ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[R06–OAR–2005–TX–0018; FRL–7980–6]

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: Proposed rule.

SUMMARY: EPA is proposing to approve revisions to the State Implementation Plan (SIP) for the State of Texas as it applies to the Houston/Galveston/ Brazoria (HGB) Ozone nonattainment area. These plan revisions result from more recent information on ozone formation in the Houston/Galveston area indicating that a combination of controls on oxides of Nitrogen (NO_X) and highly reactive volatile organic compounds (HRVOCs) should be more effective in reducing ozone than the measures in the previously approved plan which relied almost exclusively on control of NO_X. Approval of these revisions will incorporate these changes into the federally approved SIP.

DATES: Comments must be received on or before November 4, 2005.

ADDRESSES: Submit your comments, identified by Regional Material in EDocket (RME) ID No. R06–OAR–2005–TX–0018, by one of the following methods:

- Federal eRulemaking Portal: *http://www.regulations.gov.* Follow the on-line instructions for submitting comments.
- Agency Web site: *http://docket.epa.gov/rmepub/* Regional Material in EDocket (RME), EPA's electronic public docket and comment system, is EPA's preferred method for receiving comments. Once in the system, select ''quick search,'' then key in the appropriate RME Docket identification number. Follow the on-line instructions for submitting comments.
- U.S. EPA Region 6 ''Contact Us'' Web site: *http://epa.gov/region6/r6coment.htm* Please click on ''6PD'' (Multimedia) and select ''Air'' before submitting comments.
- E-mail: Mr. Thomas Diggs at *diggs.thomas@epa.gov.* Please also cc the person listed in the **FOR FURTHER INFORMATION CONTACT** section below.
- Fax: Mr. Thomas Diggs, Chief, Air Planning Section (6PD–L), at fax number 214–665–7263.
- Mail: Mr. Thomas Diggs, Chief, Air Planning Section (6PD–L), Environmental Protection Agency, 1445 Ross Avenue, Suite 1200, Dallas, Texas 75202–2733.
- Hand or Courier Delivery: Mr. Thomas Diggs, Chief, Air Planning Section (6PD–L), Environmental Protection Agency, 1445 Ross Avenue, Suite 1200, Dallas, Texas 75202–2733. Such deliveries are accepted only between the hours of 8 am and 4 pm weekdays except for legal holidays. Special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Regional Material in EDocket (RME) ID No. R06–OAR–2005–ST–0018. EPA's policy is that all comments received will be included in the public file without change, and may be made available online at *http://docket.epa.gov/rmepub/*, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information the disclosure of which is restricted by statute. Do not submit information through Regional Material in EDocket (RME), regulations.gov, or e-mail if you believe that it is CBI or otherwise protected from disclosure. The EPA RME website and the Federal regulations.gov are ''anonymous access'' systems, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through RME or regulations.gov, your e-mail address will be automatically captured and included as part of the comment that is placed in the public file and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

Docket: All documents in the electronic docket are listed in the Regional Material in EDocket (RME) index at *http://docket.epa.gov/rmepub/.* Although listed in the index, some information is not publicly available, *i.e.*, 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 in RME or in the official file which is available 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 am and 4:30 pm 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 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: Guy R. Donaldson, Air Planning Section (6PD–L), Environmental Protection Agency, Region 6, 1445 Ross Avenue, Suite 700, Dallas, Texas 75202–2733, telephone (214) 665–7242 fax number 214–665–7263; e-mail address *donaldson.guy@epa.gov.*

SUPPLEMENTARY INFORMATION: Throughout this document wherever ''we,'' ''us,'' or ''our'' is used, we mean the EPA.

Table of Contents

I. Background

A. What Are the Actions Being Proposed Here?

EPA is proposing to approve the following revisions to the approved 1-hour ozone attainment plan for the HGB area:

- TCEQ's revised demonstration, submitted December 2004, that the 1-hour ozone standard will be achieved in 2007.
- The revised motor vehicle emissions budgets associated with the revised attainment demonstration.
- 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 2001, 66 FR 57160). With respect to its original enforceable commitment to reduce NO_X emissions, TCEQ has instead substituted reductions in HRVOCs for a portion of these NO_X reductions and shown that the HRVOC reductions are as effective in reducing ozone levels.
- Revisions to the industrial NO_X rules submitted January 2003, which included several miscellaneous changes and the reduction in stringency from a nominal 90% to 80% control.
- Revisions to the Texas Inspection and Maintenance (I/M) rules that drop three counties from the I/M program. In addition, several miscellaneous changes are proposed for approval.
- 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 (VMEP).

To replace the above measures being repealed or relaxed, Texas has adopted the following new control measures:

- Annual Cap on HRVOC emissions.
- Hourly (short-term) limit on HRVOC emissions.
- Improved requirements for HRVOC fugitive emissions.
- Requirements for Portable Gasoline containers.

Separately, EPA has proposed or is proposing to approve the newly adopted measures. Comments on the proposed approval of the new control measures should be directed to these separate **Federal Register** actions. The actions addressed in this rulemaking in conjunction with the new HRVOC rules, if approved, will provide for timely attainment as demonstrated through the modeling analysis. In addition, 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 this Act. (Section 110(l) demonstration).

B. Why Control Ozone?

Inhaling even low levels of ozone can trigger a variety of health problems including chest pains, coughing, nausea, throat irritation, and congestion. It can also worsen bronchitis and asthma and reduce lung capacity. EPA has established National Ambient Air Quality Standards (NAAQS) for ozone. The standard of 0.12 ppm averaged over a 1-hour period was adopted in 1979. In July 1997, EPA adopted a revised standard of 0.08 ppm averaged over an 8-hour period. In the Phase I Implementation Rule (April 30, 2005, 69 FR 23951) for the 8-hour standard, EPA provided for revocation of the 1-hour standard for most areas including HGB on June 15, 2005. Also, EPA established anti-backsliding provisions to insure that areas maintain the progress expected under the requirements of the 1-hour standard as areas transition to developing programs to meet the 8-hour standard.

C. What Does the Currently Approved SIP for HGB Contain?

On November 14, 2001, EPA approved the 1-hour ozone attainment plan for the HGB nonattainment area. This plan relied primarily on reductions in emissions of NO_X to project attainment. The plan included a wide variety of controls on NO_X emissions including an approximately 90% reduction in industrial NO_X emissions, vehicle inspection and maintenance in eight counties, and the Texas Emission Reduction Program (TERP). The plan, however, did not contain sufficient adopted control measures as needed to demonstrate attainment. Because the State had adopted NO_X measures more stringent than any where else in the country and was unable to identify specific NO_X measures by which to achieve all of the needed emission reductions, the State included an enforceable commitment to adopt rules to achieve the 56 tpd of additional emission reductions which were necessary to demonstrate attainment. The additional measures were to be adopted in two phases; measures to achieve 25% of the needed reductions were to be adopted by December 2002 with measures to achieve the remaining emission reductions to be adopted by May 2004. In addition, Texas committed to perform a mid-course review, evaluating the modeling, inventory data and other tools and assumptions used to develop the plan and make adjustments to the plan to provide for timely and cost effective attainment. If, based on the mid-course review, more or fewer NO_X reductions were necessary, Texas committed to provide the revised analysis to EPA for review.

Texas, however, was sued in State court on its plan for the Houston area. The litigants alleged that the controls on industrial NO_X emissions of approximately 90% would not be effective and that instead the State should be controlling releases of HRVOCs. Texas entered into a settlement agreement with the litigants whereby one facet of the mid-course

review was accelerated to determine if the point source NO_X controls could be relaxed and replaced with controls on HRVOCs. This study and any consequent rule changes were to be completed by December 2002.

D. What Revisions to the State Implementation Plan Are Being Considered Here?

The following submissions which impact the HGB attainment plan are being considered :

January 28, 2003: This submission responded to the State's settlement agreement to provide an accelerated evaluation of whether the industrial NO_X controls could be relaxed and controls on HRVOCs could be substituted. Based on the study, the commission adopted relaxed controls on NO_X emissions from industrial sources and 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 TERP emission reductions would be sufficient to achieve the 25% of the NO_X reductions needed to demonstrate attainment (i.e., about 14 tpd).

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

October 6, 2004: This submission repealed the I/M program in Chambers, Liberty and Waller Counties.(RME 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 was submitted to meet 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_X control measures including, the vehicle idling prohibition (Docket R06–OAR–2005–TX–0013), the speed limit strategy, the voluntary mobile emissions program (VMEP) and the commitment to achieve NO_X reductions reductions beyond the initial 25% provided in January 2003 (*i.e.*, revoked the State's commitment to achieve 42 tpd of the NO_X reductions that were included in the enforceable commitment as part of the prior attainment demonstration).

E. What General Criteria Must These Revisions Meet To Be Approvable?

To be approved, the revisions to the attainment demonstration must meet several requirements. First, the State submission must demonstrate that the revised plan, as a whole, will result in attainment of the 1-hour as expeditiously as practicable but no later than 2007. This is necessary, even though the 1-hour standard was revoked on June 15, 2005, because the approved SIP commits the State to adopt 56 tons/day of additional NO_X reductions unless, based on the mid-course review analysis, the area can show attainment of the 1-hour standard by 2007 with a different mix of emission reductions.[1] In Section II.A. we discuss TCEQ's revised 1-hour attainment demonstration. Second, the measures in the revised control strategy must meet the requirements for being creditable under the Clean Air Act and must be permanent, surplus, quantifiable and enforceable and achieve the necessary amount of reductions. The new and revised measures are discussed in Section II.B. and II.C. Some of these control measures have been or are being reviewed in separately proposed rules. Before the revisions to the attainment plan can be finally approved, all of the control measures relied on in the attainment plan must also be approved. Third, the State must show that the revised control strategy includes all reasonably available control measures (RACM). This showing is discussed in Section II.D. Fourth, the State must show, as required by section 110(l) of the Clean Air Act, that the revisions to the plan will not interfere with attainment or reasonable further progress or any other applicable requirement of the Act. Compliance with 110(l) is discussed in Section II.E. Finally, the State must show that it has met all of the enforceable commitments contained in the approved SIP. (Instead of meeting the enforceable commitment to achieve the remaining 42 tpd NO_X reductions, the State has adopted controls on HRVOCs and submitted modeling to demonstrate that the 42 tons/day of NO_X reductions is not necessary for the HGB area to attain by November 2007.) Enforceable commitments are discussed in Section II.F.

II. Evaluation

A. One Hour Attainment Demonstration

1. What Modeling Approaches Were Used for This 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 by 2007. Also, as allowed 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_X rules and adopting measures for the control of HRVOCs.

The SIP revision actually relies on two sets of modeling analyses. First, the SIP 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 to 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).

