainder of the severe areas included in Table 1. Table 1 in Section 181(a)(1) cannot be read in isolation, and must be read in conjunction with Section 181(a)(2). EPA thus interprets Section 181(a)(5) as providing for attainment date extensions for all severe areas, including those whose attainment date in Table 1 is modified by Section 181(a)(2).

EPA interprets Section 181(a)(2) as simply recognizing that Severe areas with a higher design value will need additional time to reach attainment and thus is simply extending the date in Table 1 for severe areas with high design values. There is nothing in Section 181 that directly excludes Severe-17 areas from the extensions provided for in Section 181(a)(5). The commenter seems to suggest that even though Congress recognized that Severe-17 areas would need more time to reach attainment, they are not entitled to the extensions in Section 181(a)(5). This interpretation would result in the Severe-17 areas getting no more time to attain than Severe-15 areas that potentially could qualify for the two one-year extensions. This would be an

absurd result. Under the commenter's interpretation, all areas, including those designated "Extreme", would be entitled to attainment date extensions, with the sole exception of Severe-17 areas. This would mean that severe areas with design values under .190 would be allowed two one-year extensions, providing them with an attainment period of up to 17 years, while the Severe-17 areas, which were intended to have two years longer to attain than the other severe areas, would be held to their initial 17-year attainment period, thereby eliminating the very distinction between the areas that Congress intended in section 181(a)(2). The better reading is that Severe-17 areas should be eligible for the 2 one-year extensions (if they qualify for them) provided for in Section 181(a)(5). EPA has consistently taken this position. Indeed, in the approval of the full attainment demonstration SIP for the Houston area in our November 14, 2001 (66 CFR 57160, 57163), we indicated in a response to a comment (that the modeling should show attainment in 2005) that EPA's modeling guidance provided for modeling to demonstrate attainment in the last year (2007 in this case) such that it would be eligible or clean data extensions in accordance with Section 181(a)(5). It has been EPA's opinion at least since 2001 that Houston, a Severe-17 area, was entitled to the extensions in question. If the commenter's interpretation was applied (interpret 181(a)(5) as not applying to Severe-17 areas), three years of data (2005–7) would be needed to yield attainment in 2007 and to yield those monitor levels, EPA would have had to modify modeling guidance and required TCEQ to model 2005 future year for Houston and show no exceedances in the SIP revisions EPA approved in 2001. Once again, if the commenter's assertion were correct, Severe-17 areas would not be eligible for clean data extensions with the end result being an attainment date not much different than if the area had been designated a Severe-15 area.

In addition, under EPA's interpretation, a Severe-17 area does not automatically get the extensions. They have to demonstrate significant progress towards attainment. Nonattainment areas subject to the requirements of subpart 2 of part D of the Act, need to demonstrate that in the attainment year, the area will have air quality such that the area could be eligible for the two one-year extensions provided under section 181(a)(5) of the Act. Under section 181(a)(5), an area that does not have three years of data demonstrating

<sup>1</sup> 42 U.S.C. 7509(a)(1) and (2).

<sup>2</sup> 42 U.S.C. 110(k)(5).

attainment of the ozone NAAQS, but has complied with all of the statutory requirements and that has no more than one exceedance of the NAAQS in the attainment year, may receive a one-year extension of its attainment date.

Assuming those conditions are met the following year, the area may receive an additional one-year extension. If the area has no more than one exceedance in this final extension year, then it will have three-years of data indicating that it has attained the ozone NAAQS. There is no reason to believe that Congress did not intend for Severe-17 areas to exercise this option.

Moreover, EPA believes this approach is consistent with the statutory structure of subpart 2. Under subpart 2, many of the planning obligations for areas were not required to be implemented until the attainment year. Thus, Congress did not assume that all measures needed to attain the standard would be implemented three years prior to the area's attainment date. For example, areas classified as marginal—which had an attainment date of three years following enactment of the 1990 Clean Air Act Amendments—were required to adopt and implement RACT and I/M “fix-ups” that clearly could not be implemented three years prior to their attainment date. Similarly, moderate areas were required to implement RACT by May 1995, only 18 months prior to their attainment date of November 1996. Also, the ROP requirement for moderate and above areas, including the 15% plan for reductions by November 1996, applies through the attainment year. Thus, EPA believes that Congress did not intend that these additional mandatory reductions be in excess of what is needed to achieve three years of “clean data.” EPA does not require areas to demonstrate that the area will have three years of data (2005–2007) showing attainment in the attainment year. However, EPA does believe that the Act requires and that it is prudent for States to implement controls as expeditiously as practicable. As discussed elsewhere in this notice, additional reductions are being made in the Houston area after the 2005 ozone season, so it is still possible for the additional measures to result in the area reaching attainment by 2007. For these reasons, EPA does not agree with the commenter that the State's attainment demonstration is inadequate because of the exceedances that occurred at six monitors in 2005.

A plan for maintenance of the NAAQS is not necessary for the attainment demonstration to be approved. A State is not required by the Act to provide a maintenance plan until the State petitions for an area to be

redesignated to attainment. While it is not necessary for the State to provide for maintenance of the standard at this time, we do believe emissions in the HGB area will continue to decrease after 2007 due to on- and off-road vehicle emission control programs that will provide additional reductions as the fleet continues to turnover after 2007. TCEQ is also required to provide an 8-hour ozone attainment SIP for the HGB area that will likely require a new mixture of control measures to demonstrate future attainment of the 8-hour ozone standard. So there is reason to believe that air quality will continue to improve after the 1-hour attainment date.

*Comment GC3:* Commenter (Wilson) suggested the plan should address other air pollution concerns such as reasonable further progress of the 8-hour standard in addition to attainment of the one-hour standard. The commenter suggested the plan should provide as much progress as possible toward implementing the 8-hour standard as the requirements of the Act and EPA's implementing regulations allow.

*Response GC3:* EPA established submission dates for 8-hour SIPs in its Phase 2 ozone implementation rule (70 FR 71611). SIPs addressing reasonable further progress and attainment of the 8-hour standard are due in 2007 and are not the subject of this rulemaking. EPA's review here is focused on whether the submitted plan meets the statutory requirements for attainment of the one-hour ozone standard, and doesn't interfere with attainment of the 8-hour NAAQS. In reviewing the 1-hour attainment SIP, EPA did consider consistent with section 110(l) whether this SIP revision would interfere with attainment of the 8-hour NAAQS. Section 110(l) requires that any plan revision not interfere with any applicable requirement concerning attainment and reasonable further progress, or any other applicable requirement of the Act 42 U.S.C. § 7410(l). As provided in Section II.E, EPA concludes that these revisions will not interfere with attainment or progress toward attainment of the 8-hour ozone NAAQS.

*Comment GC4:* The commenter (Wilson) indicated the EPA should reject the TCEQ claim that the SIP revision is likely to lead to attainment because it is based on a model analysis that is systematically biased towards under predicting unhealthy levels of ozone, both in the base case and future conditions. The commenter continues that TCEQ wrongly claims the only significant reason for this under prediction is the under reporting of

short-term emissions by industry and that other factors exist for the under prediction bias. The commenter continues that because the TCEQ did not recognize the other factors that lead to the under prediction bias in their model, that the plan being considered by EPA lacks remedies for each of these factors. The commenter gives the example that TCEQ did not adopt measures to regulate VOCs other than HRVOCs and that TCEQ even repealed some general VOC control measures even though evidence suggests that Other VOCs (OVOCs) are a factor in the under prediction bias. The commenter summarizes that since such additional control measures are lacking, that EPA should disapprove the revisions.

*Response GC4:* While EPA agrees that a general under prediction bias exists in the base case and future year modeling, we disagree that this is grounds for disapproving the revisions. EPA believes all model performance measures should be considered and there is no rigid criterion for model acceptance or rejection in assessing model simulation results for the performance evaluation. As recommended by EPA, the State's model performance evaluations for the selected episode included diagnostic and sensitivity analyses, and graphical and statistical performance measures. The model performance evaluation included statistical measures consisting of comparing the modeled versus monitored ozone that were mostly within the suggested limits in EPA's guidance. In addition, the graphical performance of the model for the episode indicated the model performed fairly well. For all days modeled, the combination of statistical and graphical performance was deemed sufficient for this revision package.

Sufficient evidence exists that the episodic emissions that occur in the Houston area do impact the model's capacity to replicate ozone and are a plausible reason for much, if not all of the ozone under prediction in the model. While some evidence exists that an under estimation of emissions of Other VOCs (OVOCs = VOCs other than HRVOCs) may exist and that this may be responsible for some modeling under prediction, the research to answer the level of under/over estimation of OVOCs and how to allocate such adjustment in the model were not available when TCEQ was conducting the modeling for these revisions. Furthermore, modeling analyses indicate that HRVOC emission releases (in addition to the normal inventory) could result in higher ozone levels that would be as high as monitored values

and would seem to resolve much of the modeling under prediction bias issues. While an under estimation of OVOCs may also be part of the reason for the under prediction bias in the model, sufficient analyses/evidence do not exist to specifically quantify any level of bias due to wrongful estimation of OVOCs. While TCEQ did not implement additional controls on OVOCs, it is EPA's technical opinion that based on the weight-of-evidence and the modeling, the State's revised control strategy provides for attainment by November 15, 2007.

*Comment GC5:* The commenter (Wilson) indicated that the plan is not likely to lead to attainment because several of the control strategies are not likely to be as effective as TCEQ claims. The commenter continues that EPA should not approve some of the control strategy revisions (relaxation of NO<sub>x</sub> controls) in order to maintain a higher level of pollution control in the Houston area. In other parts of the commenter's package, the commenter indicated that the NO<sub>x</sub> rule revisions should not be approved.

*Response GC5:* It is EPA's technical opinion that based on the modeling results and the additional weight-of-evidence, the State's revised control strategy provides for attainment of the 1-hour ozone NAAQS by November 15, 2007. We have addressed other specific comments from the commenter on issues related to why the control strategies may not be as effective as TCEQ claims elsewhere in the response to comments. The Clean Air Act gives the State the primary authority to prepare a SIP that provides for implementation, maintenance and enforcement of the NAAQS in each air quality control region and to determine the mix of control measures to achieve that goal, as long as they show attainment and the demonstration meets 110(l) requirements. EPA's responsibility is to review SIPs that the State provides and either approve or disapprove the revisions based on their meeting the requirements of the Act. EPA has reviewed the revised SIP and has determined that the revisions (including the NO<sub>x</sub> rule revisions) demonstrate attainment by November 15, 2007.

*Comment GC6:* The commenter (Wilson) indicates that although the TCEQ has exercised sound scientific judgment in responding to many issues that have arisen, the SIP revision is also characterized by a pattern of avoiding unwanted findings by withholding data, applying standards selectively, reaching inconsistent conclusions, failing to conduct critical research, and

unreasonably dismissing comments. The commenter continues that these actions undermine the technical credibility of the SIP revision and prejudice its findings. The commenter indicates that EPA should conduct its own analysis of available data and apply a health-protective bias whenever more than one argument is supported by the available data.

*Response GC6:* EPA is satisfied with the technical credibility of TCEQ's finding. As discussed in the response to comment GC5, TCEQ is responsible for developing an acceptable implementation plan. TCEQ continues to have an open stakeholder process (both periodic technical and planning meetings and special meetings). EPA encourages TCEQ to continue having an open stakeholder process and to continue to share as much information (analyses, modeling, proposed regulations, etc.) as possible with the public/stakeholders and allow for comments/feedback to be considered in the SIP development process. EPA conducted a detailed review of the proposed revisions prior to proposing approval and provided detailed review of the modeling and weight-of-evidence analysis in the proposal and TSD. EPA has also considered the comments received during the proposal's comment period and has determined that the SIP revisions are acceptable and EPA is approving these revisions to TCEQ's SIP.

*Comment GC7:* A commenter (Wilson) indicated that TCEQ has failed to include contingency measures in the HGB ozone SIP. The commenter continues that TCEQ has claimed they satisfy this requirement with the measures to be implemented in 2008, since the measures are above and beyond those modeled in the proposed revision and include additional TERP reductions. The commenter contends that these measures are not sufficient because TCEQ has not substantiated how they are sufficient to advance attainment.

*Response GC7:* TCEQ included contingency measures in the SIP revision for 23.57 tpd reduction in NO<sub>x</sub> and 10.84 tpd of VOC in 2008. EPA has reviewed the proposed contingency measures and concluded that they meet the level of reductions necessary. Historically, EPA has recommended that contingency measures achieve an additional 3 percent reduction in emissions. (57 FR 13511) The purpose of contingency measures is to ensure continued progress while the area moves forward to adopt additional controls needed for attainment and we believe an additional 3 percent achieves

that purpose. (57 FR 13511) We are uncertain what the commenter is referring to when it suggests that contingency measures must be "sufficient to advance attainment" but note that term is not used in the statute nor has EPA ever suggested that as the test for determining the adequacy of contingency measures. While we find that TCEQ has adequately satisfied the contingency measure requirement, ultimately we note that contingency measures for failing to attain the 1-hour standard will not apply. As noted in the Phase 1 Rule to Implement the 8-hour ozone NAAQS, EPA did not retain 1-hour contingency measures as an applicable requirement that would continue to apply after the 1-hour standard is revoked (*i.e.*, June 15, 2005 for the HGB nonattainment area). EPA also further noted that once the 1-hour standard was revoked, EPA would no longer make determinations whether an area had met or failed to meet that revoked standard and thus contingency measures would not be triggered even if adopted. (70 FR 30592, May 26, 2005 at page 30599.)

*Comment GC8:* A commenter (Wilson) indicated EPA should not disregard the 1-hour ozone standard in light of the new 8-hour standard. The commenter indicated that an analysis of the historical record demonstrates that if Houston meets the 1-hour standard, the public will be protected from air pollution exposures that would be allowed under the 8-hour standard. The commenter iterated that it is likely to be true that for much of the rest of the country the 8-hour standard can reasonably supplant the 1-hour standard and in Houston the 8-hour standard is clearly superior to the 1-hour standard in terms of public health benefits. The commenter continued that the 1-hour standard has a special role in Houston for the protection of public health. The commenter indicated that TCEQ data suggest that failing to attain the 1-hour standard will leave Houston residents with exposure to ozone at levels that the EPA once sought to prevent. According to the commenter's analysis of days when either the 1-hour and/or the 8-hour standard were exceeded during 2000–2003, the one-hour standard was the only standard breached on about 7 percent of the days (approximately 6 days/year). The commenter also indicated the AQI reaches a higher value based on the one-hour standard on a similar number of days. The commenter continued by indicating a singular focus on the 8-hour standard (and not addressing the 1-hour standard) could leave Houston residents

breathing unhealthy air about 6 days per year even after the 8-hour standard is attained.

The commenter continued that controlling short-term exposures to ozone is important as many scientific studies based on the 1-hour ozone standard report increased use of asthma medication, increased emergency room visits and hospitalization for respiratory problems, even at levels below 0.12 ppm for just one or two hours with affects continuing for days or months afterwards.

The commenter continues that EPA has always viewed the 1-hour and 8-hour standards as adequate alternative methods for protecting public health, and gave consideration to establishing a standard that combined both 1-hour and 8-hour measurements. The commenter indicates the basis for revoking the 1-hour ozone standard dates back to a 1996 report (EPA, Review of National Ambient Air Quality Standards for Ozone: Assessment of Scientific and Technical Information, June 1996) issued by EPA staff that concluded from a public health perspective, a 1-hour, an 8-hour or a combined standard could be set at a level that would adequately protect public health. The commenter continues that the report did not explicitly reject a combination of the 1-hour and 8-hour standards, but did firmly endorse an 8-hour standard. The commenter indicates the record isn't entirely clear as to why a combined standard was not the initial recommendation of staff in the report, but it seems to turn on the word "efficient."

The commenter continues that EPA concluded later that year in a report (US EPA, "Responses to Significant Comments on the 1996 Proposed Rule on the National Ambient Air Quality Standards for Ozone"; December 13, 1996), based on modeling of ozone exposures, "that an 8-hour 0.08 ppm averaging time does effectively limit both 1- and 8-hour exposures of concern. The commenter continues that subsequent EPA decisions recognize that the 8-hour standard might not effectively protect the public from 1-hour health effects, and sought to retain the 1-hour ozone standard until attainment, and then revoke it on an area-by-area basis. The commenter indicates that this would have been consistent with full protection of public health and administrative efficiency.

The commenter continued that the EPA decided for legal reasons to go ahead and revoke the 1-hour standard nationwide while California's current review of its state ozone standards is likely to lead to a 1-hour standard of

0.09 ppm, compared to the current 0.12 ppm standard used by EPA.

The commenter concluded if the plan EPA proposes to approve fails, Houston could still have serious public health effects due to ozone smog even if the TCEQ leads Houston to attainment of the 8-hour standard.

*Response GC8:* As we noted in the final Phase 1 Rule, we determined in the 1997 NAAQS rulemaking (69 FR 23951) that we did not need to retain the 1-hour standard to protect public health. Thus, in the 1997 NAAQS rulemaking, EPA concluded that the 8-hour standard would replace the 1-hour standard. The issue of whether the 1-hour standard is needed to protect public health has not been reopened here and, indeed, should be considered only in the context of a national rulemaking reviewing the NAAQS.

## 2. Comments on the Photochemical Modeling

*Comment M1:* Commenter (Wilson) comments that EPA modeling guidance (1996) indicates that weight of evidence analysis included to supplement the deterministic and statistical modeling attainment demonstrations needs to be compelling to overcome the results from the photochemical grid model. The commenter continues to cite EPA guidance indicating that "If the results of corroborative analyses are also consistent with the conclusion that a strategy will be insufficient to meet the NAAQS by the statutory date, attainment would not be demonstrated." The commenter continues that the SIP revision does not meet EPA guidance for demonstrating attainment because: (1) The plan fails the deterministic test as indicated by the use of weight of evidence (WOE) to justify dropping the August 31 from the modeling episode. (2) The databases, in particular emission inventories, used in the modeling have a number of problems including the failure of TCEQ to reconcile their own findings about the under-reporting of other VOCs. The analysis and WOE exhibit a selective approach to the examination of relevant data that distorts the WOE guidance and results in relaxation of WOE requirements. (3) The episode days used to evaluate the control strategy do not include days with observations near, but slightly above, the design value and meteorological ozone forming potential likely to be exceeded about once per year as advised by EPA guidance. (4) The TCEQ's corroborative analyses are also consistent with the conclusion that the strategy is insufficient to demonstrate attainment.

The commenter summarizes that a thorough and skeptical consideration of TCEQ's technical analysis must result in the EPA finding that the SIP revision does not demonstrate attainment of the 1-hour ozone standard. The commenter continues to indicate: (1) The modeling has a systematic ozone underprediction bias at levels above 120 ppb. (2) TCEQ's attainment demonstration has failed to address this shortcoming in the WOE and the plan does not include control measures to adequately control emissions on "level purple" ozone days that are representative of the region's design value. (3) The control measures included in the plan are inadequate to meet even the expectations of the TCEQ. The commenter then indicates that EPA should not approve the SIP revision, and instead find that TCEQ has failed to submit a plan providing for implementation, maintenance, and enforcement of the ozone NAAQS for the HGB area.

*Response M1:* As also discussed in other responses, EPA did not dismiss any measures or analyses used by TCEQ for their model performance evaluation, nor did EPA disagree with TCEQ's conclusion, based on the modeling and in conjunction with the WOE analyses, that this SIP revision should result in the HGB area attaining the 1-hour ozone standard by November 15, 2007. EPA's analysis included evaluating model performance and model reaction on the August 31st episode day in conjunction with the additional WOE materials that TCEQ provided for this day, as well as the rest of the attainment demonstration period. The commenter raised a number of specific issues that are addressed in this comment or more specifically addressed in separate comments, but the combination of the comments do not sway EPA's technical opinion that the modeling and the combined Design Value (DV) approach predicts the area will reach attainment by the end of 2007.

EPA also reviewed modeling sensitivities conducted by TCEQ including rough adjustments to OVOCs, but concurred with TCEQ that the body of supporting material to conduct a refined adjustment for OVOCs did not currently exist. EPA encourages TCEQ to continue to research this issue to address this uncertainty in the future and further address this issue in the 8-hour ozone SIP. EPA believes that most of the error can be best explained by uncertainties in the amount of HRVOC that were actually emitted and the spatial allocation of the HRVOC adjustment and meteorological model issues. TCEQ chose an average value for the adjustment factor for the HRVOCs

and adjusted the same level over the entire Houston/Galveston/Brazoria area, even though field study data indicates that a range existed that was many times higher than the value utilized in TCEQ's modeling in some cases. The TCEQ and EPA agree that there is simply not enough data available at this time to precisely locate all of the sources of non-inventoried HRVOC emissions. The TCEQ is pursuing several areas of research that will use additional monitoring data and other data to improve the spatial and temporal allocation of HRVOC emissions, and is simultaneously pursuing bottom-up methods to improve emissions inventories. These efforts will allow a much more refined treatment of "extra" hydrocarbon emissions in future modeling. TCEQ should continue to strive to yield better estimates in HRVOC and OVOC emissions from industrial facilities in HGB and this should continue to be one of the focus areas for the second TEXAQS study in 2005–2006. EPA agrees that TCEQ made an appropriate estimate of how the emission inventory for HRVOCs should be adjusted without sufficient data to conduct a higher level of adjustment with spatial variability. TCEQ tried to gather more data through a special inventory request of over 80 industrial facilities in the HGB area, but was not able to collect all of the data required to conduct a more accurate HRVOC adjustment. We believe our understanding of the process is sufficient, however, to interpret the photochemical model results and determine that this SIP revision is approvable.

EPA previously reviewed and agreed that the episode (8/21–9/6/2000) was appropriate for this SIP revision. The episode did include several days (8/25, 8/30, 8/31, and 9/5) that included surface level monitored data greater than 175 ppb and several days near the area's design value at the time of the episode and the episode did have the benefit of intensive data collected during this period. Given the historical difficulty with obtaining acceptable photochemical model performance in the HGB area, EPA recognizes the importance of selecting days from a field study period in preference to other non-field study days. On these high ozone level days (>175 ppb) the commenter is correct that the model had an under prediction bias of the domain peak and at many monitors (values above 120 ppb). But this is thought to be largely the result of many issues (HRVOC adjustments and the two-pronged design value approach,

meteorological issues, general modeling issues, etc.) discussed above and in other responses, but was determined acceptable in this SIP revision due to the inclusion of HRVOC rules that will remove much of the variability in HRVOC emissions and result in significantly lower HRVOC emission levels. It should also be noted that on these four high ozone level days (>175 ppb monitored), EPA's three primary ozone statistic metrics were within EPA guidance parameter for all four days (including the August 31st) with the exception of the Peak Prediction accuracy metric on the August 30th (see TSD Tables G.1–1 to G.1–3 and Texas SIP materials for details).

The need for further studies does not mean, however, that the modeling relied upon today was unable to estimate the amount and type of emission reductions needed for attainment. EPA believes because the diagnostic/sensitivity tests do not reveal serious flaws in model formulations and the model generally predicts the right magnitude of the peak which is confirmed by the statistical measures and graphical analysis, that the model does provide an acceptable tool for estimating the amount of emissions reductions needed. It is EPA's technical opinion that based on the modeling and the weight-of-evidence, the State's control strategy should provide for attainment by November 15, 2007.

TCEQ and others have provided significant amounts of modeling sensitivities, monitoring analyses, etc. as part of the corroborative analyses that were evaluated in the decision to propose approval of the SIP revisions. While some components of the corroborative analysis seem to indicate that the SIP revision plan may not succeed, a majority of the components indicate that the plan will succeed. EPA has weighed many different analyses from TCEQ and others (including the HARC H12 and H13 project results) and concluded that the SIP revision plan will attain by the attainment date. TCEQ has agreed to conduct further refinements to the emission inventory and meteorology of this episode in development of the 8-hour ozone SIP. TCEQ and others are also conducting another field study in 2005 and 2006. TCEQ has indicated that they will attempt to weigh any new information derived from the further studies and evaluations, and incorporate the information into the HGB 8-hour Ozone SIP to be submitted to EPA by June 15, 2007.

*Comment M2:* The commenter (Wilson) commented that they are concerned with final episode selection

and with the modeling results for that episode. The commenter continued by conjecturing that the episode included in the modeling does not contain enough days with observations near, but slightly above, the design value and with meteorological ozone forming potential that is likely to be exceeded about once per year as is advised by EPA guidance. The commenter also indicated that the SIP revision adequately addresses Air Quality Index (AQI) level "Orange" ozone days and not "Purple" level ozone days when the HGB area has a AQI level "Purple" ozone problem.

The commenter continued, the 2003 design value for the 1-hour ozone standard was 0.175 ppm and for the period 2000–2003, air pollution monitors recorded an average of 9 days per year with a 1-hour ozone measurement over 0.165 ppm, and about 1 additional day per year measured over 0.205 ppm. The commenter summarized this data as on average during the HGB area has 10 AQI level "Red" and "Purple" days per year during the 2000–2003 period.