2. What Is a Photochemical Grid Model?

Photochemical grid models are the state-of-the-art method for predicting the effectiveness of control strategies in reducing ozone levels. The model uses a three-dimensional grid to represent conditions in the area of interest. In this case, TCEQ has developed a grid system that stretches from beyond Austin to the west, to Georgia to the east, to Nebraska to the north and into the Gulf of Mexico to the south. The model uses nested grid cells of 36 km on the outer portions, 12 km in east Texas and portions of nearby States and a 4 kilometer grid cell covering the HGB and Beaumont Port Arthur (BPA) areas. For more information on the modeling domain, please see the TSD. The model simulates the movement of air and emissions into and out of the three-dimensional grid cells (advection and

[1] In addition, EPA has retained the 1-hour attainment demonstration requirement as an applicable requirement under the Phase I rules antibacksliding provisions. See 40 CFR 51.900(f).

dispersion); mixes pollutants upward and downward among layers; injects new emissions from sources such as point, area, mobile (both on-road and nonroad), and biogenic into each cell; and uses chemical reaction equations to calculate ozone concentrations based on the concentration of ozone precursors and incoming solar radiation within each cell.

Air quality planners choose an historical episode of high ozone levels to apply the model. Running the model requires large amounts of data inputs regarding the emissions and meteorological conditions during an episode. Modeling to duplicate conditions during an historical episode is referred to as the base case modeling and is used to verify that the model system can predict the historical ozone levels with an acceptable degree of accuracy. If the model can predict the ozone levels in the base case, it can then be used to project the response of future ozone levels to proposed emission control strategies.

3. What Episode Did Texas Choose To Model?

Texas chose an historical episode, August 19–September 6, 2000, that encompassed the time period of the Texas Air Quality Study (TxAQS) 2000. During this study, researchers from around the country participated in an intensive study of ozone formation in the HGB area, collecting additional meteorological and chemical data. This study has provided a wealth of information to test the assumptions in the model. EPA believes that the extended episode from August 19–September 6, 2000, is an acceptable episode for development of the 1-hour attainment plan. It encompasses 13 exceedance days and contains a variety of meteorological conditions which resulted in high concentrations of ozone in the area as measured on both a 1-hour and 8-hour basis.

4. How Well did the Model Perform?

Model performance is a term used to describe how well the model predicts the ozone levels in an historical episode. As models have to make numerous simplifying assumptions and the system being modeled is very complex, model predictions will never be perfect. EPA has developed various diagnostic, statistical and graphical analyses that TCEQ has performed to evaluate the model's performance and determine if the model is working adequately to test control strategies. For a subset of days, August 25, 26, 29, 30, 31, September 1–4 and 6, TCEQ deemed the model's performance adequate for control strategy development to address routine emissions. EPA agrees that the overall model performance is adequate but notes that the model tends to under-predict on high days and over-predict on low days raising some uncertainty in the control strategy modeling. At least part of the under prediction has been attributed to non-routine emissions not captured in the modeling. This is discussed further in the section on alternative design values. It is also worth noting that, to achieve adequate performance, TCEQ adjusted the amount of HRVOC emissions in the model above the reported emission inventory values based on ambient measurements which demonstrated that reported HRVOC emissions were underestimated. This adjustment is discussed in more detail in later sections.

5. What Did the Results of the Modeling of Routine Emissions Show?

The results of modeling the revised control strategy are shown in Table 1.

Episode day	Measured peak	Modeled peak (base case)	Modeled peak (future case [2])
August 25	194	156.5	121.6
August 26	140	149.4	113.6
August 29	146.7	151.2	113.6
August 30	200.5	137.2	122.5
August 31	175.5	173.0	147.6
September 1	163.7	136.7	119.5
September 2	125.5	152.7	128.6
September 3	127.2	139.3	115.0
September 4	145.0	158.0	125.2
September 6	156.0	152.9	125.1

Table 1 shows that on all of the days except August 31, the modeled control strategy was predicted to bring the area under or very near the one-hour standard of 125 ppb. The modeling, however, incorporates only routine emissions in the future case and reported non-routine emissions in the base case. As will be discussed in more detail in later sections, TCEQ believes that large non-routine emission events not included in the modeling also contribute to high ozone levels in the HGB area. These non-routine emission events explain, in part, the model's under-prediction on several days such as August 25th, 30th, and September 1st.

As discussed in the weight of evidence section regarding alternative design values, the TCEQ believes that without the influence of emission events, an alternative design value of 144 ppb can be estimated. If 144 ppb is a reasonable representation of the area's ozone levels due to routine emissions, then the modeling results in Table 1 indicate sufficient reductions in ozone levels due to routine events. In addition to the modeling results and the alternative design value approach which is explained later in this notice, TCEQ has presented other evidence to demonstrate that attainment will be reached. These additional demonstrations are included in the weight of evidence section.

To address the part of the ozone levels due to non-routine emissions, TCEQ established a short term limit of 1200 lb/hr on emissions of HRVOCs. The development of this limit is discussed in the next section on emission event modeling. The purpose of this limit is to reduce the frequency of non-routine emission events sufficiently so that emission events impacting peak ozone levels will be reduced in frequency to less than 1 event per year and thus will not impact attainment of the 1-hour standard.

We recognize that there is considerable uncertainty regarding the impact of emission events on peak ozone. As we discuss in the next section on emission event modeling, the project H13 study seems to indicate a smaller impact of emission events on peak ozone levels than the alternative design value approach. The projected smaller

[2] These values also do not include the impact of wildfires as discussed in the WOE section.

impact could stem from the following reasons. First, the H13 study looked at the impact of emission releases after the institution of NO_X controls, whereas the alternative design value analysis performed by TCEQ is based on historic data before the institution of controls. Thus, the impact of emission events in the past is likely to be larger than events in the future when there is less NO_X with which to react. Second, the frequency of events was based only on detected and reported events. Past monitoring and reporting techniques may not have detected all events. The improved HRVOC reporting rules should help address this possible problem. Finally, project H13's assumptions regarding the frequency of events looked only at events occurring at the most sensitive times and location. Larger events occurring at slightly less sensitive times and locations could also be impacting peak ozone. On the other hand, it is likely that the alternative design value approach overstates the impact of emission events. Some of the rapid rises in monitored ozone that are filtered out in the alternative design value approach could be caused by narrow continuous plumes of ozone sweeping across a monitor as winds shift direction. Weighing the available information, EPA believes that the occurrence of emission events in the HGB area that are not included in the model contribute at least in part to the model's under prediction of some measured ozone levels. The short-term limit will address these non-routine emission events. In addition, the controls on routine emissions will provide the reductions in the ozone due to routine emissions necessary to reach attainment. In addition, Texas has considered other weight of evidence information indicating there will be more improvement in air quality than can be expected demonstrated by the modeling of routine emissions.

6. What Did the Results of the Emission Event Modeling Show?

Traditionally ozone control plans have been based on the assumption that emissions for an area do not change significantly from day to day and differences in pollution levels are caused by changes in the meteorological conditions between days. This assumption has been reexamined for the Houston area because of the number of non-routine emissions that are reported in the Houston area from the refining and petrochemical industry.

The project H13 report, ''Variable Industrial VOC Emissions and Their Impact on Ozone Formation in the Houston Galveston Area,'' April 16, 2004, looked at the potential impact of emission releases in the area. It determined, by examining the TCEQ emission events data base and records of emissions from sources with monitors on flares and cooling towers, that ''variability in HRVOC emissions from point sources is significant and due to both variability in continuous emissions and discrete emission events.'' The area wide variability had the following characteristics:2–3 times per month HRVOC emissions variability > 10,000 lbs/hour,2–3 times per month HRVOC emissions variability 5,000–10,000 lbs/hour, daily HRVOC emissions variability > 100 lbs/hour.

Based on the above findings, the researchers then examined the impact that emissions variability could have on peak ozone levels by modeling the impact of emission events of various sizes at various locations and times. It was determined that an event of 1,000 lbs in the most sensitive area and during the most sensitive time could have a 1–2 ppb impact on the peak ozone level within the fine grid modeling domain. Larger events would have correspondingly larger impacts on ozone levels. A 10,000 lb release at the most sensitive place could have a 10–20 ppb impact on ozone levels.

The study, based on assumptions regarding the frequency of ozone conducive weather conditions, the time window most sensitive to releases and the location of most sensitive releases, presented the results of a Monte Carlo simulation to estimate the probability and expected magnitude of emission events that would impact peak ozone levels. The report states that if no actions were taken to reduce emissions variability, an air quality plan should anticipate that at least one event per year of 1,000 lbs would happen at the right time and the right place to impact peak ozone. Based on this finding, TCEQ adopted a short-term limit on HRVOC emissions designed to reduce the magnitude and frequency of emissions events. This is not to say that a 1–2 ppb increase in ozone is not significant, but that with the short term limit, the occurrence of non-routine events at the times and places to impact peak ozone will be diminished sufficiently as not to impact attainment with the 1-hour ozone standard. Because facilities would be expected to take action to avoid events of 1,200 lbs/hr, the frequency of such events in the future will be lower than in the past and therefore less than 1 event per year impacting peak ozone should be expected. As discussed, some non-routine emissions, in the past, may not have been detected or reported in which case the actual frequency of events impacting peak ozone levels may be higher than projected in project H13, which as discussed previously, would help explain the under-prediction in the routine modeling. The improved monitoring requirements in chapter 115 should serve to prevent undetected HRVOC releases in the future and the specter of enforcement will cause facilities to take measures to prevent emission events. This is further discussed in the section on the short term and long term cap.

7. How Did Texas Handle Questions About Emission Estimates?

TCEQ has followed acceptable procedures for the development of the base case inventory, following or building upon EPA guidance. Despite these efforts, one of the findings of the TexAQS 2000 study was that observed concentrations of certain compounds, especially light olefins such as ethylene and propylene, were much larger than represented in the reported emission inventory. This conclusion has been reviewed and documented in numerous scientific journals. For more information on these studies see the TSD.

Emissions of these compounds principally come from the petrochemical industry. While it is clear that the reported emissions are too low, the ambient data does not show, however, which types of facilities and equipment are the source of the underestimated emissions. Various methods have been attempted to estimate the actual emissions of VOCs in the HGB area based on the available ambient measurements. TCEQ decided to use data from aircraft flights which indicated NO_X emissions were similar to VOC emissions when considered on a molar basis. Therefore, TCEQ adjusted the molar emission rate of HRVOC emissions at each facility to match the NO_X emission rate. This adjustment is more fully described in Chapter 3 of the SIP revision. The adjustment had the effect of substantially increasing the level of HRVOC emissions in the modeled emissions inventory. Prior to adjusting the inventory, the model did not perform well. Model performance was improved after the adjustment. The adjusted inventory became the basis for achieving acceptable model performance and for the control strategy development.

Clearly, this type of across-the-board adjustment of emissions is not the preferable way to estimate emissions and makes control strategy targeting and development difficult. Unfortunately, using established methods for estimating source emissions has been

demonstrated to be inaccurate. As support for their adjustment approach, TCEQ points out the amount of emissions added to the inventory is corroborated by a study conducted by Environ ATop Down Evaluation of the Houston Emissions Inventory Using Inverse Modeling'' (Yarwood *et al.*, 2003) which indicated that approximately the right amount of reactivity had been added to the model and that further adjustment was not warranted under the then-current model formulation.

EPA believes that the approach Texas has taken to estimate the inventory of HRVOCs is acceptable given the information that is available. This conclusion is supported by the available aircraft data and Environ inverse modeling study. Clearly, this is an area that should be improved as the State develops future SIP revisions.

8. What Actions Are Being Taken To Improve the Emissions Estimates of HRVOCs?

It was the consensus at a conference of emissions inventory experts held in Clear Lake, Texas in 2001, that the errors in the inventory were most likely from errors in the estimates of emissions from cooling towers, flares, fugitive emissions and start-up, shutdown and malfunction events. Texas has moved forward to improve the inventory of HRVOCs in all of these areas by requiring monitoring of cooling towers, flares, pressure relief devices and process vents in HRVOC service. This source monitoring, which will be in place by the end of 2006, should dramatically reduce the amount of error in the HRVOC inventory by more directly measuring both continuous emissions and emissions events. In addition, for all VOCs, Texas is now requiring that correlation equations be used for the estimation of fugitive emissions. This will reduce the amount of error in fugitive emission estimates.

9. What About Estimates of Less-Reactive VOC Emissions?

Texas elected to adjust the reported emission rates of only HRVOCs. Other less-reactive chemicals are also released from flares, cooling towers, fugitive sources and during start up/shutdown and malfunction events and traditional emissions estimation techniques for less-reactive VOCs are the same as those for HRVOC. Thus, it is reasonable to suspect that these chemicals are also under-represented in the inventory. If these chemicals are under-represented in the inventory, the degree of underestimation may be less than for HRVOCs. One reason is that the processes that emit HRVOCs, such as ethylene plants, are often under very high pressures and this may increase the degree of underestimation more than would occur for emissions in lower pressure processes as one would expect leaks under higher pressures would tend to release a greater mass of emissions than lower pressure leaks. Also, many less-reactive VOCs are much lower in volatility than the HRVOCs which could also serve to reduce the amount of emissions underestimation.

There is some evidence from ambient measurements that the less-reactive chemicals are underestimated in the emission inventory, but there are not yet the number of peer reviewed studies regarding these other VOCs that exist for HRVOCs making determination of appropriate adjustment factors problematic. Therefore, Texas chose not to adjust the reported inventory for the less-reactiveVOCs for the attainment demonstration modeling because of the lack of information regarding the appropriate level of emissions. TCEQ did conduct a study of ambient data, referred to in the SIP revision, indicating that emissions might be underestimated by a factor of 4.8. Based on this study, Texas performed a sensitivity run with the model to evaluate the impact potential errors in less-reactive VOC emissions might have on projected attainment. This sensitivity analysis indicated that the addition of less-reactive VOCs using a factor of 4.8 could have an impact of 2–29 ppb on the peak ozone depending on the day. The performance of the model, however, was slightly worsened by the addition of the less-reactive VOCs indicating that possibly too much reactivity had been added. Other analyses performed by the University of North Carolina (Role of Modeling Assumptions in Mid-Course Review, HARC 12.2004.8HRB, 2005) adjusting only fugitive emissions of less-reactive VOCs by lower factors indicated no more than a 0.5 ppb increase in ozone levels. The main differences between the analyses were the assumptions regarding the amount of additional less-reactive VOCs and the amount of HRVOCs in the model.

EPA is proposing to accept the attainment demonstration based on TCEQ's approach to less reactive VOCs, because of the uncertainty on what adjustments might be appropriate and what impact those adjustments might have on the model. We understand that TCEQ is continuing to evaluate ambient data to determine what adjustments to the inventory might be appropriate. Texas has also undertaken a stakeholder process to identify additional ways to improve the emissions inventory. This stakeholder process will be vital to the improvement of future SIP revisions. EPA expects that future SIPs revisions will be based on improved emissions inventories of both less-reactive VOCs and HRVOCs. We note that the move to require the correlation equations for the estimation of less-reactive VOC will serve to improve the estimate of fugitive emissions. Improvements to the emission estimates for cooling towers and flares in less reactive VOC service should also be considered. Roles should also be found for emerging remote sensing technologies that have been shown to detect leaks from sources which have not been traditionally considered such as barge hatches and fittings on floating roof storage tanks.

10. What Additional Evidence Did Texas Provide?

The EPA's 1996 guidance entitled ''Guidance on Use of Modeled Results to Demonstrate Attainment of the Ozone NAAQS'' allows for the use of alternative analyses, called weight-of-evidence (WOE), to provide additional evidence that the proposed control strategy, although not modeling attainment, is nonetheless expected to achieve attainment by the attainment date. More specifically, the intent of this guidance was to be cognizant of the ozone NAAQS, which allows for the occurrence of some exceedances and to consider potential uncertainty in the modeling system. Thus, even though the specific control strategy modeling may predict some areas to be above the NAAQS, this does not necessarily mean that with the implementation of the control strategy, monitored attainment will not be achieved. As with other predictive tools, there are inherent uncertainties associated with modeling and its results. For example, there are uncertainties in the meteorological and emissions inputs and in the methodology used to assess the severity of an exceedance at individual sites. The EPA's guidance recognizes these limitations, and provides a means for considering other evidence to help assess whether attainment of the NAAQS is likely.

Since the future control case modeling in the Texas SIP revision predicts some areas still exceeding the ozone NAAQS, the TCEQ elected to supplement the control strategy modeling with WOE analyses. Texas submitted the following analysis as WOE: August 31st rare meteorology; additional reductions that were not modeled; comprehensive ozone metrics and ambient trends; alternative design value and addressing short-term excursions; and unusual wildfire

activity. Each of these is discussed below.

August 31st Rare Meteorology

A combination of unusual meteorological conditions, extremely high temperatures and winds from the west, occurred on August 31, 2005. The record high temperatures recorded during the August 30–September 5, 2000 period, with several days of maximum temperature ≥104°F (40°C), have occurred in this geographic area only once before in the previous 57 years. On August 31st, the Houston Intercontinental Airport observed its highest temperature ever recorded in the month of August. High temperatures throughout the region led to higher than normal estimated biogenic emissions as the calculation of biogenic emissions is a strong function of temperature. Texas calculated that biogenic emissions within the HGB area were approximately 400 tons/day higher on August 31st than on August 25th which had more moderate temperatures. The elevated biogenic emissions in rural areas west of Houston were also high and, because of somewhat atypical winds from the west, available for transport into HGB. Texas used the source apportionment tool (OSAT) to analyze the contributing emissions to high ozone. The OSAT tool indicated that on the 31st, 78 ppb of the peak ozone could be attributed to biogenics as compared to 24 ppb that could be attributed to biogenics on the 25th. Other days of the episode also had high temperatures but only when combined with the west winds did the unusual impact of biogenics result. Texas points out that winds from the west are not typical of the days that have high ozone in Houston which usually occur on days with a flow reversal due to the land sea breeze effect.

EPA agrees that the meteorological conditions on August 31st, which combined record high temperatures and winds from the west, were not typical of the conditions that lead to high ozone in the HGB area. The higher than normal biogenic emissions and winds from the west appear to have caused the 31st to be a day that did not respond well to the adopted control strategy which is weighted toward control of point sources that are predominant in eastern Harris County. This strategy has been effective in reducing ozone levels on other days of the episode. On the 31st, it appears much of the elevated ozone resulted from the increased biogenic emissions mixing with the NO_X emissions present in the western portion of the HGB area. In this portion of the area, NO_X emissions are primarily from on- and off-road mobile sources. To control ozone levels on days with routine conditions similar to August 31st would require substantial additional controls on mobile and area sources beyond the levels in the current strategy. But because the conditions on the 31st are atypical, we believe the HGB area can attain and a shift in strategy is not warranted.

EPA's rules at 40 CFR 50, Appendix I permit the Regional Administrator to exclude values caused by stratospheric ozone intrusion or natural events in determining whether a NAAQS has been exceeded or violated. Additionally, EPA's long-standing policy and guidance on the handling of air quality data affected by exceptional or natural events permits special consideration to be given to recorded air quality measurements that are affected by unusual events under certain circumstances. See, *e.g.*, ''Guidance on the Identification and Use of Air Quality Data Affected by Exceptional Events (July 1986)''. However, this guidance and other guidance distinguish between those types of events which directly produce emissions of a pollutant or its precursors and meteorological conditions that may affect concentrations of a pollutant emitted by sources. In particular, EPA guidance provides that no consideration is given in determining whether the NAAQS are exceeded or violated for such things as inversions, stagnation of air masses, high temperatures or lack of rainfall. This language has recently been codified in an amendment to section 319 of the Clean Air Act by P.L. 109–59 [SAFETEA]. However, a reasonable distinction may be drawn between the determination of whether NAAQS are exceeded or violated during times when such meteorological conditions exist and the meteorological and emissions data sets used in prospective demonstrations of attainment. In the latter, our policy has been for States to examine the typical conditions that lead to high ozone when modeling to determine whether their control strategies are sufficient to provide for attainment and maintenance of NAAQS. (U.S. EPA, (1996), ''Guidance on Use of Modeled Results to Demonstrate Attainment of the Ozone NAAQS'', EPA–454/B–95–007.) In this case, the combination of conditions on the 31st are not typical and, in fact are quite rare. Therefore, EPA does not believe a shift in control strategy is warranted to address the unusual conditions on August 31st that are expected to occur so infrequently as to be unlikely to impact the area's ability to attain the NAAQS.

Additional Reductions Not Modeled

The TCEQ believes potential additional emissions reductions will take place as a result of programs which have been and will be implemented in the HGB area but which are not reflected in the modeling. These reductions are not included in the modeling because, at present, these reductions are not quantifiable. Emission reductions that were not included in the model should improve the probability of HGB achieving attainment of the ozone NAAQS. First, as industries improve their monitoring capabilities and reduce their HRVOC emissions, the TCEQ anticipates collateral reductions of other VOCs that are present in HRVOC streams. For instance, the TCEQ developed regulations requiring owner/operator of flares in HRVOC service to install flow-meters and comply with maximum tip velocity and minimum heat content requirements to ensure proper combustion by the flare. The tip velocity and heat content requirements apply at all times, not only when the flare is combusting HRVOC streams. Because many of these flares are also used for non-HRVOC streams, the regulations will often result in a reduction of less-reactive VOCs as well. Similarly, TCEQ has improved the leak detection and repair program for streams with more than 5% HRVOC content. When leaks from streams containing both HRVOCs and less reactive VOCs are repaired, other less-reactive VOCs will also be reduced. EPA agrees that these collateral reductions are likely to occur, but we believe the potential benefit of these unmodeled emission reductions has been partially lost because TCEQ allows emission reductions of less-reactive VOCs to offset small increases in HRVOCs using the Maximum Incremental Reactivity (MIR) scale (see Section II.B.4.). It is likely that some of the benefit will be realized because we do not expect that many companies will implement the additional monitoring of less reactive VOCs that would be necessary to establish baselines necessary to participate in the trading program. Also, under the TCEQ rules, less reactive fugitive emissions reductions cannot be credited toward HRVOC increases so collateral reductions in fugitive emissions should be fully realized. Another issue is the uncertainty in the less-reactive VOC inventory. As discussed in the section on emissions inventory uncertainty, it may be that less-reactive VOCs are under-represented in the base case

inventory. Because of uncertainty about the inventory, these collateral reductions may not serve to reduce VOC emissions below what was assumed in the model. These collateral reductions will serve to reduce the degree of any potential under-representation in the inventory and thus reduce this area of uncertainty in the attainment demonstration.