The commenter also indicated that according to ground-level monitoring data used by the TCEQ in its plan, the episode used for control strategy evaluation in the proposed SIP does not provide ozone formation conditions that are close to the region's design value, and that it does not resemble the character of the region's serious ozone problems. The commenter provided a graph to illustrate that the plan's best effect is shown by reducing several AQI level "Orange" days near the 1-hour ozone standard of 0.12 ppm, but no AQI level "Red" or level "Purple" days. The commenter also indicated that aircraft data and Williams tower data did include higher AQI levels of "Red" and "Purple" in some of the areas that do not have ground monitoring stations with the caveat that some of this data was of shorter duration period.

The commenter continued that: "The TCEQ estimates the effect of the undocumented emission releases by calculating an alternative design value of 144 ppb for comparison to the actual design value of 182 ppb for the 1999–2001 period." The commenter further indicated that another perspective is suggested by comparing the model variability in peak ozone to actual variability and concludes that routine variability on days conducive to ozone formation is limited to only about 20 ppb, compared to about 75 ppb of actual variability in ozone formation observed at ground monitors. The commenter concludes that regardless of whether one concludes that 38 ppb (182 ppb–144

ppb) or 55 ppb (75 ppb–20 ppb) of peak ozone formation are not properly modeled, the challenge to the weight-of-evidence analysis is clearly substantial.

*Response M2:* The original episode selection of August 19–September 6, 2000 was selected by TCEQ with EPA review and comment on the selection of the episode. This TexAQS 2000 episode was selected because it includes a 19-day window with both weekday and weekend events, a suite of wind directions, and daily ozone peaks measured in several different areas of the city reflecting the net surface transport during each day. When combined with the additional meteorological and precursor data collected during the TexAQS 2000 study period, this extended ozone episode includes a better than normal monitored data set and a fairly representative mix of HGB area episode types. Given the historical difficulty with obtaining acceptable photochemical model performance in the HGB area, EPA recognized (as allowed by EPA modeling guidance) the importance of selecting days from a field study period in preference to other non-field study days during the episode selection process with TCEQ. EPA's modeling guidance for the 1-hour ozone NAAQS ("GUIDELINE FOR REGULATORY APPLICATION OF THE URBAN AIRSHED MODEL"; U.S. EPA; July 1991; pg. 11) includes the following text:

In choosing from among the top-ranked episode days, consider the availability and quality of air quality and meteorological data bases, the availability of supporting regional modeling analyses, the number of monitors recording daily maximum ozone concentrations greater than 0.12 ppm (i.e., pervasiveness), number of hours for which ozone in excess of 0.12 ppm is observed, frequency with which the observed meteorological conditions correspond with observed exceedances, and model performance (discussed in Chapter 5). For example, the top-ranked episode day within a meteorological regime may have only routine air quality and meteorological data bases available for use in the modeling. The third-highest day, however, may have occurred during an intensive field study, so that a more comprehensive data base is available. Thus, the third-highest day may be more desirable for modeling than the top-ranked day.

As EPA's guidance indicates, days with not quite as high ozone exceedances may be chosen over the highest ozone day if they occurred during an intensive field study. Given the difficulties and uncertainties with modeling the Houston area, EPA approved the selection of the field study period as the episode period to be

modeled in accordance with EPA's guidance. It should be noted that the 1-hour ozone design value is calculated for each monitor in the domain and is the 4th highest 1-hour ozone value in a three year period (see EPA's memo titled "Ozone and Carbon Monoxide Design Value Calculations"; June 18, 1990). Therefore the design value for the area is usually lower than the 1st high value as the commenter indicated, and for the limited time period (2000–2003) that the commenter analyzed, the HGB area design value was not a "Purple" level AQI day, but a mid "Red" level AQI day.

Based on model performance issues, the original episode was reduced to August 25, 26, August 29–September 4, and September 6, 2000. As TCEQ identified in their response to comments, it is important to note that six 1-hour ozone exceedance days were included in the ten day modeling period (August 25–September 1), and the average of those peaks was 168.3 ppb. This modeled period of the episode did include several days (8/25, 8/30, 8/31, and 9/5) that included surface level monitored data greater than 175 ppb and several days near the area's design value at the time of the episode and the episode did have the benefit of intensive data collection that occurred during this period. The September 5th day was dropped due to model performance issues. On these high ozone level days (>175 ppb) the commenter is correct that the model had an under prediction bias of the domain peak and at many monitors (values above 120 ppb), but this is thought to be largely the result of many issues (HRVOC adjustments and the two-pronged alternative design value approach, meteorological issues, general modeling issues, etc.). As discussed in other responses, the modeling was determined to have an acceptable model performance. Even with an under-prediction bias, six of the Base 5b episode days had values greater than 150 ppb in the basecase modeling which is higher than the Alternate Design Value (ADV) of 144 ppb that TCEQ used (and 7 days above 144 ppb, see TSD Table H-3). In evaluating the TSD tables, the modeling episode included three monitored "Red" AQI level days, with two of the days near "Purple" levels (8/25 and 8/30). With the combined strategy of reducing emission events and routine emissions, EPA would not expect the basecase modeling (utilizing a routine emission approach) to include ozone levels above the design value. Furthermore, TCEQ did include many days that were above the 144 ppb ADV that they used and

thus we weighted this fact as a conservative WOE element. We also concurred with the selection of this episode and that it included enough high ozone value days with values near the design value to be the basis for attainment demonstration modeling.

*Comment M3:* Commenter (Wilson) comments that the episode used for control strategy evaluation in the proposed SIP does not provide ozone formation conditions that are close to the region's design value, and do not resemble the character of the region's ozone problems with the under prediction of the peaks and the modeled peak 1-hour ozone levels only varying approximately 20 ppb for each day between the base and future attainment demonstration modeling. The commenter then continues that TCEQ's response is the under prediction of the peaks is likely due to unreported or under-reported releases of HRVOCs and that EPA concurred in this assessment of the model performance with citations from EPA's Technical Support Document. The commenter continues that TCEQ estimated the effects of undocumented releases by estimating an Alternative Design Value (ADV) of 144 ppb compared to the actual design value of 182 ppb for the 1999–2001 period. The commenter then discusses an alternate approach to an ADV based on the routine variability of only 20 ppb in the modeling. The commenter summarizes that the two approaches yield either a 38 ppb or a 55 ppb level of peak ozone that is not modeled properly and that the challenge to the WOE is substantial.

The commenter continued that EPA properly expressed some skepticism that under-reported, short-term emission releases should explain the entire under-prediction of peak ozone levels, with a cite from EPA's TSD. The commenter concludes that EPA should further conclude that several other factors are equally likely causes of the under-prediction of ozone peaks by model analysis: Failure to use superfine grid, under-reporting of OVOCs (both routine and short-term), and underestimation of emissions from ports and heavy duty diesel trucks. The commenter also indicated that the drop in ozone design values over the last several years is due to the implementation of NO<sub>x</sub> RACT and favorable meteorology.

Another commenter (BCCAAG) commented in favor of the ADV approach and the ADV value of 144 ppb as utilized by TCEQ. The commenter continued that the strength of TCEQ's WOE demonstration is borne out by the recent decreases in ozone values

(Design values, # of days of exceedances, # of 1st and 2nd High values) in HGB. The commenter continues that this occurred despite an increase in ozone monitors and economic growth in the region.

*Response M3:* As previously discussed in the response on M2, EPA concurred that this was a reasonable episode for this SIP revision and that it included enough days with high ozone levels. The commenter is correct in indicating that for most days the modeled change between base and 2007 future controlled level is less than the difference between the daily monitored peak and 124 ppb, but the daily difference value ranges from 14.7–37.6 ppb with an average of approximately 27.5 ppb (not 20 ppb). EPA conducted further analysis of TSD tables G.1–2 and G.1–3 in preparing response to this comment. The original episode had 19 days with 13 exceedance days with an average of 1–HR daily maximum ozone of 160 ppb (36 ppb above attainment) and a range of exceedances from 125 to 200 ppb for the exceedance days. This SIP included a shorter period due to model performance issues that included nine exceedances with an average of 159 ppb and a range from 125 to 200 ppb (based on surface measurements).

The commenter lists a number of issues—failure to use superfine grid, under-reporting of OVOCs (both routine and short-term); and underestimation of emissions from ports and heavy duty diesel trucks—that may be part of the reason for the under-prediction bias and did consider these issues in the TSD that was the basis for our proposal. We discuss these specific issues in other responses in this notice, but we believe that these issues, in conjunction with other issues (including under/unreported emissions) that we have discussed in other responses, covers most of the issues that may be causing the under-prediction bias. Specifically, we have concluded that one of the greatest components of uncertainty in the modeling system is the variability and under/unreported emissions issue. The measures included in this revision will help to resolve the level of uncertainty in this area. As noted elsewhere in this document, we have reviewed the model performance, including bias issues, and have determined the modeling demonstration to be acceptable.

*Comment M4:* Commenter (Wilson) comments that the TCEQ should have developed a robust method of relating one- and five-second interval ozone data collected by moving aircraft to one hour ozone estimates measured by stationary ground monitors so that airborne

monitoring data may be used to estimate 1-hour ozone values in areas of the HGB area that are far from ground monitoring stations.

*Response M4:* EPA agrees that such a methodology would be a useful analytical tool and TCEQ did initiate a study with the Pacific Northwest National Laboratory to discuss and illustrate problems associated with comparing observations from an airborne monitoring platform to results from photochemical model grids (which might be used with ground based monitoring data). Developing such a methodology is a complex issue since the methodology must take into account temporal differences in the data (*i.e.* one second interval for airborne data versus a five minute interval for ground data), spatial differences in the monitors (differences in location and elevation), and environmental differences for the monitoring equipment (temperature, humidity, solar radiation, etc.) and potentially varying levels of sensitivity/accuracy between the different instruments utilized.

Monitors measure concentration at a point in space and in reality, these concentrations can vary significantly over a grid cell or an area. This is true especially for ozone if it is contained in a narrow plume. Inevitably, a grid type model will smooth some natural phenomena because natural conditions are averaged over the volume of each grid cell. For instance, model output represents a volume average, typically 4 km × 4 km by 50 meter column. As a result, reasonable comparisons between model predictions and monitor observations are not expected to match exactly. With reasonable performance, time series typically show similar diurnal cycles but not exact concentration levels. As a result, it is very difficult to obtain a precise equality between modeled concentration and monitored concentration. This is to be expected and does not necessarily call into question the model's utility as a tool to predict the level of emission reductions needed to reach attainment. As stated in previous comments, EPA believes the model provides reasonable predictions of ozone levels as confirmed by comparisons with monitoring data and therefore can provide an acceptable estimate of the amount of emissions reductions needed for attainment.

*Comment M5:* Commenter (Wilson) commented that aircraft data were excluded from the model performance evaluation. The commenter also commented that the TCEQ should have revised the base case model performance evaluation section to include qualitative evaluation of model

performance based on aircraft data, including reconsideration of alternative model approaches that may appear more favorable in light of these data.

The commenter then indicated that TCEQ had performed a comparison of model results to aircraft data, but inadvertently omitted this comparison from Appendix B of TCEQ's proposal. Due to this omission during TCEQ's proposal, the commenter indicates that they have reviewed the TCEQ's analysis and are providing comments on TCEQ's Appendix B analysis.

The commenter then indicates that they calculated a value of 89 percent as the difference between 1-hour and 5-minute peaks at the Deer Park Monitor on October 7, 1999 (30 ppb difference). The commenter's analysis then utilized this 89 percent factor to scale aircraft data to 1-hour ozone values for comparisons on August 25–30, and September 1, 3, 4, and 6th.

The commenter then continued to give specific analyses of aircraft observations to model predictions for each of these days. The commenter utilized the 89 percent factor to indicate that August 25, 30, and September 1st were days that aircraft and surface monitoring data showed levels well above those achieved in the model. The commenter also utilized the 89 percent factor to indicate that aircraft data showed ozone levels above both the surface monitoring data (maximum of 146 ppb) and model performance data (maximum of 151 ppb) for August 29th.

The commenter also utilized the 89 percent factor to conjecture that TCEQ incorrectly assessed that the model over-predicted ozone formation on August 27 and 28 and that the aircraft data suggests that the model does accurately predict ozone levels. The commenter then continued on that the model under-predicts high ozone levels above 120 ppb.

*Response M5:* TCEQ did include the Appendix B materials in the SIP submitted to EPA and EPA reviewed the Appendix B as part of the review conducted for the proposal notice. Aircraft observations can be useful in assessing model performance, but must be done with care, due to the many issues outlined in Response M4. Due to these technical concerns it is difficult to utilize aircraft data other than in a qualitative/directional sense for comparing aircraft observational data to 4 km hourly grid modeling predictions.