A second program that should result in additional reductions is the Environmental Monitoring Response System (EMRS). The TCEQ and the HRVOC regulated community have expanded the real-time ambient monitoring network of specific VOCs in the HGB area. A primary goal of EMRS is to prevent HRVOC emissions from creating situations that may lead to high levels of ozone. The near real time monitoring and response built into the program, which is further described in the TSD, will provide rapid feed back that should help identify and quickly correct the releases that can lead to high levels of ozones. EPA believes this added scrutiny of ambient VOC levels will result in improved overall program effectiveness, and could identify previously unknown sources of emissions that could be controlled to further reduce emissions.

The TCEQ believes that additional reductions will also be achieved through its public web-based access to an emission event database incorporating lower reportable quantities of VOCs beyond just the HRVOCs of most concern. This database puts facility performance regarding unauthorized emission releases at the public's fingertips. As public awareness of the number and amount of these releases increases, industry is expected to respond in a manner similar to its response to the Toxics Release Inventory program which has resulted in large reductions in Toxic emissions. EPA agrees awareness and documentation of these events should prompt industry to begin to evaluate the causes of these events and institute an enhanced program to ensure that the potential of an event is significantly minimized.

Texas believes the projected emissions for electric generating units outside the nonattainment area are probably too high. The current HGB SIP attainment demonstration modeling only excludes from the future case emissions projections for units that have formally indicated an intent to cease operation or that will be retired/reduced under agreed orders. The future projected case modeling inventory may include sources that will in fact be retired in (and/or prior to) 2007 as newer, more cost effective plants come online as Texas utilities continue the transition to a fully deregulated market. If this occurs, additional reductions could result which are not accounted for in the current SIP because the newer facilities would have lower emission rates. EPA agrees that deregulation will encourage the retirement of less efficient plants. Some of the benefit of this process may already be incorporated in the projections because Texas has projected newly permitted units will operate at 75% capacity in its projection of future emissions for electric utility emissions. It may be that newly permitted plants operate closer to full capacity as less efficient plants are curtailed or retired such that overall projected emission levels do not decrease as much. Some reductions should still occur because the newer plants will be cleaner than the older plants. A factor that weighs toward the projections of future emissions outside the nonattainment being too low is the findings of a report on emissions from offshore facilities too recent to be included in the SIP which indicates that projected emissions from these facilities may be significantly higher than what was modeled. Considering these factors together, EPA believes that NO_X emissions outside the nonattainment area are slightly if at all less than projected and provide little additional evidence the area will attain.

Texas also believes that NO_X emission projections inside the nonattainment area are overestimated. Inside the eight county nonattainment area, the Mass Emissions Cap and Trade (MECT) program for NO_X applies. For sources with permits in hand when the first cap allocations were established but which had not yet operated, TCEQ issued allowances based on the allowable emissions in the permit (so called ''allowable allowances''). Allowable allowances are those allocated to sources based on permits issued prior to the initiation of the MECT program, but not in operation for sufficient time to establish a baseline. During the interim period, until a baseline is established, sources operate complying with the ''allowable allowances.'' Then, based on the actual emissions during the baseline period, the State grants ''actual allowances.'' Because typically these facilities are not operating at their full allowable rates, but significantly below those values, a source will get fewer ''actual allowances'' than the ''allowable allowances'' it was granted based on the permit. Therefore, as these newly permitted facilities establish baselines from which to grant ''actual'' allowances, the NO_X cap in the HGB will decrease overall. The TCEQ examined the 2002 and 2003 permit database and found that only 33 to 39 percent of the allowable allowances for permitted facilities were used. The modeling was based on the ''allowable allowances'' because it was not possible to predict how much lower the actual allowances will be than allowable allowances. The number of allowable allowances is not insignificant. The TCEQ registry currently carries 18,658 allowable allowances for 2007 which could translate into a potential additional NO_X emissions reduction beyond what was modeled of up to 31 tpd if current trends for the conversion of allowable allowances to actual allowances continue. EPA agrees that as allowable allowances are converted to actual allowances, actual emissions will be less than the emissions that were modeled which should result in greater improvement in air quality than projected in the model.

In summary, EPA believes that TCEQ has provided sufficient evidence that NO_X emission levels will be lower than those projected in the model and thus, air quality improvements should be better than predicted by the model. We also believe the reductions that will occur due to collateral VOC reductions and brought about by the EMRS system and emission events data base will reduce the uncertainty in the model due to uncertainty in the VOC inventory.

Comprehensive Ozone Metrics And Ambient Trends

Based on the ambient data, the 1-hour ozone design values for the HGB area have decreased significantly from 260 ppb in 1982 to 175 ppb in 2003. Texas used this initial data to estimate a trend that demonstrated that attainment of the 1-hour standard would be reached sometime after 2020. The area's design value dropped significantly during the 1980s, then flattened out during the 1990s, hovering around 200 ppb. Design values recently have resumed their downward trend and are at the lowest values seen in at least the last twenty years. EPA notes that the 2004 design value has further decreased to 169 ppb. The current trend may be partly due to meteorological conditions in recent years, but it is almost certainly accelerated by emission reductions made since the 2000 SIP revision. If the design value continues to drop at a rate comparable to that seen in the most recent five-year period, then attainment would occur sometime around 2010. But the amount of emissions reductions is expected to increase each year until 2007 as a result of rules adopted in the

2000 SIP revision and in this SIP revision. Consequently, the design values are expected to decrease more rapidly as 2007 approaches. This simplistic analysis alone by no means proves the area will attain the standard by 2007, but EPA agrees the recent design value trends are consistent with reaching attainment by 2007.

Alternative Design Value And Addressing Short-Term Excursions

As discussed previously, 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 believes the traditional modeling does not replicate ozone produced by the sudden sharp increases in HRVOC emissions that can occur in the HGB area due to non-routine emission releases. TCEQ argues that this technical deficiency provides an explanation for why the model's peak simulated ozone concentrations were all below the HGB area's design value in 2000. The actual design value calculated for the years 1999–2001 was 182 ppb, while base case simulated peak ozone concentrations were below 160 ppb on every day but August 31st. The TCEQ believes that the influence from short-term releases should 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 the influence of short-term releases, TCEQ applied Blanchard's technique (Statistical Characterization of Transient High Ozone Events Interim Report; December 21, 2001) to the 1999–2001 AIRS data. This technique uses a threshold of a 40 ppb rise in ozone concentration in 1 hour to distinguish between sudden rises in ozone from the more typical case where ozone increases more gradually. Removing all days with identified sudden ozone concentration increases (SOCI), an alternate design value of 144 ppb was calculated by TCEQ. The base case includes seven days with modeled peak ozone greater than 144 ppb, so the modeled peaks, in fact, correspond well with the (non-SOCI) design value and in fact the model may be over-predicting the ozone resulting from routine emissions. If the model is over-predicting the ozone due to routine emissions in the base case, then it is likely the model is over-predicting the ozone due to routine emissions in the future case projections providing additional evidence that the control strategy will sufficiently reduce the ozone from routine emissions.

EPA considers the alternative design value approach one 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 potential impact of large emission releases on the design value. We are not convinced, as yet, 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. Wind shifts are a common occurrence in the HGB area and are likely responsible for some of these SOCI events. The TCEQ analysis also did not screen out widespread exceedences unlikely to be the result of a non-routine event. Still, we agree that emission events do impact the design value to a degree that is difficult to quantify. Therefore, we agree that considering the alternative non-SOCI design value provides additional evidence that the future design value will reach the standard in the future case as Texas has developed a strategy to control both routine and event emissions, thus reducing both contributions to the design value.

Wildfire Activity: In 2000, there was an unusually large amount of wildfire activity in Southeast Texas due to drought conditions and extreme temperatures in the August-September time frame. This is documented in Section 3.7.2 of the SIP that shows that more than 5 times as many acres burned in 2000 as in any of the other years between 1999 and 2003. It is not expected the number and scope of fires modeled in the current SIP attainment demonstration modeling would be reasonably expected in future years. A sensitivity analysis was conducted to quantify the impact of wildfires on the future year ozone level in the HGB indicating wildfire activity does have an impact on the HGB future ozone levels (*i.e.*, 0.1 ppb to 1.7. ppb). EPA agrees that the amount of wildfire activity was unusual in 2000 and should not generally be expected in most years. Therefore, we agree that this is additional evidence that indicates improved probability that the area will attain in future years because the projected modeled emissions are higher due to wildfires than should generally be encountered in future years.

11. Is the One-Hour Attainment Demonstration Approvable?

EPA believes that the combination of photochemical modeling and other evidence (WOE) indicates that the revised control strategy will bring the area into attainment. This demonstration is based on new information not available at the time the currently approved SIP was developed and represents a significant improvement over past efforts to model Houston. Specific improvements include:

- Improved representation of Houston's complex meteorology.
- Recognition of the importance of HRVOCs.
- Recognition that HRVOCs are underestimated in the emissions inventory.
- Recognition of the potential impact of emissions variability on ozone levels.

EPA believes that the modeling projects significant improvement due to reductions in routine emissions. EPA believes TCEQ has shown through the modeling of routine emissions that the portion of the ozone due to routine emissions will be sufficiently reduced. The modeling of routine emissions does not predict attainment on all days. The circumstances that led to the very high exceedance on August 31, have been shown to be unusual and thus EPA concludes the 31st should not be used to drive the control strategy. On other days of the episode, ozone levels have been shown to be reduced to below or just slightly above the standard. The wildfires that occurred during the episode also are a rare event occurring because of the high temperatures and drought conditions. Removing the influence of wildfires from the modeling brings all of the days with the exception of August 31 within 3.8 ppb of the standard. Texas has provided evidence that additional emission reductions will occur of both VOC and NO_X. EPA particularly believes the expected additional NO_X reductions will provide additional ozone benefit that could offset the small amount the modeling of routine emissions shows the area to be above the standard. The additional reductions in VOC expected from collateral reductions due to the HRVOC rules and due to the implementation of the EMRS system and the event reporting data base should at least partially mitigate any errors in the non-HRVOC inventory used for the attainment modeling.

The model's under-prediction of high ozone levels using routine emissions have been examined by TCEQ. TCEQ has proposed that two phenomena (routine and non-routine emissions) drive the HGB design value and that it is appropriate to estimate an alternative design value that does not include the effects of non-routine emissions. If

TCEQ's estimated alternative design value (144 ppb) is an accurate representation of the design value due to routine emissions, then the control strategy modeling should reduce ozone levels due to routine emissions below the ozone standard. TCEQ addresses the non-routine emissions with the short-term limit that is expected to reduce the contribution to the HGB area's ozone level due to non-routine emissions such that non-routine emissions should not occur frequently enough at sensitive locations and times to impact the area's attainment of the 1-hour standard. As discussed in the TSD, the alternative design value probably overestimates, to some degree, the impact of short-term releases but still provides evidence that the current strategy to reduce routine emissions should be successful in addressing that portion of the 1-hour problem due to routine emissions and supports TCEQ's two pronged approach to achieving attainment of the 1-hour standard.

Finally, EPA believes the evaluation of ambient data trends indicates that the area is on a track that is consistent with achieving attainment of the one-hour standard by 2007.

B. New Control Measures

1. What Are the New Control Measures in These SIP revisions?

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

- Annual Cap on HRVOC emissions
- Hourly (short-term) limit on HRVOC emissions
- Improved requirements for HRVOC fugitive emissions
- Requirements for Portable Gasoline containers

2. What Are the Annual Cap and Short-term Limit on HRVOC emissions?

As discussed in Section II.A.1, 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_X 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.

To reduce the routine emissions of highly-reactive VOCs, Texas adopted an HRVOC emissions cap-and-trade (HECT) program. This program establishes an annual cap on emissions of ethylene, propylene, butadiene and butenes from cooling tower heat exchange systems, flares, and vent gas streams in Harris County. The rules establishing the cap-and-trade system are contained in 30 TAC Chapter 101, Subchapter H, Division 6. The rules establishing the monitoring and record keeping necessary to determine compliance with the HECT are contained in 30 TAC , Chapter 115, Subchapter H. EPA has reviewed the monitoring rules and proposed approval of the Chapter 115 rules. (See E-Docket R6–OAR–2005–TX–0014) EPA is reviewing the HECT program rules with respect to EPA's Economic Incentive Program guidance and a separate proposed rule is being developed. (See E-Docket R06–OAR–2005–TX–016) Because the emission reductions achieved by the HECT program are relied on in the attainment demonstration, EPA cannot finalize an approval of the attainment demonstration unless or until the HECT program and the Chapter 115 rules have been approved. In this document, we discuss how the controls on HRVOCs have been modeled and support the attainment demonstration.

In projecting the HRVOC emissions that would occur after the HECT annual cap was implemented, TCEQ included a 5 percent safety factor in the attainment demonstration modeling. In other words, rather than model the levels established by the cap, Texas included 5 percent additional emissions of HRVOCs in the model. This safety factor was necessary because of the uncertainty that is introduced into the modeling by using an annual cap to achieve a short-term standard such as the National Ambient Air Quality Standard for ozone. On any given day more sources could be operating above their annual average emissions than below their annual average emissions. The 5 percent safety margin provides some room to account for this day-to-day variation in routine emissions.

As discussed previously, a large number of scenarios were simulated in the Project H13 work, examining the impact of releases of various sizes, times and locations. This study demonstrated that releases at the worst-case place and time of 1000 lb/hour could have a 1–2ppb impact on peak ambient ozone levels. To minimize frequency of these events, TCEQ established an hourly limit on emissions from process vents, flares, cooling towers and pressure relief devices. The hourly limit on emissions is 1200 lbs/hour and is established at §§ 115.722 and 115.761.

3. How Are the Annual Cap and the Short-Term Limit Related?

Texas has included features in the rules defining the interaction between the annual cap and short-term limit that are unique to the HECT. Typically, all emissions during the year would be counted toward compliance with an annual cap. In establishing a cap-and-trade system for the petrochemical industry in the HGB area, TCEQ felt it necessary to consider the possibility of major upsets. TCEQ believed that non-routine emissions from process upsets, while likely to occur, are not predictable and therefore could make management of emissions under an annual cap difficult. Therefore, TCEQ established in its rule that emissions above the 1200 lb/hr short-term limit are not counted toward compliance with the annual cap but rather expected to be controlled by the short term limit. TCEQ was particularly concerned about the potential situation where a single large release could force a smaller source to shut down for the remainder of the year because its allowances had been exhausted.

Although EPA agrees that a forced shutdown of smaller sources is possible, it believes that many upsets can be avoided by a source through the development and implementation of operation and maintenance plans that address start-up, shutdown and malfunction of process equipment and application of good air pollution control practices such as required by 40 CFR 60.18(d). EPA notes that application of the aforementioned procedures would significantly reduce the emissions associated with such start-up, shutdown and malfunction events and could avoid a the need for a forced shutdown. In addition, planning and management of emissions by the source including participation in the credit market should also avoid a forced shutdown while ensuring compliance with the annual cap.

Emissions above the short-term limit would still be subject to enforcement as a violation of the short-term limit, but only 1200 lbs would be reported for compliance with the annual cap during those hours where emissions exceed 1200 lbs. It is our expectation that the root cause of the conditions giving rise to the emissions above the short-term cap will be identified and corrected. Moreover, the source is still required to use good air pollution control practices consistent with the applicable NSPS (40 CFR 60.11(d)) and MACT standards or

other applicable Federal or State programs.

The structure of the Texas HECT program, which does not require emissions above the short-term limit to be counted against the long-term cap, is a significant departure from past practices for cap-and-trade programs such as the Title IV Acid Rain program and the Houston NO_X cap-and-trade programs. EPA's Economic Incentive Program guidance regarding mass emissions cap-and-trade programs indicates that all sources in the program should account for all of their emissions. See section 7.4 of the EIP Guidance. We believe, in this instance, the approach of not counting emissions above the short-term limit toward the annual cap has both advantages and disadvantages as discussed below. We are inviting comment on approving a program with this structure, as we remain concerned about excess emissions resulting from poor operation and/or poor maintenance.

We believe the structure of the TCEQ HECT rule has the advantage that it establishes a clear procedure for how emissions during non-routine events will be handled. For every hour during a large emissions event, the source will include 1200 lbs toward meeting its annual cap. This will avoid disputes about the validity of data during large emission events, when monitoring may be less reliable. The rule clearly defines the procedures to be followed during an emission event. Sources will have no choice but to ensure that at the end of the compliance period they have sufficient allowances to cover all of the emissions up to the 1200 lb limit, or else face deductions from their compliance account and other potential penalties. In addition, emissions above that level would be subject to enforcement under the short term limit.

On the other hand, the structure of the rule has the disadvantage that some of the incentive to prevent large releases is lost by excluding emissions above the short-term limit from the annual cap. In addition, some of the incentive for reducing the size of large events, when they occur, may also be lost. With the annual cap-and-trade program's exclusion of emissions above the hourly (short-term) limit, it is probable that fewer violations of the annual cap will occur than if the exclusion had not been provided. For sources that would have violated the annual cap if emissions above the short-term limit were considered, it may be harder to promote systemic changes at those sources to reduce overall emissions.

Having looked at the advantages and disadvantages, we are proposing approval of the program. We are proposing approval because, even though it provides an exclusion for non-routine emissions above short-term limit from the annual cap, it provides new enforceable limits that are an improvement on the status quo, and we believe the annual cap in conjunction with the short term limit will achieve the goals of the attainment demonstration as indicated by the modeling analysis. The annual cap should result in the necessary reductions in routine emissions and the short-term cap should result in the necessary reduction in the amount and frequency of non-routine emission events. We note that the program rules require TCEQ to audit the HECT program every three years, and facilities have to provide compliance reports annually, so it will be readily apparent if the goals of the rules are being achieved.

We believe the program will achieve the necessary reductions in routine emissions because the size of the short-term limit is such that only truly non-routine emissions will not be counted toward the annual cap. Based on evaluation of the emission rates that were modeled in the January 2003 SIP, the 1200 lb/hour limit is expected to be about ten times larger than the average hourly emission rate at the largest sources of HRVOCs. This order of magnitude difference between the short-term limit and the average annual hourly emissions ensures that sources will not routinely operate near or above the short-term limit, thus achieving the goal of reducing routine emissions.

Also, while the structure of the HRVOC rules anticipates that emission events will not be completely eliminated, EPA believes that it provides sufficient disincentives that sources will reduce the frequency and magnitude of large emissions events such that emission events would not be expected to frequently impact peak ozone levels. The Project H13 report 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. This indicates that while emission events are frequent in the Houston area, emission releases at the place and time that impact peak ozone do not occur nearly as frequently. As noted elsewhere, it is possible that events are more frequent than found in the project H13 report as past monitoring practices may not have detected all releases.

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 exceedence per year. Based on the study, we believe the hourly emission limit will achieve this goal. After the institution of the short term limit, EPA expects that emissions events impacting peak ozone levels will be reduced in frequency to fewer than one per year. The frequency of emission events will be reduced as facilities take actions to prevent violations of the short term limit such as adding additional flare gas recovery capacity so more releases can be captured and routed back to the process. Sources that fail to take appropriate actions and which violate the short term limit will be subject to enforcement. While events may occur that impact ozone levels at other locations than where the peak ozone level occurs, these events, because they are occurring in areas with lower ozone levels, would not be expected to impact attainment of the 1-hour NAAQS.

Again, EPA recognizes that the approach of providing this partial exclusion for emissions above the short-term cap 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 may never be completely eliminated in the petrochemical industry. Because of the uniqueness of this approach, however, we invite comment on our proposed approval of this facet of the Texas plan.

4. Can Reductions in Less-reactive VOCs Be Made Instead of Reductions in HRVOCs?

One feature of the Texas rules for capping HRVOCs is that sources can make reductions in other less-reactive VOCs to generate allowances for the HRVOC cap. The VOC reductions are used to generate emission reduction credits (ERCs), in accordance with the Emission Credit Banking and Trading Program, referred to as the ERC rule, established at 30 TAC Chapter 101, Subchapter H, Division 1. These ERCs can then be converted to allowances under the HECT program. The amount of allowances is determined based on the ratio of the reactivity for the speciated VOCs being reduced to the

reactivity of an HRVOC. Reactivity values are obtained from the Maximum Incremental Reactivity Scale (MIR), California Code of Regulations, Title 17, Chapter 1, Section 94700, concerning MIR values for Compounds. The amount of allowances that can be generated is limited to 5% of a facility's cap. To generate less-reactive VOC emission reduction credits, sources must meet the same monitoring requirements for the less-reactive VOC streams that are required for HRVOCs streams.