The commenter did not provide the data utilized to calculate the 89 percent conversion value to convert aircraft data into an estimate of 1-hour ozone concentrations. The commenter did indicate that this value was calculated

using only one day of data at one monitor in the HGB area for a day that is not during the modeled episode period and for a day (October 7, 1999) that is not even during the main period of ozone season in the HGB area. No analysis was provided to document that this was a typical day, or a typical data set to estimate the 89 percent conversion factor nor was an effort made to make sure the data sample set for this calculation was appropriate. This 89 percent value seems high from discussion within EPA Region 6 including monitoring staff that typically review the 5-minute data and 1-hour data. Furthermore the commenter has made several assumptions in their analysis that they utilize to support their comment, that actually weakens their analysis. The commenter assumed that 5-minute data is the approximate length of time that is representative of the aircraft data in comparison to a model grid square, although no basis was given. The method does not resolve that an aircraft would be a line sample through a model grid square at an altitude that does not have hourly monitored data and would not be the same sampling as a single monitor (if you could have one at the altitude of the aircraft). The commenter did not adjust for a model that calculates a large volume average versus an aircraft that is a shorter duration line sample through multiple grid cells that may be several hundreds of meters thick for the layer of the model that the aircraft would be flying. Due to all of these issues including the very limited data set that the 89 percent was generated, we have to discount any assessments that utilized the 89 percent factor.

While the commenter is correct that comparing ground observations to modeled values, the model does under-predict ozone concentrations above 120 ppb for some of the days. As discussed in response to comments elsewhere in this notice, this is expected and was fully reviewed and determined to be approvable for this SIP revision.

*Comment M6:* The commenter (Wilson) indicates that the exclusion of one kilometer resolution modeling is arbitrary and unreasonably biases the results in favor of an attainment finding. The commenter continues by disagreeing with EPA's proposed action and requests that EPA evaluate the one kilometer resolution modeling as useful evidence that the attainment demonstration is insufficient. The commenter argues that the TCEQ has failed to present a compelling technical argument for excluding one kilometer resolution from the base case and control strategy evaluations. The

commenter included language from TCEQ emails, that were included in the materials that were reviewed by EPA while developing the proposal and TSD for this action. The commenter asserts that TCEQ made the decision to exclude one kilometer modeling prior to attempting to develop a technical justification for the decision. The commenter indicates that peak ozone levels are often higher for one kilometer modeling, but other model performance statistics are relatively unchanged when the one kilometer modeling output is compared to the four kilometer average of the one kilometer resolution output. The commenter concluded that the one kilometer resolution modeling made attainment demonstration more difficult and therefore EPA should consider that statistics do not degrade and the peak ozone levels are better represented with the one kilometer modeling, that EPA should not approve the demonstration because the one kilometer grid modeling predicts nonattainment on several days for control strategy evaluations.

*Response M6:* While the commenter asserts that EPA should reconsider our analysis of the appropriateness of the one kilometer resolution modeling, no new information was provided that was not previously considered in our review during the development of the proposal and TSD for this action. We would like to point out that a full model performance analysis (including statistics, graphical plots, and emissions sensitivities) were not provided for the one kilometer resolution modeling by the commenter or in the TCEQ SIP revisions, so that a full model performance analysis could be compared with four kilometer model performance analysis. Without such an analysis, it is difficult to ascertain whether one kilometer resolution modeling is actually better performing (as the commenter claims) than four kilometer resolution modeling or just yielding higher peak ozone values.

As was discussed in the TSD, concerns have been raised by the academic community that while the CAM<sub>x</sub> model will give model predictions at 1 km, it has never been fully evaluated for correct performance at this scale in the HGB area and that the uncertainties associated with these concerns may undermine the credibility of the model runs upon which the control strategy was based. Some of the parameters within CAM<sub>x</sub> which raised concerns include horizontal and vertical diffusivities and assumptions within CAM<sub>x</sub> that apply to the hydrostatic equilibrium of horizontal and vertical transport may begin to break down at a finer grid resolution.

TCEQ indicated in their response to comments that continued evaluation and peer review of these uncertainties is necessary before the model can routinely be applied at a finer resolution to replicate all conditions of ozone formation.

For further discussion of technical concerns with utilizing the one kilometer resolution modeling and EPA's thoughts and review of the issue please see the proposal and TSD for this action.

*Comment M7:* The commenter (Wilson) comments that while short-term HRVOC emission events are surely a frequent and significant cause of ozone formation in the Houston area, the TCEQ overstates their role. The commenter continues that TCEQ failed to consider specific problems with its data, and then TCEQ made broad statements that are not supported by their analysis. The commenter then indicates that a more rigorous analysis would support a smaller, yet still significant, role in the SIP.

The commenter then commented on a TCEQ analysis of August 30 indicating that it demonstrated an example of how the TCEQ failed to identify weaknesses in its control strategy by inconsistent analysis. The commenter stated that TCEQ suggests that the gap between the modeled peak of 0.137 ppm and the observed peak of 0.200 ppm on August 30 could be explained by the evidence that one or more emission events not accurately represented in the modeling inventory occurred on this day. The commenter continued, that on the other hand, the TCEQ conducted a sensitivity analysis with a hypothetical upset included on August 30, but the model peak only increased to 0.145 ppm. The commenter further indicated that TCEQ minimized the importance of emission events on ozone formation by finding that "emission variability of roughly 1000 lb/hr should be expected in the regions upwind of peak, region wide ozone concentration at least once per year and that releases over approximately a two to three hour period can lead to increases of 2-3 ppb in peak ozone concentration per 1000 lb of additional HRVOC emissions. The commenter concluded that although two different TCEQ approaches to modeling short-term emission events suggest that the hypothesized releases of August 30 could be expected to cause 4 ppb to 9 ppb of additional ozone, the TCEQ appears to consider this an acceptable explanation for the 43 ppb gap between the model and measured peak ozone levels.

The commenter also indicated that TCEQ failed to properly analyze the



impact of short-term events on ozone formation because of TCEQ's failure to question whether the inventory of emissions caused by short-term releases is accurate in light of the many problems with emissions inventories. The commenter continues that self-reported upset data are estimated using methods that have been called into question for many sources, including flares, cooling towers, storage tanks and fugitive leaks. The commenter gives the example that flare emissions are routinely calculated assuming flare performance is at optimal levels, an assumption that has been questioned by the TCEQ in its technical analysis (e.g., the "big smoky" August 30th flaring event) and by the EPA.

The commenter then criticizes TCEQ for TCEQ's remarks on an absence of evidence available at this time to warrant a correction factor for under-reported upset emissions and as a result, TCEQ decided to not conduct a speculative sensitivity analysis. The commenter continued that on the other hand TCEQ indicated that unreported/underreporting of short term releases of HRVOCs is responsible for the underprediction bias in the modeling on some days.

The commenter concludes that TCEQ's failure to assess the accuracy of the upset inventory causes EPA to speculate on the implications of this omission and exactly how much of the underprediction bias is due to unreported/underreported emission events.

*Response M7:* As we discussed in our proposal and TSD, the attainment strategy is based on a two-pronged approach: control of routine emissions and a short-term limit to control emission events. The TCEQ indicated that the influence from short-term releases must be removed from the area's design value to determine the design value based on routine emissions. This alternative design value theoretically will more closely correspond to the routine urban ozone formation captured by the model. To remove influence of short-term releases, TCEQ applied Blanchard's technique on the 1999–2001 AIRS data. This technique uses a threshold of a 40 ppb rise in ozone concentration in one hour to distinguish sudden rises from the more typical case where ozone increases more gradually. Removing all days with identified sudden ozone concentration increases (SOCl), an alternate design value of 144 ppb was calculated by TCEQ. Final base case (i.e., Base 5b) includes seven days with modeled peak ozone greater than 144 ppb, so the modeled peaks in fact, represent very

well the TCEQ estimated (non-SOCl) design value.

EPA considers the alternative design value approach a reasonable tool in evaluating the possible impact of non-routine emission releases, particularly releases of HRVOCs on the design value. By removing the days that have rapid ozone formation and therefore are possibly the result of large releases, it is possible to get a sense of the impact of emission releases on the design value. We are not convinced that all occasions where ozone rises by 40 ppb from one hour to the next are caused by releases. Some of these events could be caused by continuous plumes of ozone sweeping across a monitor as winds shift direction. These issues take some of the benefit away. In addition, other studies (including H13) of the frequency of reported emission events have indicated that the occurrence of reported events in the right location at the right time in order to impact peak ozone levels only occurs with a small percentage of non-routine releases. Still, we agree that emission events do impact the design value to some degree. Therefore, we agree that considering the alternative non-SOCl design value provides additional evidence that the future design value will reach the standard in the future case.

We disagree with the commenter's criticism of TCEQ's analysis of August 30th. The 30th had a large flaring event that was likely underestimated even with the hypothetical run by TCEQ as the photographs indicate the flare was not completely combusting the emissions. TCEQ considered a hypothetical situation and was conservative (both TCEQ and EPA's TSD include this evaluation) in estimating the true level of emissions present. TCEQ's analysis does indicate that their hypothetical event would impact the ozone levels significantly and if actual emissions data were available to model, it would likely show a much larger impact. TCEQ's analysis was to support that at a minimum, the "big smoky" flare event could have a significant impact on the 30th and other such events would yield similar results. Furthermore, the flare sensitivity does not have to explain all of the underprediction bias on the 30th as many other factors (meteorology, emissions from other sources, etc.) also can result in such a bias.

Furthermore, without the additional monitoring of units in HRVOC service that is included in this SIP revision, it is impossible to determine the absolute accuracy of HRVOC emission estimates from flares and similar emission sources. Therefore neither TCEQ nor

EPA, could completely assess the full extent to which that HRVOC emission events impact daily ozone levels. TCEQ has required monitoring and restriction of HRVOC emissions that will reduce the chance of these types of emissions impacting ozone exceedance levels.

As we indicated in the TSD for this notice, other studies (including H13) of the frequency of reported emission events have indicated that the occurrence of reported events in the right location at the right time in order to impact peak ozone only occurs with a small percentage of non-routine releases. The H13 study relied on reported emission events that are likely underreported and also should be considered a conservative estimate of potential impacts from short-term HRVOC emission events since some events are larger than the levels modeled and ozone formation is not linear. TCEQ determined, and EPA concurs, that it is necessary to reduce the frequency of emission events so that emission events do not interfere with attainment of the 1-hour NAAQS, which only allows an average of one exceedance per year. Based on our review, we believe the hourly emission limit will achieve this goal. Because facilities would be expected to take action to avoid emissions events exceeding the short-term limit of 1,200 lbs/hr, we anticipate that the frequency of such events in the future will be lower than in the past and therefore less than one event per year impacting peak ozone should be expected. Even though emission levels above 1,200 lbs/hr do not count towards the Annual Cap, the Annual Cap level is low enough that a source could not operate at a 1,200 lb/hr rate for extended periods without severely impacting its Annual cap level that is on the order of 2,000 lbs/day or less for most facilities (maximum cap is 2,419 lbs/day). For more details about the relationship of the short-term limit and annual cap, please see the response for comment M8, the proposal and TSD materials.

The commenter criticizes TCEQ for not estimating the level of under reporting and unreported emissions, but without flow monitors and other monitoring requirements on HRVOC emissions (that are being approved as part of this revision), it would be pure speculation by TCEQ without any strong basis.

*Comment M8:* The commenter (Wilson) comments that TCEQ inappropriately assumed that upset emissions will not occur in the future. The commenter continues that TCEQ should have considered the chance for upset emission events to occur in the

future in its weight-of-evidence analysis.

*Response M8:* While the structure of the HECT and the HRVOC rules anticipates that emission events will not be completely eradicated, EPA believes that in combination these programs provide sufficient disincentives that sources will reduce the frequency and magnitude of large emissions events such that emission events would not be expected to impact peak ozone levels. The University of Texas report "Variable Industrial VOC Emissions and Their Impact on Ozone Formation in the Houston Galveston Area," April 16, 2004, estimated from historic information that it is probable that at least one event will occur annually at a time and location to impact peak ozone. It is therefore necessary to reduce the frequency of emission events so that emission events do not interfere with attainment of the 1-hour NAAQS, which only allows an average of one exceedance per year. Based on this study, we believe the hourly emission limit will achieve this goal. Because facilities would be expected to take action to avoid non-routine emissions events exceeding the short-term limit of 1,200 lbs/hr, we anticipate that the frequency of such events in the future will be lower than in the past and therefore less than one event per year impacting peak ozone should be expected.