As mentioned earlier, EPA is evaluating the HECT rule in a separate **Federal Register** notice being developed concurrently. In addition, EPA is evaluating TCEQ's ERC rule in a separate **Federal Register** also being developed concurrently. (See E-dockets R06–OAR–2005–TX–0016 and R06–OAR–2005–TX–0006). Since this attainment demonstration depends on the reductions achieved by the HECT program, we cannot approve the attainment demonstration unless the HECT rules are first approved. Also, the conversion of ERCs to HECT allowances will not be approved until the underlying ERC rules are approved.

Below we describe the impact of the conversion of allowances based on the MIR scale on the attainment demonstration. EPA has generally classed VOCs into two groups: reactive and non-reactive. All reactive VOCs have traditionally been treated equally for regulatory purposes. The findings of the TxAQS study, indicate that reactivity of certain chemicals and their prevalence in the HGB area are causing a disproportionate impact on ozone levels in the area. Thus, these HRVOCs were targeted for control. Texas is making an allowance for a small increase in HRVOCs (up to 5%) above the new emissions levels to be offset with larger reductions in less-reactive VOCs. Modeling sensitivity analyses were performed by the University of Texas and documented in a report, titled ''Survey of Technological and Other Measures to Control HRVOC Event Emissions.'' In this report, trades of less-reactive VOCs much larger than would be allowed with the 5% cap were considered. In the sensitivity runs, the impacts ranged from a 2.1 ppb increase to a 3 ppb decrease in the peak ozone, depending on the episode day and the assumptions made about the less-reactive chemical that was reduced. The researchers looked at the impact of adding between 15 and 33 tpd of HRVOC to the model while removing the requisite amount of less reactive VOCs. Under the rule, capping trades at a 5% increase in highly reactive VOCs, an increase of less than 2 tpd of HRVOCs would be all that could be allowed. Therefore, the impact of the actual program will be quite small.

We believe that the generation of HRVOC allowances of up to 5% of a sources annual cap using reductions in less-reactive VOCs will not interfere with the area's ability to attain the NAAQS. We are proposing approval because the impact on the attainment demonstration will be very small. In addition, for sources that participate in the program, it will have the advantage of implementing additional source monitoring on less-reactive VOCs. Our proposed approval does not represent a general endorsement of the use of the MIR scale for use in SIPs. In this instance, with the aforementioned technical support, we believe this is an acceptable approach which is consistent with EPA's recently issued ''Interim Guidance on the Control of Volatile Organic Compounds in Ozone State Implementation Plans'' (August 25, 2005). EPA will continue investigating how best to incorporate reactivity in the regulation of VOCs.

5. What Estimates of Flare Efficiency Are Made in the SIP Revision?

For purposes of estimating emissions for compliance with the Cap, the TCEQ rule requires companies to assume that properly operated flares achieve 99% destruction efficiency for C2 and C3 hydrocarbons and 98% destruction efficiency for all other hydrocarbons. To insure these destruction efficiencies are achieved, the TCEQ rules require sources to monitor continuously to demonstrate compliance with the operating parameters of 40 CFR 60.18. Sources not operating in compliance with 60.18 are subject to enforcement. In addition, during periods when a flare operates outside the parameters of 60.18, companies are to assume 93% destruction efficiency. EPA has proposed approval of these rules. (See E-Docket R6-OAR–2005-TX–0014) The assumptions regarding destruction efficiency impact the projected emissions in the model. TCEQ has provided the justification for these assumptions in Appendix L of the SIP. TCEQ relies on data from flare studies initiated by EPA in the early 1980's that indicate that a properly operated flare should achieve destruction efficiencies of 98%. (Flare Efficiency Study, July 1983, PB83–261644, Evaluation of Efficiency of Industrial Flares: Test Results, May, 1984, PB84–199371) These studies provided the basis for the development of 40 CFR 60.18. Texas used the data from these studies on ethylene and propylene to estimate that for these chemicals destruction efficiencies of 99% should be achieved by a properly operated flare.

Emission estimates from flares will always be a source of uncertainty because emissions from flares cannot be directly measured with today's technology. EPA is proposing to accept 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.

6. How has the Texas Leak Detection and Repair Program Been Strengthened?

For a number of years, TCEQ has implemented a leak detection and repair program as part of its program to control VOCs. When TCEQ determined that additional reductions of HRVOCs were needed, they established 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 a full discussion of the improvements to the program, see the Technical Support Document for this action. We have proposed approval of

these changes. (See E-Docket R6-OAR–2005-TX–0014)

7. How Have the Benefits of the Leak Detection and Repair Program Been Projected?

The nature of fugitive emissions introduces a great deal of uncertainty in estimating fugitive emission rates. Much of this uncertainty is unavoidable given the impossibility of estimating emissions from each leaking component. In this SIP revision, TCEQ has increased the amount of modeled HRVOC emissions above reported levels based on ambient measurements as described previously. As part of this adjustment, fugitive emissions were also increased above reported levels. Below we explain why this increase in the modeled emissions to match ambient measures may have been necessary because of possible problems with assumptions regarding control efficiency and rule effectiveness for fugitive emissions that were made in the State's emissions inventory. EPA also believes these past practices are being improved to reduce the uncertainty of future estimates.

Control Efficiency: Past TCEQ emission inventory practices allowed companies the option of using average Synthetic Organic Chemical Manufacturing Industry emission factors in combination with estimated control efficiencies to estimate emissions. Since this approach does not employ the data on the number of leaking components or the concentrations of leaks, it potentially misjudges emissions. The control efficiencies TCEQ has allowed sources to assume are higher than EPA has projected for similar control programs. For example, in past estimates for a similar program to the Texas program, EPA had estimated a 92% control efficiency, where Texas has allowed sources to assume a 97% control efficiency. See the TSD for a more complete discussion. The adjustment to the inventory based on ambient measurements could account for discrepancies in assumed control efficiencies.

Rule Effectiveness: Rule effectiveness is a concept that tries to account for difference between reported emissions and actual emissions. Sources generally assume ideal program implementation in reporting emissions when actual program implementation may be less than ideal. In the case of fugitive emissions, a 100% rule effectiveness would assume that facilities are completely accurate in their component counts and detect and repair all of the leaking components. Clearly, in practice, 100% effectiveness is only a goal that can be strived for. Again, the adjustment to the emissions inventory based on ambient measurement is necessary, in part, due to rule effectiveness issues.

It is EPA's understanding that, prior to adjusting the inventory, TCEQ assumed a rule effectiveness of 100% for sources that participated in its special inventory.[3] Because of the number of sources in the special inventory, it is believed that the rule effectiveness is nearly 100%. EPA's National Enforcement Investigations Center has performed leak surveys at refineries and has generally found more leaking equipment than estimated by facilities. Surveys at 17 refineries across the country found on average that facilities found 1.7% of their components to be leaking. Where as the NEIC surveys found on average 5% leaking components. Emissions based on the NEIC surveys were 2.4 times as high as the emission estimates based on the facility surveys.

Taken together, the control efficiency and rule effectiveness determine the overall program effectiveness. TCEQ's addition of imputed emissions based on actual ambient measurements is one way to account for the program effectiveness issues described above and other potential problems such as leaks from non-traditional components such as heat exchanger bonnets and man-way covers.

The changes to the program will make strides to address these issues. First, TCEQ has expanded the leak detection and repair program to include connectors and non-traditional components. This will increase the probability that leaks from unsurveyed equipment will be detected and repaired. Second, TCEQ is requiring, starting with the 2004 inventory, that all sources use correlation equations instead of assuming a control efficiency. Correlation equations are the most sophisticated approach to estimating emissions, short of bagging studies on each valve. As a result, future emission estimates will be based on the actual leaks found. In addition, the institution of third party audits should improve the performance of leak survey technicians so that more leaks are detected and repaired. Finally, more valves will be repaired as companies are required to employ ''extraordinary efforts'' to repair a leaking valve before allowing the repair to be delayed until the next shutdown. New technologies for repair, coming under the heading of ''extraordinary efforts'' should greatly reduce the number of valves that go unrepaired.

In summary, EPA believes that part of the reason it was necessary to adjust the base inventory to increase the emissions above reported levels based on ambient measurements, was to account for problems in assumptions for control efficiency, rule effectiveness and leaks from non-traditional components. The changes to the program will address each of these areas. EPA believes that the combination of the improvements to the program and the institution of third party audits can result in the projected 64% reduction in emissions. The addition of new components to the program and the requirement for extraordinary repair effort will improve the control efficiency. The requirement for third party audits and other changes will improve the rule effectiveness. EPA's policy on credit for rule effectiveness improvements requires that States commit to perform a study to determine if the rule effectiveness improvements are in practice realized. In response to comments on this issue, TCEQ has committed to conducting a rule effectiveness study based on the third party audit program after the program has progressed and data is available. EPA notes the first third party audits will be completed December 31, 2005. EPA would expect a rule effectiveness study summarizing the results of the first third party audits could be completed during the 2006 calender year. Using the rule effectiveness study and the results of the improved emission inventory estimates based on correlation equations, Texas will be able to determine if the emissions targets that have been modeled have been reached. In addition, this data will be useful in developing the 8-hour attainment plan.

EPA is proposing to approve 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.

8. What Are the 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 has approved the TCEQ rules on February 10, 2005 (70 FR 7041). TCEQ has projected 2.9 tons/day

[3] The special inventory was developed by asking the largest facilities in the HGB area to provide daily emission estimates for the time period of the TxAQS 2000 study.

of emission reductions. We are proposing approval of the modeling with the inclusion of these projected emission reductions.

C. Revised Control Measures

1. What Control Measures Have Been Revised or Repealed?

Texas has revised a number of control strategies that were included in the approved State Implementation Plan. A description of the revisions follows.

Industrial NO_X Controls: Texas revised its NO_X rules to relax the controls from a nominal 90% control to 80% control. Both the 90% level of control and the 80% level of control are far more stringent than the levels of control EPA previously approved as meeting the NO_X RACT requirements of Section 182 (65 FR 53172, September 1, 2000). Therefore, the 90% level of control is a discretionary control measure as considered in the Phase 1 rules because the 90% level of control was not mandated by Subpart 2 of the Clean Air Act but was chosen as necessary for the area to demonstrate attainment of the 1-hour standard. Discretionary measures are not subject to the antibacksliding provisions of the Phase 1 rule, but any revisions of such measures are subject to Section 110(l) of the Act. In Section II.E., we discuss the revised plan's compliance with Section 110(l) of the Act. In Section II.B., we discuss why we believe, taken together with other changes, the plan continues to demonstrate attainment of the 1-hour standard. In section II.D., we explain why we believe this measure is not necessary to meet the Act's RACM requirement. For the above reasons, we are proposing approval of the revisions to the TCEQ Chapter 117 rules reducing the stringency from a nominal 90% control to a nominal 80% control.