Based on the final HECT allocation scheme updated March 20, 2006, the largest allocation is 441.9 tons. This allocation is approximately equivalent to 100.9 lb/hr, assuming the facility will operate with the allocation as an hourly average to represent routine emissions. Therefore, the largest HECT allocation will be approximately twelve times smaller than the 1200 lb/hr short-term limit. For every other source under the HECT, the disparity would be even greater. Based on this difference between the short-term limit and presumed routine emissions levels, no source would be able to operate at the hourly limit for an extended period of time without pushing its emissions total close to or above the annual cap. Therefore, as discussed in our proposal, only truly non-routine emissions are expected to exceed the hourly limit. Furthermore, all exceedances of the 1200 lb/hr limit are subject to enforcement, which should act as a further deterrent to excess emissions events.

*Comment M9:* The commenter (Wilson) commented that EPA should not approve the TCEQ's approach to less reactive VOCs, but should assume that the failure to analyze and develop

control strategies for Other VOCs (non-highly reactive volatile organic compounds) will lead to higher levels of ozone formation than is represented by the TCEQ modeling analysis. The commenter continues that there is evidence that Other VOCs (OVOCs) are underestimated in the inventory and are a source of uncertainty. The commenter cites to a study by Environ "Top Down Evaluation of the Houston Emissions Inventory Using Inverse Modeling" (Yarwood et al., 2003) which indicated that about the right amount of reactivity had been added to the model and that further adjustment is not warranted. The commenter reiterated EPA's TSD by stating that the report indicates that about the right amount of reactivity had been added to the model by TCEQ with scaling of olefin to NO<sub>x</sub> emissions and that further adjustment to the inventory is not warranted. The commenter indicates that the Yarwood study is not conclusive on the point of assuming a linear function of emissions from each of the source categories and further cites from the study "this finding does not rule out the possibility of achieving more significant improvements in model performance if just the right combination of relatively large adjustments were applied to the inventory." The commenter continues by further citing from the Yarwood report and indicates that statistically significant improvements in model performance were seen by increasing VOCs from area and mobile sources near and inside Beltway 8, and point sources located in the west end of the Houston Ship Channel. The commenter also indicated that the report indicated that the underestimation of VOCs in the Ship Channel sub-region is particularly severe. The commenter concluded that TCEQ did not conduct a balanced evaluation of the Yarwood study and its OVOC modeling effort when TCEQ adopted the SIP revision.

The commenter indicated that TCEQ's one base case modeling sensitivity with an adjusted OVOC inventory improved model performance including the performance of the peak predicted value.

The commenter indicates that the case for adjusting OVOC emissions is also supported when evaluating the composition of model cell box in Channelview area to the long-term Auto Gas Chromatograph (GC) data from Channelview and Deer Park monitors. The commenter continues that the Ethylene and Olefin portions are a larger percent of total VOC compared to the monitoring data. The commenter also indicates that the OVOCs portions are underestimated by the box model

compared to the long-term monitoring data.

The commenter also presented information on TCEQ's future year modeling sensitivity with the OVOCs imputed and then compared future year peak values with the CS06a run and a control of all VOCs run (these runs were in TCEQ's TSD). The commenter comments that the imputing of OVOCs raises peak ozone values 2–30 ppb for the days of the episode.

*Response M9:* The TCEQ was reluctant to make any inventory adjustments which could be viewed as arbitrary for modeling purposes. Even though there exists some data that OVOCs may be under reported, TCEQ decided that they did not have sufficient data to justify a particular emission inventory adjustment to OVOCs. EPA has also commented in the past that TCEQ should investigate OVOC adjustments and in our TSD and proposal we indicated that OVOC underreporting concern is an issue of uncertainty. At this time though, we recognize that TCEQ did not think they had enough data to develop a control strategy including a inventory that had imputed OVOCs. We agree with the commenter that the Yarwood report has some interesting sensitivities and potential impacts, but the body of data to support an OVOC adjusted inventory was not present when TCEQ developed the SIP in 2004. While the peak modeling values increased in the basecase with the imputed OVOCs, a full model performance analysis including statistics, time series, graphical, and responses to variations in EIs inputs was not done, so EPA does not conclude that overall model performance was better with the imputed OVOCs. A full modeling analysis would need to be conducted with the items listed to determine if the imputed OVOCs was getting the right answer for the right reason. TCEQ conducted model performance analysis of this level with both the base inventory and then with the HRVOC imputed inventory in order to support that the HRVOC imputed inventory was actually an improvement in the modeling. We will continue to encourage TCEQ to investigate OVOCs in the development of their future HGB SIPs. A separate study by Yarwood (H6E.2002 report) cited in our TSD included analysis showing that the Olefin to NO<sub>x</sub> imputing factor that TCEQ utilized produces approximately the correct amount of reactivity in the model. The olefin-to-NO<sub>x</sub> adjustment was applied only after a large body of peer reviewed research showed conclusively that such a discrepancy

affected emissions of certain HRVOCs from industrial sources. The bibliography included in TCEQ's TSD includes a list of many of the peer reviewed studies considered by TCEQ and reviewed by EPA.

In TCEQ's response to comments on their HGB proposal in June 2004 they agreed that there is some evidence that OVOCs may be underestimated in the modeling inventory, but the evidence to justify adjusting emissions of OVOC is much less conclusive and open to debate. TCEQ's response continued, that at that time, few in-depth analyses of aircraft observations had been conducted comparing OVOC concentrations with those expected based on the reported emissions. The TCEQ compared ambient concentrations of OVOC with the reported inventories at the Clinton Drive and Deer Park monitoring locations and used this data to conduct the OVOC modeling sensitivity. The study suggested that OVOC may be underreported by a factor of 4.8. The scope of this study was limited however, because in 2004 only these two TCEQ sites had collected continuous, multi-year speciated hydrocarbon data in the Ship Channel industrial district. We encourage TCEQ to continue to evaluate the Auto GC data and utilize the data in developing future SIPs.

Based on our comments above on the need for a full base case model performance to justify the OVOC adjustment as an improvement in the modeling, we do not concur with commenter's comment that the future year model predictions with additional OVOCs included are of enough concern that EPA should not approve these SIP revisions. The future year sensitivity modeling is speculative and the base modeling was not verified to actually be a better performing modeling system with the OVOC imputation.

In TCEQ's response to comments on their June 2004 proposal, they indicated that if the OVOC emissions are indeed underestimated substantially, then additional reductions may be necessary. We encourage TCEQ to continue to evaluate OVOCs in their development of the 8-hour SIP for HGB.

*Comment M10:* The commenter (Wilson) commented that the 8-hour ozone non-interference demonstration is inadequate and biased, and that furthermore, may be based on a faulty emissions inventory since OVOCs were not adjusted and errors in simulating the CS-2001 control strategy occurred. The commenter concludes that EPA must find that the non-interference demonstration is inadequate and disapprove the relaxation of control

measures that if kept, could contribute to progress towards attaining the 8-hour standard.

The commenter continues that the 8-hour modeling results presented in TCEQ's TSD shows that the proposed 1-hour strategy falls short of making reasonable progress towards 8-hour attainment. The commenter continues that the plan backslides in comparison to the 2001 approved plan because six of the 16 monitors show higher 8-hour Design Values and the area of exceedances is larger on 6 of the 10 days with the new SIP revisions. The commenter also comments the average of the relative reduction factors is essentially unchanged (0.7 percent lower after implementation of the proposed control strategy as compared to the EPA-approved control strategy) and that significant additional reductions will be necessary to attain the 8-hour ozone standard.

The commenter indicated that in addition to excluding the analysis of adjustments to the OVOC inventory, the TCEQ made a number of other assumptions that tend to bias the non-interference demonstration in favor of the proposed control strategy.

The commenter indicated that the use of updated activity data as the basis for the CS-2001 may add as much as 20 tpd more NO<sub>x</sub> than would be allowed by the SIP revision that EPA is proposing to approve. The commenter did recognize that TCEQ had made several technical updates by using Mobile 6 that were acceptable. The commenter commented that a 13 percent increase in VMT that was included for the 2000 motor vehicle emissions budget (MVEB) should have been restricted to the old VMT and that the inclusion of the additional VMT is inappropriate. The commenter continued that they were concerned with the use of a revised/updated 2007 Traffic Demand Model as the basis for the CS-2001 inventory because this included the new activity data, which results in as much as 20 tpd. The commenter continued that the old activity data should be used unless EPA approves a new MVEB.

The commenter indicated that if EPA approves the use of updated activity data for the baseline model, then the MVEB is not a binding constraint. The commenter urged EPA to reconsider our guidance on the noninterference test and conduct our own analysis in a manner consistent with their comments.

*Response M10:* EPA disagrees with the assertion that the non-interference demonstration is inadequate and biased, and that it represents backsliding. As indicated in more detail in the proposal notice and TSD for this action, it was

our observation that while individual monitors may have increases in ozone, overall the modeling metrics indicated either an even benefit or a slight increased benefit for the 8-hour ozone NAAQS. EPA gave the State guidance that non-interference and equivalence can be demonstrated by showing through an air quality analysis, that the new strategy will not create more 8-hour ozone exceedances, higher 8-hour ozone concentrations, or higher cumulative exposure levels than the old strategy.

The 8-hour demonstration process uses the model in a relative sense using Relative Reduction Factors (RRFs), so 8-hour modeling may show attainment with RRF analysis but still have grid cells over the standard in the model predictions. The results indicated that CS-08 is slightly more effective in reducing 8-hour ozone levels than CS-2001 in both average relative reduction factor (0.931 vs. 0.940) and in future design value (107 vs. 108 ppb), even though some stations fare slightly worse under the new control strategy as the commenter indicated. In weighting the 110(l) analysis, the closest thing to the attainment test is the change in RRFs and the change in Future design values between the old and new strategies. This is the brightest line test, so a reduction in these is a good indicator of non-interference. For most of the design values, they decrease with the new strategy (See Table I-3 on page 76 of EPA's TSD). It is also important to realize that all of the higher design values (>95 ppb) decrease with the new strategy and with the exception of the Bayland Park (BAYP) monitor (which dropped 1 ppb), they dropped a significant value (5-8 ppb).

In addition, for both peak 8-hour ozone concentration and exposure metrics, benefits of the new strategy exceed those of the old strategy for every day that was modeled except September 6, where the old strategy performs slightly better. For the area of exceedance however, the comparison is less clear-cut. As the commenter indicated for area of exceedance, the older strategy shows more of a benefit on six of ten days and the new strategy shows a greater benefit on three days and on one day both strategies are equivalent. Even though more grid cell area per day were predicted to be in nonattainment, when the level of ozone above nonattainment was weighted with the grid cells predicted to be in nonattainment, the ozone exposure metric showed improvement for the majority of the days. EPA's guidance for demonstrating attainment for the 8-hour ozone NAAQS is to use the RRFs average for all the days that monitors

had elevated ozone. So even though some days had larger exceedance areas, the ability to attain the 8-hour ozone NAAQS will be more heavily weighted by the change in the average RRFs and the monitors with the higher design values. Although there are uncertainties with comparing the modeled results of the two strategies, EPA believes that the new strategy and the old strategy are at least equivalent in overall 8-hour ozone benefit with the new strategy slightly more effective in reducing the peak ozone values and the old strategy slightly more effective in reducing the area of exceedance. In summary, both the Future design values and RRFs are lower for the new strategy (especially for the higher design values that will be critical in future 8-hour attainment SIP development). Furthermore, two of the three ozone metrics showed improvement with the new strategy. Taking all of these metrics into consideration and recognizing the uncertainties in the modeling, we believe that Texas has demonstrated that the new strategy will not interfere with attainment of the 8-hour standard.

The EPA agrees that a different mix of control measures may be necessary to reach attainment of the 8-hour ozone standard and the State will need to address this in their 8-hour ozone attainment SIP that is due in June 2007. At that same time, the State will need to submit its "reasonable progress" SIP for the 8-hour standard. As discussed previously in the response to comment for M9 comment, EPA determined that the Emission Inventory utilized for this attainment demonstration modeling was acceptable. EPA ultimately agreed with TCEQ that there was not enough data and studies on OVOCs to warrant imputing the inventory for OVOCs. Therefore, it would not have been reasonable to make a OVOC adjustment in the 110(l) analysis.

TCEQ discussed with EPA the best approach to making this demonstration. One of the key issues of concern in conducting it was the fact that the photochemical modeling is now based on an improved August–September 2000 ozone episode rather than the older September 1993 ozone episode on which the December 2000 SIP was based. Recognizing that this was a major change since 2000, the noninterference modeling included the control strategies listed in the December 2000 SIP together with updated inventories and updated methodologies utilizing the 2000 episode.

The commenter emphasized that the December 2000 SIP MVEB placed a "binding constraint" on how any CS–2000 onroad inventory should be

developed. It was also suggested that the CS–2000 inventory should have coupled updated MOBILE6-based emission rates with the old VMT and other associated activity data from the December 2000 MVEB. This suggestion is impractical because an onroad emissions inventory which becomes an MVEB is a combination of both emission rates (from the MOBILE emissions model) and activity data (from a travel demand model). EPA concurs with the method that TCEQ conducted the VMT and MVEB for this 110(l) analysis.

The 2007 on-road inventory that was developed for the December 2000 SIP included an estimate of 129.4 million VMT from the Houston Galveston Area Council's (HGAC) travel demand modeling. Since that time, new travel networks, demographic data, census data, etc. inputs have been added to HGAC's travel demand modeling process, and the updated 2007 on-road inventory was developed, 146 million VMT is the best available estimate of 2007 activity levels. This inventory was developed by following EPA's memo entitled "Policy Guidance on the Use of MOBILE6 for SIP Development and Transportation Conformity", dated January 18, 2002, which can be found at <http://www.epa.gov/otaq/m6.htm>.

The test that EPA has to apply to this SIP revision is that the revisions demonstrate attainment with the 1-hour ozone standard in 2007 and that the revisions will not interfere with any other applicable CAA standard (including 8-hour ozone). EPA is approving these revisions and the revised motor vehicle emission budget in this action.

*Comment M11:* The commenter (Wilson) commented that the emissions estimates for heavy-duty trucks do not use the best available information and cites a memo from Rick Baker of ERG to Hazel Barbour (TCEQ) dated August 30, 2003 that indicates the 2007 mobile inventory may be underestimated by up to 3.7 tpd of NO<sub>x</sub> due to heavy-duty trucks not being reflashed. The commenter also noted that as of November 2004, only 12.7 percent of the applicable trucks nationally had been reflashed. The commenter also commented that the EPA default "reflash" rate of 90 percent for heavy-duty diesel trucks was inappropriate for use in development of the 2007 on-road emissions inventory.

*Response M11:* The commenter is correct in noting that under a 1998 consent decree with EPA, manufacturers of diesel truck engines are required to install software upgrades (reflash) to engines they sold between 1993 and 1998 with "defeat devices" that resulted

in higher NO<sub>x</sub> emissions than allowed by applicable certification standards. All States except California are required to use the latest available version of EPA's MOBILE emissions model for on-road SIP inventory development purposes. In addition, States are encouraged to use EPA guidance when using the MOBILE model for SIP purposes. The latest version of the MOBILE6.2 User's Guide (dated August 14, 2003) can be found at <http://www.epa.gov/otaq/m6.htm>. The User's Guide indicates that a default effectiveness rate of 90 percent should be used, unless good local data is available.

While the commenter is correct that some local data with estimates of how many trucks had been reflashed in 2002 and nationally in 2004 exists, the consent decree still requires all the trucks to be reflashed by 2008. With the compliance date of 2008 for the consent decree, EPA has not changed the recommended default value of 90 percent for 2007. While reflash rates may have been slow and below expected levels in 2002 and 2004, the flash rate did increase from 2 percent in 2002 to 12 percent in 2004 according to the comment. Furthermore, EPA still expects the consent decree to be met in 2008, so a high compliance rate in 2007 is thought to be an appropriate estimate. TCEQ modeled 2007 emissions with the EPA recommended default rate of 90 percent reflash rate and decided to utilize EPA defaults. EPA concurred at the time that this was an acceptable assumption. Furthermore in March 2006, EPA issued a letter to TCEQ confirming that for the 8-hr ozone SIP, that TCEQ could use EPA defaults for the MOBILE emission estimates for the truck population subject to the reflash requirement.

*Comment M12:* The commenter (Wilson) commented that the TCEQ has not revised off-road and area emissions to account for operations of two permitted container and cruise ship port facilities. The commenter indicated that they did not believe the current SIP revision fully accounts for operating emissions related to the rapid growth in port facilities in the Houston region including ship, train and truck emissions that would also increase as a result of the port activity. The commenter asks EPA to evaluate whether these ports and the associated growth emissions were included in the proposed SIP revision.

*Response M12:* The projected 2007 shipping inventory explicitly accounts for traffic to/from the new Bayport container and cruise terminals. The shipping inventory does not account for

the Texas City container terminal, which was approved long after the current inventory was developed. However, even though the facility plans to open in 2006, the level of activity through 2007 will likely be fairly modest. The TCEQ plans to revise its shipping inventory to include emissions associated with this new port in future modeling work.

Future ship and train emissions are normally accounted for by growth factors developed by applying econometric growth forecasts as was done in this case. During EPA's review of the Bayport Draft EIS's, we reviewed the estimated emissions from increased ship traffic from the new ports and the total was less than the growth amount in tpd of NO<sub>x</sub> that TCEQ had included for 2007 modeling in this SIP.

TCEQ estimated train emissions by growing the area-wide inventory according to projected trends. Because there is insufficient information available to allocate emissions of locomotives to specific track segments, the growth was spread across all the track miles in the 8 county area equally. TCEQ has a project to improve Texas locomotive emissions and its results should be added to the model for the 8-hour SIP.

Truck emissions are based on travel-demand modeling conducted by HGAC, which included the Bayport and Texas City terminals in the 2007 inventories it generated for TCEQ's future case modeling.

*Comment M13:* The commenter (Wilson) indicates that TCEQ continues to claim credit for emission reductions from the institution of Federal DOE standards on certain appliances even though TCEQ has dropped these measures from their attainment modeling. The commenter states that if these measures have been dropped, then EPA should provide a reference for this change.

*Response M13:* In the previous SIP, TCEQ had included the DOE energy efficiency benefits as a gap measure but had not modeled the reductions. The HGB area is part of a NO<sub>x</sub> Cap and Trade program and any reductions due to increases in energy efficiency, including federal appliance energy efficiency programs, could help utilities maintain their cap and might not yield actual reductions to the HGB airshed. While federal (DOE) appliance energy efficiency programs still exist, TCEQ has dropped taking credit for these programs in this SIP revision because of the HGB Cap and Trade program. TCEQ did not include any potential emission reductions in this SIP revision that may

occur for other areas of Texas from DOE appliance energy efficiency programs.

*Comment M14:* The commenter indicates that EPA should not approve a plan that fails to require industry to reduce emissions of OVOCs. The commenter refers to the comment on OVOC modeling sensitivity to substantiate their comment.

Furthermore, the commenter refers to presentations by TCEQ and a report by TCEQ indicating that large amounts of VOC reactivity from OVOC and HRVOCs could yield ozone based on analysis of Auto gas chromatographs that are not part of the chemicals compounds covered by the HRVOC rules. The presentations and reports indicated were: John R. Jolly, Fernando I. Mercado, and David W. Sullivan, "A Comparison of Ambient and Emissions VOC to NO<sub>x</sub> Ratios at Two Monitors in Houston, Texas" (Texas Commission on Environmental Quality, June 2004). Mark Estes et al., "Analysis of Automated Gas Chromatograph Data from 1996–2001 to Determine VOCs with Largest Ozone Formation Potential" (TCEQ Technical Support Document Attachment 6, December 2002). Mark Estes, "VOC Reactivity Before, During and After TexAQS 2000" (Presentation to TexAQS Science Meeting, February 2004). John Jolly and Elaine Schroeder, "Analysis of HGB Enhanced Industry-Sponsored Monitoring (EISM) Data" (Presentation to EISM Network Stakeholder Meeting, as updated April 2004). John Jolly et al., "An Analysis of VOC Reactivity in Houston" (TCEQ SIP Technical Support Document Appendix GG, January 23, 2004).

*Response M14:* See Response to Comment M9 for EPA's comments on the analysis of sensitivity modeling of OVOCs. EPA is approving this package because it has demonstrated that the area will attain the 1-hour ozone standard by November 15, 2007 and that no additional reductions were determined to be needed by TCEQ. EPA had previously reviewed the presentations and reports that the commenter refers to in their comment, prior to our proposed action on these SIP revisions. These studies do suggest that more information is needed on the imputing of OVOCs, but they do not in and of themselves provide enough of a technical basis to take action on imputing OVOCs at this time. EPA encourages TCEQ to continue to evaluate OVOCs and other HRVOCs and consider regulating sources of these chemical compounds if modeling indicates that their control is necessary for attainment of the 8-hour ozone NAAQS.

*Comment M15a:* The commenter indicates that EPA cannot assume the level of control effectiveness claimed by the TCEQ for regulating HRVOCs. The commenter indicates that TCEQ failed to provide an estimate of rule effectiveness that takes into account that the sources it regulates may not sufficiently encompass the major sources of HRVOCs, and to address the specific challenges of enforcement and implementation. The commenter continued that TCEQ did not consider evaporative emissions from rail tank cars and fugitive emissions from above ground and underground pipelines carrying petroleum products and from barges.

*Response M15a:* Aircraft flights and other monitoring during and since the TexAQS 2000 study have indicated a significant under-reporting of emissions of HRVOCs that are emitted primarily from industrial sources. As previously discussed in our proposed approval notice (70 FR 58119) and the TSD, EPA believes that the field data collected in 2000 and since indicates that rule effectiveness has been previously overestimated for sources of HRVOCs. TCEQ significantly increased the basecase 2000 inventory for industrial sources of HRVOC by imputing the inventory to correct for the over estimation of rule effectiveness and to bring the 2000 HRVOC rule effectiveness estimate in line with the available ambient data that has been collected. EPA believes TCEQ's adjustment to the basecase inventory is appropriate based on the information available. TCEQ then adopted HRVOC rules to reduce emissions of HRVOCs and put in place additional monitoring to maintain compliance with the new limits on HRVOCs. Because of these changes by TCEQ, EPA finds that rule effectiveness is adequate for the HRVOC program.

Having identified that HRVOC's need to be reduced, as discussed elsewhere, TCEQ adopted rules for the control of HRVOC's. As discussed elsewhere, TCEQ has implemented an annual HRVOC cap to reduce emissions of HRVOCs. TCEQ reduced the annual HRVOC cap levels that were set in the regulations by 5 percent compared to modeled levels in setting the HRVOC annual cap limits in part to address rule effectiveness and emission characterization concerns regarding daily variability in emissions and geographical variability of location of emissions. These HRVOC rules also incorporated stronger monitoring, recordkeeping, and reporting than previous versions of rules for the control of VOCs. Therefore EPA believes that

future rule effectiveness will be much improved over the past.

Specifically, TCEQ now requires direct continuous measurement of flow and heating value of the flow to flares, which is a vast improvement over the past practice using engineering estimates and one time tests. TCEQ also requires monitoring of flow and concentration to cooling towers giving a direct measurement of emissions. When direct measurements are used, no rule effectiveness adjustment is necessary. Finally for fugitive emissions, TCEQ is requiring third party audits that will be used to confirm that the expected rule effectiveness has been achieved for the leak detection and repair program. TCEQ has agreed to utilize the available data, including the first third party audits, to conduct a rule effectiveness study in 2006 and include this analysis in development of future SIPs.

EPA believes that certain past practices are being improved to reduce the uncertainty of the estimates. In particular, the uncertainty introduced by certain assumptions of control efficiency and rule effectiveness is being improved. This approach of reassessing rule effectiveness when additional data is available is consistent with EPA's guidance on how to address rule effectiveness (EPA memo on rule effectiveness from Sally Shaver dated April 27, 1995; and guidance document EPA-452/4-94-001, RULE EFFECTIVENESS GUIDANCE: INTEGRATION OF INVENTORY, COMPLIANCE, AND ASSESSMENT APPLICATIONS). EPA is approving the emission reductions that have been projected for the improved fugitive emissions rules because the new measurement and monitoring requirements in the adopted rule will result in significantly improved accuracy. In addition, Texas has committed to perform a rule effectiveness study and use improved emission inventory techniques to estimate future emissions and confirm the effectiveness of the program.

It is EPA's position that VOC emissions and some HRVOC emissions could occur from the sources that the commenter mentions and are outside the traditional TCEQ regulatory field (evaporative emissions from rail cars in transit, barges in transit, pipelines, etc.). TCEQ has followed EPA guidelines in estimating emissions from these sources in development of the Emission Inventory for this revision. The initial field monitoring data that indicated these may be areas underestimated by traditional EPA guidelines was only starting to be available in 2003-2004 time frame as TCEQ was developing this

revision. At the time TCEQ was developing this revision, there was not a sufficient body of data to allow for any estimation of the level of emissions that may exist from these sources that are not in the inventory currently. EPA believes that the inventory reflects the best estimate of emissions that was possible at the time. Inventory analysis is always an ongoing process that is constantly needing to be improved. TCEQ will continue to investigate and improve emission estimates. Furthermore, the investigation into these potential sources of error in the emission inventory will lead to better science and planning of effective control packages to attain the 8-hour standard. We encourage TCEQ and others to continue to use imaging devices and other technologies to help refine emission inventories.