In addition to a change in stringency of the rules, TCEQ made a number of less significant changes that are discussed in appendix 1 of the TSD. These changes include the repeal of outdated sections, rule clarifications, stylistic changes in response to Texas Register guidelines, minor changes to monitoring requirements, corrections to cross references and improved recordkeeping requirements for consistency with Title V requirements. We are also proposing approval of these less substantive changes.

Vehicle Inspection and Maintenance Program in Three Rural Counties: TCEQ has dropped the requirement for I/M in Waller, Liberty and Chambers Counties. These counties are not included in the urbanized area and are therefore not required by Subpart 2 of the Act to implement an I/M program. Therefore, I/M in these three counties is a discretionary measure that is not subject to the antibacksliding provisions of the Phase 1 rule, but any revisions to the SIP approved I/M requirements must comply with section 110(l) of the Act. In Section II.E., we discuss the revised plan's compliance with Section 110(l) of the Act. In Section II.B we discuss why we believe, taken together with other changes, the plan continues to demonstrate attainment of the 1-hour standard. In section II.D., we explain why we believe this measure is not necessary for the area to meet the Act's RACM requirement. Therefore, EPA is proposing to approve the repeal of the I/M program for these three counties.

The TCEQ also made a number of nonsubstantive changes to the I/M program that are discussed in Appendix 2 of the TSD. These changes were corrections to cross references and stylistic changes. We are also proposing approval of these additional nonsubstantive changes.

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. This measure is not required by Subpart 2 of the Clean Air Act. Therefore, it is a discretionary measure that is not subject to the antibacksliding provisions of the Phase 1 rule, but any revision to the approved SIP must comply with section 110(l) of the Act. In Section II.E., we discuss the plan's compliance with Section 110(l) of the Act. In Section II.B., we discuss why we believe, taken together with other changes in the plan, the revised plan continues to demonstrate attainment of the 1-hour standard. In section II.D., we explain why we believe this measure is not necessary to meet the Act's RACM requirement. Therefore, EPA is proposing approval of this change.

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. Calculated using Mobile 6, the reductions from this measure are much smaller than as calculated under Mobile 5 in the previous SIP. This measure is not required by Subpart 2 of the Clean Air Act. Therefore, it is a discretionary measure that is not subject to the antibacksliding provisions of the Phase 1 rule, but any revision to the approved SIP must comply with section 110(l) of the Act. In Section II.E., we discuss the plan's compliance with Section 110(l) of the Act. In Section II.B., we discuss why we believe, taken together with other changes in the plan, the revised plan continues to demonstrate attainment of the 1-hour standard. In section II.D., we explain why we believe this measure is not needed to meet the Act's RACM requirement. For the above reasons, EPA is proposing approval of this revision of the State's plan.

Removal of the Vehicle Idling Restriction: This measure that would have prohibited prolonged idling of heavy duty diesel vehicles has been repealed. This measure is not required by Subpart 2 of the Clean Air Act. Therefore, it is a discretionary measure which is not subject to the antibacksliding provisions of the Phase 1 rules, but any revision to the approved SIP must comply with section 110(l) of the Act. In Section II.E., we discuss the plan's compliance with Section 110(l) of the Act. In Section II.B., we discuss why we believe, taken together with other changes in the plan, the revised plan continues to demonstrate attainment of the 1-hour standard. In section II.D., we explain why we believe this measure is not necessary to meet the Act's RACM requirement. For the above reasons, we are proposing approval of this change.

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_X emission rates. A delay in the compliance date results in reduced emission reductions because there is less time for old water heaters to be replaced with new water heaters through normal turnover. Texas has accounted for these lost reductions in its attainment modeling. This measure is not required by Subpart 2 of the Clean Air Act. Therefore, it is a discretionary measure that is not subject to the antibacksliding provisions of the Phase 1 rule, but any revision to the approved SIP must comply with section 110(l) of the Act. In Section II.E., we discuss the plan's compliance with Section 110(l) of the Act. In Section II.B., we discuss why we believe, taken together with other changes in the plan, the revised plan continues to demonstrate attainment of the 1-hour standard. In section II.D., we explain why we believe earlier

implementation of this measure is not necessary to meet the Act's RACM requirement.

We are not proposing approval of this change 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 State Implementation Plan. This portion of the plan, which was approved in 2001, was projected to achieve 23 tpd of emission reduction through various voluntary and often innovative measures. Experience and the recalculation of the benefits with Mobile 6 has resulted in a much lower expectation for the program which now is expected to only achieve 10.6 tpd of emission reductions. The details of changes to the program are contained in appendix O of the SIP. These measures are not required by Subpart 2 of the Clean Air Act and therefore, are discretionary measures that are not subject to the antibacksliding rules provisions of Phase 1 rule, but revisions to the approved 1-hour SIP must comply with section 110(l) of the Act. In Section II.E., we discuss the plan's compliance with Section 110(l) of the Act. In Section II.B., we discuss why we believe, taken together with other changes in the plan, the revised plan continues to demonstrate attainment of the 1-hour standard. In section II.D, we explain why we believe these measures are not necessary for the area to meet the Act's RACM requirement. For the above reasons, EPA is proposing approval of the revisions to the VMEP measures.

D. Reasonably Available Control Measures

1. What Are the RACM Requirements?

Section 172(c)(1) of the Clean Air Act requires that each nonattainment plan provide for the implementation of all reasonably available control measures as expeditiously as practicable (including such reductions in emissions from existing sources in the area as may be obtained through the adoption, at a minimum of reasonably available control technology) and shall provide for attainment of the national primary ambient air quality standards. EPA has provided guidance interpreting section 172(c)(1) of the Act. See 57 FR 13498, 13560, April 16, 1992. In that guidance, EPA indicates that potentially available control measures, which would not advance the attainment date for an area or contribute to reasonable further progress, would not be considered RACM under the Act. EPA's guidance also indicates that States should consider all potentially available measures to determine whether they are reasonably available for implementation in the area including whether or not they would advance attainment. Further, the guidance calls for states to indicate in their SIP submissions whether measures considered are reasonably available or not, and if so the measures must be adopted as RACM. Finally, the guidance indicates that States could reject potential RACM measures either because they would not advance the attainment date or would cause substantial widespread and long-term adverse impacts or for various reasons related to local conditions. See ''Guidance on Reasonably Available Control Measures (RACM) Requirement and Attainment Demonstration Submissions for Ozone Nonattainment Areas,'' John Seitz, Director, Office of Air Quality Planning and Standards, November 30, 1999.

2. How Has Texas Insured With This Plan Revision That All RACM Are Being Implemented?

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_X 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_X 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_X reductions necessary for attainment, while still substantial, are not as great and that control of HRVOCs is a more effective way of reducing ozone. In section II.A. of this notice, we discuss how EPA found that the revised plan for HGB will achieve attainment of the 1-hour standard, based on the controls that will be in place by the beginning of the ozone season of 2007. Both NO_X 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_X 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 described in Section II.C., Texas believes the RACM requirement is still being met. What follows is a summary of EPA's evaluation of each of the revisions.

Industrial NO_X Controls: TCEQ has relaxed the NO_X rules for a number of NO_X 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 considered 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 and therefore is not RACM. 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. (See the Technical Support Document for more information)

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. These 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 .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. Thus, EPA proposes that implementation of I/M in these three counties is not required to meet the RACM requirement.

Removal of Small Spark Operating Restrictions: This measure would prohibit lawn and garden service contractors for operation in the morning hours from 6 a.m. to 10 a.m.—a time during which emissions have been found to contribute most significantly to ozone production. 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_X 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 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 Mobile 6, 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 Mobile 5 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_X emissions by 0.48 tpd. Texas decide 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.

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_X 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 and would not be RACM.

E. Section 110(l) Analysis

1. What Does Section 110(l) Require?

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.''

2. How Has Texas Shown These Revisions Do Not Interfere With Attainment of the 8-hour Standard?

Texas must consider whether the new strategy which relies on fewer reductions of NO_X and more reductions of VOC will interfere with attainment or reasonable further progress or any other applicable requirement under the Act. A strict interpretation of this requirement would allow EPA to approve a SIP revision removing a SIP requirement only after determining, based on a completed attainment demonstration, that it would not interfere with applicable requirements concerning attainment and reasonable further progress. As discussed above, Texas has completed a revised attainment demonstration with respect to the 1-hour standard. Attainment demonstrations for the 8-hour standard are not due for several years. EPA recognizes that prior to the time areas are required to submit full attainment demonstrations for the 8-hour ozone standard, this strict interpretation could prevent any changes to the SIP control measures. EPA does not believe this strict interpretation is necessary or appropriate.

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. For example, different mixes of NO_X or VOC and industrial or mobile source controls may result in attainment. 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 the control measures being removed from the approved SIP. EPA believes preservation of the status quo air quality during the time new attainment demonstrations are being developed will prevent interference with the States' obligations to develop timely attainment demonstrations and to attain as expeditiously as practicable.

''Equivalent'' emission reductions mean reductions which result in equal or greater air quality benefit than those reductions being removed. To show the compensating emission reductions are equivalent, modeling or adequate justification must be provided (EPA Memorandum from John Calcagni, Director Air Quality Management Division, to the Air Directors in EPA Regions 1–10, September 4, 1992). The compensating emission reductions must represent 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, quantifiable, and surplus to be approved into the SIP.

As discussed previously, Texas has chosen to substitute actual, reductions of HRVOCs for some of the NO_X reductions in the approved SIP. This approach is evaluated below with respect section 110(l) and the criteria described above.

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—March 31, 2004, HRVOC cap-monitoring 2005, full cap compliance 2006, gas can rule-2007. The measures being replaced, which are listed in section II.D., 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% and 80% control on NO_X, was not scheduled to be put in place until 2007. It is worth noting that reductions that would have been achieved by controls adopted to meet the enforceable commitment to reduce NO_X did not have a specified compliance date. The commitment 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_X 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 as 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 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. The results indicated that the revised SIP is slightly more effective in reducing 8-hour ozone than the previously approved SIP in both average relative reduction factor (0.931 vs. 0.940) and in average future design value (107 vs 108 ppb). Although some monitoring stations fare slightly worse under the new control strategy, others fare slightly better. In addition, for both peak 8-hour ozone concentration and exposure metrics, the benefits of the new strategy exceed those of the old on every day except September 6, where the old strategy is slightly better. Considering, the modeled predicted area of exceedance, however, the comparison is less clear-cut. The older strategy shows more of a benefit on six of ten days and the new strategy shows a greater benefit on three days. Both strategies indicate the same benefit on one day. In summary, EPA believes that the new strategy and the old strategy are approximately equivalent in eight 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 exceedence. 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 is reviewing the enforceability of the substitute measures in separate rules. The Gas Can Rule was approved on February 10, 2005, 70 FR 7041. EPA has proposed approval of the fugitive emission controls and improved monitoring requirements for HRVOCs on April 7, 2005, 70 FR 17640 . Finally, concurrent with this **Federal Register** notice EPA is proposing approval of the HECT program. In each of these rulemakings, EPA will evaluate 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. As discussed elsewhere, the revisions to the attainment plan including the NO_X rule repeals and revisions that reduce the projected amount on NO_X emission reductions cannot be approved unless final approval of the substitute rules is completed. If approved, these substitute rules will be 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.