*Comment M15b:* The commenter indicated that they were concerned with HRVOC fugitive rules for leak monitoring that seem to place determination of the threshold with the source under TCEQ rules section 115.781(f). The commenter felt that the rules should specifically state that TCEQ retains the discretion to determine monitoring intervals.

The commenter indicated that EPA should not approve backsliding on the fugitive rules for facilities not in HRVOC service in the Houston region. The commenter further expressed concern that inspectors and enforcement actions would be hindered by the removal of language on: (1) Specifying the procedure that must be used to demonstrate that leaking components cannot be repaired without a process unit shutdown, (2) specifying the requirements for undertaking extraordinary efforts to control leaks, (3) requiring the use of electronic data collection devices during monitoring, use of an electronic database, and documentation of an auditing process to assure proper calibration, identify response time failures, and assess pace anomalies. These changes were in changes in Texas regulations section 115.352 and 115.354.

*Response M15b:* EPA disagrees with the assertion from the commenter that TCEQ rules section 115.78(f) and other parts of the new HRVOC rules place determination of threshold with the source. The rules (section 115.788 (a-d)) require third party audits of the HRVOC monitoring at a facility, including 115.78(f) requirements to be conducted and submitted to TCEQ. If these third party audits raise deficiencies, section 115.788(e) requires the source to submit a corrective action plan to TCEQ. Furthermore, Texas rules section

115.788(f) allows for TCEQ and EPA to conduct audits. Upon review of audit results, Texas rules section 115.788(h) allow the TCEQ to specify additional corrective actions. Therefore, EPA believes that TCEQ retains authority to determine compliance with section 115 HRVOC rules, including section 115.78(f).

The commenter is correct that some of the minor rule changes on sources in fugitive service may be considered a relaxation of previous Texas regulations (115.352 and 115.354), but all three changes identified were changes that Texas has made to rules they previously adopted at the state level in 2002. The rules that were changed were never approved into the federal SIP. Therefore these changes are not a relaxation of the federally approved SIP. Many other changes to regulation 115, regarding VOC controls, strengthen the SIP and are considered in the more detail in our TSD. EPA disagrees with the commenter and does not consider this a backsliding issue of federally approved measures.

*Comment M15c:* The commenter concerns about flare efficiency related to too much air or steam assist and high winds, and questioned what impact these factors can have on a flare's destruction efficiency. The commenter indicated that EPA should not approve rule language that may discourage research and application of monitoring technology to verify destruction efficiencies or the use of remote technology to determine destruction efficiencies.

*Response M15c:* We are approving the estimates used for flare destruction efficiency because the estimates are based on the best scientific information available. Like the commenter, we are concerned by the uncertainty introduced by having a significant source of emissions which cannot be directly measured. We also share concerns that several factors can potentially impact flare destruction efficiency, including wind speed and volumes to the flare as well as how it is operated, but the current estimates are based on the best information available at the time these SIP revisions were completed. We believe Texas should strongly consider requirements for monitoring steam and air assist ratios to insure that operators maintain these parameters in a range to insure optimum combustion. We also encourage TCEQ to pursue new technology such as the Fourier Transform Infra-red Spectrophotometer to eventually be able to directly measure destruction efficiency in the field.

*Comment M15d:* The commenter indicated that EPA should evaluate if

interlock devices that regulate the ratio of air (or steam) should be considered reasonably available control measures (RACM), and that EPA should not approve this SIP unless TCEQ develops regulations requiring the use of interlock devices.

*Response M15d:* We covered the changes to TCEQ's previously approved RACM in detail in the proposal (70 FR 58119) and TSD. EPA determined that all reasonably available control measures were being implemented in the Houston area. In section II.a. of the TSD (pages 51–56), we discuss EPA's analysis that the revised plan will achieve attainment of the one-hour standard, based the controls that will be in place by the ozone season of 2007. As part of the RACM analysis we estimated that to advance attainment more than 39 tpd of additional NO<sub>x</sub> emission reductions would have to be achieved before the ozone season of 2006. EPA guidance is that a justification would need to support that a measure was not reasonably available for that area and could be based on technological or economic grounds.

The commenter indicated that EPA should consider requiring interlock devices as RACM. The commenter did not provide a potential quantification of how much emission reductions such a requirement would create nor how such a measure would result in ozone reductions such that attainment could be achieved earlier than 2007. It is not clear that even if such a requirement existed that it would result in enough emission reductions to advance attainment. Furthermore, the comment on the use of interlock devices was not made during TCEQ's development of these rules in 2004 and the first time this issue has been raised was in the commenter's letter to EPA received in November 2005. Even if the interlock devices could result in enough reductions, it would not have been possible for TCEQ to implement a rule requiring the use of interlock devices and for the applicable sources to achieve compliance with a interlock rule by the beginning of the 2006 ozone season. TCEQ rule development alone typically requires at least 9–12 months, so just the rule development timing would have made it impossible to advance attainment. Since attainment could not be advanced, EPA does not consider a requirement for the use of interlock devices to be a potential RACM measure. EPA does strongly encourage TCEQ to consider the use of interlock devices in the development of the 8-hour attainment demonstration for HGB.

*Comment M16:* The commenter indicates that EPA should discount any emission reduction benefit from the Environmental Monitoring Response System (EMRS). The commenter cited a comment from the TSD for this action indicating that EPA "believes the added scrutiny of ambient VOC levels will provide feedback to industry on the activities that may be causing increased VOC emissions resulting in improved overall program effectiveness and possibly identifying previously unknown sources of emissions." The commenter then commented that TCEQ had recently reported that the goal of stopping HRVOC events in real time can not be achieved with EMRS. The commenter concludes that EPA should not find that the EMRS system will result in emission reductions which have not been accounted for in the model.

*Response M16:* EPA was aware that TCEQ was trying to stop HRVOC events in real time with the EMRS. During the proposal and development of the EMRS program and to this date, we were skeptical that this could be done considering the meteorology and density of sources in wind sectors around the monitors. We do think that the data and continued focus on what compounds are emitted and alerting the sources is a worthwhile project and should continue to aid in finding new sources or issues that will improve the understanding of ozone formation and exceedances in the HGB area. We do think that it will also be a tool to help determine what facilities or group of facilities should be evaluated further in solving HGB's air quality issues.

*Comment M17:* The commenter indicates that EPA should not approve the NO<sub>x</sub> emission reduction relaxations as these changes will be needed for further progress on the 8-hour.

The commenter commented that in at least one case the ESAD level adopted by Texas was higher than required by California. The commenter indicated that the California standard was for gas fired utility boilers with a capacity greater than 100 mmBtu/Hr is 0.02–0.03 lbs/mmBtu, whereas the Texas standard is 0.03 lb/mmBtu. The commenter continues that TCEQ should provide an evaluation for each difference in ESADs that are being changed with these NO<sub>x</sub> MECT revisions and explain why the lower ESAD was not utilized and until this is completed EPA should not approve these revisions.

*Response M17:* EPA has reviewed this SIP revision package and determined that the package demonstrates attainment of the 1-hour ozone NAAQS. As explained above, this submission

was not for the purpose of addressing reasonable further progress forward and attainment of the 8-hour NAAQS. Texas is undertaking a significant and intense new air study (TexAQS II) in HGB. With this new information coming in and new 8-hour modeling taking place it is to early to determine what the appropriate suite of control measures will be for 8-hour attainment. TCEQ is in the process of developing the 8-hour demonstrations which are due to EPA on June 15, 2007.

EPA reviewed the RACM levels as discussed in a previous response and in the TSD for this action. The Texas standard is within the range (although on the high end) of the ESAD for the California rule and was reviewed prior to proposal and determined to be acceptable for RACM. EPA conducted a review of the changes to ESAD levels and documented California levels for each source category and Texas 90 percent and 80 percent in Table 6.B–1 of the TSD and determined the levels to be acceptable. Furthermore, as indicated in a previous response there are no additional measures that could be implemented to advance the attainment date sooner than the current attainment date in 2007.

#### Statutory and Executive Order Reviews

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this action is not a "significant regulatory action" and therefore is not subject to review by the Office of Management and Budget. For this reason and because this action will not have a significant, adverse effect on the supply, distribution, or use of energy, this action is also not subject to Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" (66 FR 28355, May 22, 2001). This action merely approves state law as meeting Federal requirements and imposes no additional requirements beyond those imposed by state law. Accordingly, the Administrator certifies that this rule will not have a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). Because this rule approves pre-existing requirements under state law and does not impose any additional enforceable duty beyond that required by state law, it does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4).

This rule also does not have tribal implications because it will not have a substantial direct effect on one or more

Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes, as specified by Executive Order 13175 (65 FR 67249, November 9, 2000). This action also does not have Federalism implications because it does not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132 (64 FR 43255, August 10, 1999). This action merely approves a state rule implementing a Federal standard, and does not alter the relationship or the distribution of power and responsibilities established in the CAA. This rule also is not subject to Executive Order 13045 "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997), because it is not economically significant.

In reviewing SIP submissions under the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note), EPA's role is to approve state choices, provided that they meet the criteria of the CAA. In this context, in the absence of a prior existing requirement for the State to use voluntary consensus standards (VCS), EPA has no authority to disapprove a SIP submission for failure to use VCS. It would thus be inconsistent with applicable law for EPA, when it reviews a SIP submission, to use VCS in place of a SIP submission that otherwise satisfies the provisions of the CAA. Thus, the requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 do not apply. This rule does not impose an information collection burden under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*).

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**.

This action is not a "major rule" as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by November 6, 2006. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this rule for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

#### List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Volatile organic compounds.

Dated: August 24, 2006.

**Richard E. Greene,**  
*Regional Administrator, Region 6.*

■ 40 CFR part 52 is amended as follows:

#### PART 52—[AMENDED]

■ 1. The authority citation for part 52 continues to read as follows:

**Authority:** 42 U.S.C. 7401 *et seq.*

#### Subpart SS—Texas

■ 2. Section 52.2270 is amended as follows:

■ a. The table in paragraph (c) entitled "EPA Approved Regulations in the Texas SIP" is amended as follows:

■ 1. By revising entries for Sections 114.1 and 114.2 under Chapter 114 (Reg 4), Subchapter A.

■ 2. By revising the heading entitled "Subchapter B: Vehicle Inspection and Maintenance" under Chapter 114 (Reg 4) to read "Subchapter C—Vehicle Inspection and Maintenance; Low Income Vehicle Repair Assistance, Retrofit, and Accelerated Vehicle Retirement Program"; adding a new centered heading "Division 1: Vehicle Inspection and Maintenance" immediately following it; revising entries for Sections 114.50, 114.52, and 114.53; and removing the heading entitled "Subchapter C—Vehicle Inspection and Maintenance; Low Income Vehicle Repair Assistance, Retrofit, and Accelerated Vehicle Retirement Program; and Early Action

Compact Counties" that follows Section 114.53.

■ 3. By removing the heading entitled "Division 6: Lawn Service Equipment Operating Restrictions" under Chapter 114 (Reg 4), Subchapter I; and removing entries for Sections 114.452 and 114.459.

■ 4. By removing the heading entitled "Division 1: Motor Vehicle Idling Limitations" under Chapter 114 (Reg 4), Subchapter J; and removing entries for Sections 114.500, 114.502, 114.507, and 114.509.

■ 5. By revising the heading entitled "Chapter 117 (Reg 7)—Control of Air Pollution from Nitrogen Compounds—Subchapter A" to read "Chapter 117 (Reg 7)—Control of Air Pollution from Nitrogen Compounds"; adding a centered heading entitled "Subchapter A—Definitions" immediately following it; and revising the entry for Section 117.10.

■ 6. By revising the heading entitled "Subchapter B—Division 1—Utility Electric Generation in Ozone Nonattainment Areas" under Chapter 117 (Reg 7) to read "Subchapter B—Combustion at Major Sources"; adding a centered heading entitled "Division 1: Utility Electric Generation in Ozone Nonattainment Areas" immediately following it; removing the entry for 117.104; and revising entries for Sections 117.105–117.108, 117.113–117.116, 117.119, 117.131, 117.135, 117.138, 117.141, 117.143, 117.149, 117.203, 117.205–117.207, 117.213–117.216, 117.219, and 117.223.

■ 7. By revising the heading entitled "Subchapter C—Division 1—ADIPIIC Acid Manufacturing" under Chapter 117 (Reg 7) to read "Subchapter C—Acid Manufacturing"; adding a centered heading entitled "Division 1: ADIPIIC Acid Manufacturing" immediately following it; and revising entries for Sections 117.301, 117.309, 117.311, 117.313, 117.319, 117.321, 117.401, 117.409, 117.411, 117.413, 117.419, and 117.421.

■ 8. By revising the heading entitled "Subchapter D—Water Heaters, Small Boilers, and Process Heaters" under Chapter 117 (Reg 7) to read "Subchapter D—Small Combustion Sources"; adding a new centered heading "Division 1: Water Heaters, Small Boilers, and Process Heaters" immediately following it; adding a new centered heading "Division 2: Boilers, Process Heaters, and Stationary Engines and Gas Turbines at Minor Sources" immediately preceding the entry for Section 117.471; and revising entries for 117.463, 117.465, 117.473, 117.475, 117.478, and 117.479.



■ 9. By removing entries for Section 117.540 and 117.560 under Chapter 117 (Reg 7), Subchapter E; and revising entries for 117.510, 117.512, 117.520, and 117.534.

■ b. The second table in paragraph (e) entitled "EPA Approved Nonregulatory Provisions and Quasi-Regulatory Measures in the Texas SIP" is amended

by adding a new entry at the end to read as follows:

**§ 52.2270 Identification of plan.**

\* \* \* \* \*

(c) \* \* \*

**EPA-APPROVED REGULATIONS IN THE TEXAS SIP**

State citation	Title/subject	State approval/ submittal date	EPA approval date	Explanation
* * *	* * *	* * *	* * *	* * *
<b>Chapter 114 (Reg 4)—Control of Air Pollution from Motor Vehicles</b>				
<b>Subchapter A—Definitions</b>				
Section 114.1 .....	Definitions .....	09/05/04	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 114.2 .....	Inspection and Maintenance Definitions.	09/05/04	09/06/06 [Insert <i>FR</i> page number where document begins].	
* * *	* * *	* * *	* * *	* * *
<b>Subchapter C—Vehicle Inspection and Maintenance; Low Income Vehicle Repair Assistance, Retrofit, and Accelerated Vehicle Retirement Program; and Early Action Compact Counties</b>				
<b>Division 1: Vehicle Inspection and Maintenance</b>				
Section 114.50 .....	Vehicle Emission Inspection Requirements.	09/05/04	09/06/06 [Insert <i>FR</i> page number where document begins].	Subsection 114.50(b)(2) is NOT part of the approved SIP.
* * *	* * *	* * *	* * *	* * *
Section 114.52 .....	Early Participation Incentive Program.	09/05/04	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 114.53 .....	Inspection and Maintenance Fees ..	09/05/04	09/06/06 [Insert <i>FR</i> page number where document begins].	
<b>Division 3: Early Action Compact Counties</b>				
* * *	* * *	* * *	* * *	* * *
<b>Subchapter I—Non-Road Engines</b>				
* * *	* * *	* * *	* * *	* * *
Section 114.429 .....	Affected Counties and Compliance Schedules.	12/06/00	11/14/01, 66 FR 57222.	
<b>Subchapter J—Operational Controls for Motor Vehicles</b>				
<b>Division 2: Locally Enforced Motor Vehicle Idling Limitations</b>				
* * *	* * *	* * *	* * *	* * *
<b>Chapter 117 (Reg 7)—Control of Air Pollution from Nitrogen Compounds</b>				
<b>Subchapter A—Definitions</b>				
Section 117.10 .....	Definitions .....	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
* * *	* * *	* * *	* * *	* * *
<b>Subchapter B—Combustion at Major Sources</b>				
<b>Division 1: Utility Electric Generation in Ozone Nonattainment Areas</b>				

EPA-APPROVED REGULATIONS IN THE TEXAS SIP—Continued

State citation	Title/subject	State approval/ submittal date	EPA approval date	Explanation
* * * * *				
Section 117.103 .....	Exemptions .....	09/26/01	114/14/01, 66 FR 57244.	
Section 117.105 .....	Emission Specifications for Reasonably Available Control Technology (RACT).	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.106 .....	Emission Specifications for Attainment Demonstrations.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	The SIP does not include section 117.106(d).
Section 117.107 .....	Alternative System Emission Specifications.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.108 .....	System Cap .....	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
* * * * *				
Section 117.113 .....	Continuous Demonstration of Compliance.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.114 .....	Emission Testing and Monitoring for the Houston-Galveston Attainment Demonstration.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.115 .....	Final Control Plan Procedures for Reasonably Available Control Technologies.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.116 .....	Final Control Plan Procedures for Attainment Demonstration Emission Specifications.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
* * * * *				
Section 117.119 .....	Notification, Recordkeeping, and Reporting Requirements.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
* * * * *				
<b>Division 2—Utility Electric Generation in East and Central Texas</b>				
Section 117.131 .....	Applicability .....	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
* * * * *				
Section 117.135 .....	Emission Specifications .....	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	The SIP does not include section 117.106(d).
Section 117.138 .....	System Cap .....	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.141 .....	Initial Demonstration of Compliance	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.143 .....	Continuous Demonstration of Compliance.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
* * * * *				
Section 117.149 .....	Notification, Recordkeeping, and Reporting Requirements.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
* * * * *				
Section 117.203 .....	Exemptions .....	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.205 .....	Emission Specifications for Reasonably Available Control Technology (RACT).	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	

EPA-APPROVED REGULATIONS IN THE TEXAS SIP—Continued

State citation	Title/subject	State approval/ submittal date	EPA approval date	Explanation
Section 117.206 .....	Emission Specifications for Attainment Demonstration.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	The SIP does not include section 117.206(e).
Section 117.207 .....	Alternative Plant-wide Emission Specifications.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
* * * * *				
Section 117.213 .....	Continuous Demonstration of Compliance.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.214 .....	Emission Testing and Monitoring for the Houston-Galveston Attainment Demonstration.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.215 .....	Final Control Plan Procedures for Reasonably Available Control Technologies.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.216 .....	Final Control Plan Procedures for Attainment Demonstration Emission Specifications.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
* * * * *				
Section 117.219 .....	Notification, Recordkeeping, and Reporting Requirements.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
* * * * *				
Section 117.223 .....	Source Cap .....	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
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**Subchapter C—Acid Manufacturing  
Division 1: ADIPIC Acid Manufacturing**

Section 117.301 .....	Applicability .....	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
* * * * *				
Section 117.309 .....	Control Plan Procedures .....	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.311 .....	Initial Demonstration of Compliance	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.313 .....	Continuous Demonstration of Compliance.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.319 .....	Notification, Recordkeeping, and Reporting Requirements.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.321 .....	Alternative Case Specific Specifications.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	

**Division 2: Nitric Acid Manufacturing, Ozone Nonattainment Areas**

Section 117.401 .....	Applicability .....	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
* * * * *				
Section 117.409 .....	Control Plan Procedures .....	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	

EPA-APPROVED REGULATIONS IN THE TEXAS SIP—Continued

State citation	Title/subject	State approval/ submittal date	EPA approval date	Explanation
Section 117.411 .....	Initial Demonstration of Compliance	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.413 .....	Continuous Demonstration of Compliance.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.419 .....	Notification, Recordkeeping, and Reporting Requirements.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.421 .....	Alternative Case Specific Specifications.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
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**Subchapter D—Small Combustion Sources**  
**Division 1: Water Heaters, Small Boilers, and Process Heaters**

Section 117.463 .....	Exemptions .....	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.465 .....	Emission Specifications .....	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
*	*	*	*	*

**Division 2: Boilers, Process Heaters, and Stationary Engines and Gas Turbines at Minor Sources**

Section 117.471 .....	Applicability .....	09/26/01	11/14/01, 66 FR 57244.	New.
Section 117.473 .....	Exemptions .....	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.475 .....	Emission Specifications .....	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	The SIP does not include section 117.475(i).
Section 117.478 .....	Operating Requirements .....	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.479 .....	Monitoring, Recordkeeping, and Reporting Requirements.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
*	*	*	*	*

**Subchapter E—Administrative Provisions**

Section 117.510 .....	Compliance Schedule for Utility Electric Generation in Ozone Nonattainment Areas.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.512 .....	Compliance Schedule for Utility Electric Generation in East and Central Texas.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.520 .....	Compliance Schedule for Industrial, Commercial, Institutional Combustion Sources in Ozone Nonattainment Areas.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	
Section 117.534 .....	Compliance Schedule for Boilers, Process Heaters, Stationary Engines, and Gas Turbines at Minor Sources.	12/13/02	09/06/06 [Insert <i>FR</i> page number where document begins].	

EPA-APPROVED REGULATIONS IN THE TEXAS SIP—Continued

State citation	Title/subject	State approval/ submittal date	EPA approval date	Explanation
Section 117.570 .....	Use of Emissions Credits for Compliance.	03/05/03	03/26/04, 69 FR 15686.	
*	*	*	*	*

\* \* \* \* \* (e) \* \* \*

EPA APPROVED NONREGULATORY PROVISIONS AND QUASI-REGULATORY MEASURES IN THE TEXAS SIP

Name of SIP provision	Applicable geographic or nonattainment area	State submittal/effective date	EPA approval date	Comments
Attainment Demonstration for Houston/Galveston/Brazoria (HGB) One-hour Ozone Nonattainment Area Adopting Strategy Based on NO <sub>x</sub> and Point Source Highly- Reactive VOC Emission Reductions.	Houston/Galveston, TX.	12/01/04	09/06/06 [Insert FR page number where document begins].	

[FR Doc. 06-7412 Filed 9-5-06; 8:45 am]  
BILLING CODE 6560-50-P

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 52**

[EPA-R06-OAR-2005-TX-0006; FRL-8216-3]

**Approval and Promulgation of State Implementation Plans; Texas; Emission Credit Banking and Trading Program**

**AGENCY:** Environmental Protection Agency (EPA).  
**ACTION:** Final rule.

**SUMMARY:** EPA is approving revisions to the Texas State Implementation Plan (SIP) concerning the Emission Credit Banking and Trading Program. Additionally, EPA is approving a section of Chapter 115 of the Texas Administrative Code (TAC) on Control of Air Pollution from Volatile Organic Compounds that cross-references the Emission Credit Banking and Trading Program and the Discrete Emission Credit Banking and Trading Program. We are also approving a subsection of Chapter 116 of the TAC, Control of Air Pollution by Permits for New Construction or Modification, which provides a definition referred to in both the Emission Credit and the Discrete Emission Credit Banking and Trading Programs.

**DATE:** This rule is effective on October 6, 2006.  
**ADDRESSES:** EPA has established a docket for this action under Docket ID No. EPA-R06-OAR-2005-TX-0006. All documents in the docket are listed on the [www.regulations.gov](http://www.regulations.gov) Web site. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through [www.regulations.gov](http://www.regulations.gov) or in hard copy at the Air Permitting Section (6PD-R), Environmental Protection Agency, 1445 Ross Avenue, Suite 700, Dallas, Texas 75202-2733. The file will be made available by appointment for public inspection in the Region 6 FOIA Review Room between the hours of 8:30 a.m. and 4:30 p.m. weekdays except for legal holidays. Contact the person listed in the **FOR FURTHER INFORMATION CONTACT** paragraph below to make an appointment. If possible, please make the appointment at least two working days in advance of your visit. There will be a 15-cent per page fee for making photocopies of documents. On the day of the visit, please check in at the EPA Region 6 reception area at 1445 Ross Avenue, Suite 700, Dallas, Texas.  
The State submittal related to this SIP revision, and which is part of the EPA docket, is also available for public

inspection at the State Air Agency listed below during official business hours by appointment:

Texas Commission on Environmental Quality, Office of Air Quality, 12124 Park 35 Circle, Austin, Texas 78753.

**FOR FURTHER INFORMATION CONTACT:** Adina Wiley, Air Permitting Section (6PD-R), EPA Region 6, 1445 Ross Avenue, Dallas, Texas 75202-2733, telephone 214-665-2115, [wiley.adina@epa.gov](mailto:wiley.adina@epa.gov).

**SUPPLEMENTARY INFORMATION:** Throughout this document wherever “we,” “us,” or “our” is used, we mean EPA.

**Outline**

- I. What action is EPA taking?
- II. What is the background for this action?
- III. What are EPA’s responses to comments received on the proposed action?
- IV. What does Federal approval of a State regulation mean to me?
- V. Statutory and Executive Order Reviews

**I. What action is EPA taking?**

EPA is approving the Emission Credit Banking and Trading program, also referred to as the Emission Reduction Credit (ERC) program, enacted at Texas Administrative Code (TAC) Title 30, Chapter 101 General Air Quality Rules, Subchapter H Emissions Banking and Trading, Division 1, sections 101.300-101.304, 101.306, 101.309, and 101.311. These sections were submitted as SIP submittals dated December 20, 2000 (state effective date January 18, 2001);