3. What About Possible Interference With the 1-Hour Ozone 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, unless the State could show that these NO_X reductions were not needed for attainment of the 1-hour standard. We have discussed, in Section II.A., EPA's evaluation of the revised 1-hour attainment demonstration and are proposing approval of that strategy as demonstrating attainment of the 1-hour standard.

4. How Has Texas Shown These Revisions Do Not Interfere With Rate of Progress?

Texas submitted, and EPA has approved, revisions to the rate of progress plan (February 14, 2005 70 FR 7407) based on the revised strategy. These revisions will ensure that 1-hour ROP is met for each 3-year period out to the 1-hour attainment date. (See the **Federal Register** cited above for further explanation of the approved ROP demonstration.)

5. Do These Revisions Interfere With Attainment of Other Standards Besides Ozone?

The HGB area currently meets all other National Ambient Air Quality Standards besides ozone. The plan revisions being considered would not be expected to impact compliance with the CO, SO_2 or lead NAAQs as these pollutants are not affected by these rules.

The revisions to the NO_X rules do affect emissions of NO2 and thus could potentially impact attainment with the NO_2 standard. The HGB area, however, meets the NO_2 standard at today's level of NO_2 emissions and the revised plan will still reduce NO_2 emissions considerably from today's levels and thus will not interfere with maintenance of the NO_2 standard.

Similarly, the HGB area currently meets the NAAQS for PM fine. NO_X and VOCs are precursors to the formation of PM fine. The revised plan will result in additional NO_X and VOC reductions beyond today's levels. Therefore, the revised plan will not interfere with the continued attainment of the PM fine standard.

6. Do the Revisions Interfere With Any Other Applicable Requirements of the Act?

Section 110(l) applies to all requirements of the 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_X and VOC rules in the HGB area as meeting the Act's RACT requirements. The revised NO_X 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 thus these revisions do not interfere with meeting the I/M requirements of the Act.

Air Toxics: There are no federal ambient standards for air toxics and these rules do not impact compliance with any federal MACT standards so these rule revisions do not interfere with compliance with any air toxics standards. We note that air toxic levels of butadiene and formaldehyde are expected to decrease as a result of the revised plan. Butadiene emissions are directly regulated by the new HRVOC rules. Formaldehyde is formed from ethylene in the photochemical reactions leading to ozone.

F. Enforceable Commitments

1. What Is an Enforceable Commitment?

An enforceable commitment is a written commitment that is approved into the SIP that is enforceable against the State. In the SIP approved in November 2001, there were enforceable commitments to achieve additional NO_X reductions and enforceable commitments to incorporate the latest information into the SIP.

To be enforceable, commitments must be approved as part of the SIP and, therefore, the State must have given notice and taken comment on the commitment, held a public hearing and submitted it as a SIP revision. The commitments must be specific as to the state agency's future plans for adoption of specified control measures. The dates for implementation of, or compliance with, the future to-be-adopted specified control measures must be included in the commitments and be as expeditious as practicable. If the State does not follow through with the commitment, EPA can find that the State failed to implement the SIP. Further, the public can seek enforcement of the obligations under Section 304(a) of the CAA.

2. What Were the Enforceable Commitments in the 2001 Approved SIP and Have They Been Fulfilled?

In the approved SIP, there are a number of enforceable commitments. In this section we evaluate whether these enforceable commitments have been met. The State made the following commitments which were approved in the November 2001 **Federal Register**.

- 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 the mid-course review in the December 2004 submission. It included new modeling with new more recent episodes based on the Texas 2000 study. Virtually all of the inputs to the model were updated and improved, making the 2004 SIP the best modeling ever performed for the Houston area. Additionally, 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.

- 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 midcourse review modeling employed MOBILE6 for the on-road mobile source inputs satisfying this 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.

- To adopt rules that achieve at least the additional 56 tpd of NO_X emission reductions that are needed for the area to show attainment of the 1-hour ozone standard.

See below.

- To adopt measures to achieve 25% of the needed additional reductions (56 tpd) and submit those adopted measures to EPA as a SIP revision by December 2002.

Discussion: This commitment required TCEQ to find measures to achieve an additional 14 tons/day of NO_X emission reductions and to submit adopted control measures by December 2002. 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_X 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_X 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.

- 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: Texas determined that these additional NO_X reductions would not be necessary for the area to attain. Instead, as discussed elsewhere in this document, 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 Section II.B. regarding the review of the attainment demonstration and Section II.E regarding whether section 110(l) of the Act has been met.

• 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.

• That the State would concurrently revise the Motor Vehicle Emissions Budgets (MVEBs) and submit them 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 propose that TCEQ has satisfied the requirements of the enforceable commitments contained in the approved HGB SIP.

G. Motor Vehicle Emissions Budgets

1. What Is a Motor Vehicle Emissions Budget and Why Is It Important?

The MVEB is the level of total allowable on-road emissions established by a control strategy implementation plan or maintenance plan. In this case, the MVEB establishes the maximum level of on-road emissions that can be produced in 2007, when considered with emissions from all other sources, which demonstrate attainment of the NAAQS. It is important because the MVEB is used to determine the conformity of transportation plans and programs to the SIP, as described by section 176(c)(2)(A) of the Act.

2. What Are the Motor Vehicle Emissions Budgets Being Proposed for Approval?

The MVEBs established by this plan and that the EPA is proposing to approve are contained in Table 2. The development of the MVEBs are discussed in section 3.5 of the SIP and reviewed in the TSD. We are proposing approval because we find the MVEB 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_X	186.13

III. General Information

A. Tips for Preparing Your Comments

When submitting comments, remember to:

1. Identify the rulemaking by File ID number and other identifying information (subject heading, **Federal Register** date and page number).

2. Follow directions—The agency may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.

3. Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.

4. Describe any assumptions and provide any technical information and/or data that you used.

5. If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.

6. Provide specific examples to illustrate your concerns, and suggest alternatives.

7. Explain your views as clearly as possible, avoiding the use of profanity or personal threats.

8. Make sure to submit your comments by the comment period deadline identified.

B. Submitting Confidential Business Information (CBI)

Do not submit this information to EPA through regulations.gov or e-mail. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD ROM that you mail to EPA, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific information that is claimed as CBI). In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the official file. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

IV. Statutory and Executive Order Reviews

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this proposed action is not a ''significant regulatory action'' and therefore is not subject to review by the Office of Management and Budget. For this reason, 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 proposed action merely proposes to approve state law as meeting Federal requirements and imposes no additional requirements beyond those imposed by state law. Accordingly, the Administrator certifies that this proposed 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 proposes to approve 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 proposed 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 proposes to approve a state rule implementing a Federal standard, and does not alter the relationship or the distribution of power and responsibilities established in the Clean Air Act. This proposed 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, EPA's role is to approve state choices, provided that they meet the criteria of the Clean Air Act. 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 Clean Air Act. Thus, the requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) do not apply. This proposed 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.*).

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.

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

Dated: September 27, 2005.

Richard Greene,

Regional Administrator, Region 6.

[FR Doc. 05–19994 Filed 10–4–05; 8:45 am]

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[R06–OAR–2005–TX–0033; FRL–7981–2]

Approval and Promulgation of Air Quality Implementation Plans; Texas; Highly Reactive Volatile Organic Compound Emissions Cap and Trade Program for the Houston/Galveston/ Brazoria Ozone Nonattainment Area

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing to approve revisions to the Texas State Implementation Plan concerning the Highly Reactive Volatile Organic Compound Emissions Cap and Trade Program for the Houston/Galveston/ Brazoria ozone nonattainment area. These revisions were adopted by the Texas Commission on Environmental Quality on December 01, 2004, as new sections 101.390–101.394, 101.396, 101.399–101.401, and 101.403, and submitted to EPA as a SIP revision on December 17, 2004. In related rulemakings today, EPA is also proposing approval of additional revisions to the Texas State Implementation Plan.

DATES: Comments must be received on or before November 4, 2005.

ADDRESSES: Submit your comments, identified by Regional Material in EDocket (RME) ID No. R06–OAR–2005–TX–0033, by one of the following methods:

- Federal eRulemaking Portal: *http://www.regulations.gov.* Follow the on-line instructions for submitting comments.
- Agency Web site: *http://docket.epa.gov/rmepub/.* RME, EPA's electronic public docket and comment system, is EPA's preferred method for receiving comments. Once in the system, select ''quick search,'' then key in the appropriate RME Docket identification number. Follow the on-line instructions for submitting comments.
- U.S. EPA Region 6 ''Contact Us'' Web site: *http://epa.gov/region6/r6coment.htm.* Please click on ''6PD'' (Multimedia) and select ''Air'' before submitting comments.
- E-mail: Mr. David Neleigh at *neleigh.david@epa.gov.* Please also cc the person listed in the **FOR FURTHER INFORMATION CONTACT** section below.
- Fax: Mr. David Neleigh, Chief, Air Permitting Section (6PD–R), at fax number 214–665–6762.
- Mail: Mr. David Neleigh, Chief, Air Permitting Section (6PD–R), Environmental Protection Agency, 1445 Ross Avenue, Suite 1200, Dallas, Texas 75202–2733.
- Hand or Courier Delivery: Mr. David Neleigh, Chief, Air Permitting Section (6PD–R), Environmental Protection Agency, 1445 Ross Avenue, Suite 1200, Dallas, Texas 75202–2733. Such deliveries are accepted only between the hours of 8 a.m. and 4 p.m. weekdays except for legal holidays. Special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to RME ID No. R06–OAR–2005–TX–0033. EPA's policy is that all comments received will be included in the public file without change, and may be made available online at *http://docket.epa.gov/rmepub/,* including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information the disclosure of which is restricted by statute. Do not submit information through RME, regulations.gov, or e-mail if you believe that it is CBI or otherwise protected from disclosure. The EPA RME website and the Federal regulations.gov are ''anonymous access'' systems, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through RME or regulations.gov, your e-mail address will be automatically captured and included as part of the comment that is placed in the public file and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. Guidance on preparing comments is given in the **SUPPLEMENTARY INFORMATION** section of this document under the General Information heading.

Docket: All documents in the electronic docket are listed in the RME index at *http://docket.epa.gov/rmepub/.* Although listed in the index, some information is not publicly available, *i.e.*, CBI or other information the disclosure of which 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 in RME or in the official file, which is available 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 am and 4:30 pm 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 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: Ms. Adina Wiley, Air Permitting Section (6PD–R), Environmental Protection Agency, Region 6, 1445 Ross Avenue, Suite 700, Dallas, Texas 75202–2733, telephone (214) 665–2115; fax number