TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

AGENDA ITEM REQUEST

Proposed SIP Revision

AGENDA REQUESTED: August 26, 2009

DATE OF REQUEST: August 7, 2009

NAME & NUMBER OF PERSON TO CONTACT REGARDING CHANGES TO THIS REQUEST, IF NEEDED: Kerry Howard, 239-0556

CAPTION: Docket No. 2009-0744-SIP. Consideration for publication of, and hearing on, a proposed revision to the state implementation plan (SIP) concerning repeal of the Texas portable fuel container (PFC) rule. This proposed Texas PFC Rule Repeal SIP Revision (Texas PFC Rule Repeal SIP) removes Texas PFC regulations from the control strategy for the Texas' Air Quality Implementation Plan for the Control of Ozone Air Pollution. This proposed SIP revision incorporates proposed rulemaking repealing state PFC rules and demonstrates that federal PFC standards promulgated in 2007 provide replacement emission reductions. Because those emission reductions are estimated to be equal to or greater than those derived from the state regulations, the repeal of the Texas PFC rule will not negatively impact the State of Texas Air Quality Implementation Plan for the Control of Ozone Air Pollution. (Lisa Shuvalov, Chrissie Angeletti) (Project No. 2009-024-SIP-NR)

Chief Engineer | **Division Director**

Agenda Coordinator

Copy to CCC Secretary? NO_X_ YES____

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Commissioners **Date:** August 7, 2009

Thru: LaDonna Castañuela, Chief Clerk
Mark R. Vickery, P.G., Executive Director

From: Susana M. Hildebrand, P.E., Chief Engineer

Docket No.: 2009-0744-SIP

Subject: Commission Approval of a Revision to the State Implementation Plan (SIP) for the Control of Ozone Air Pollution for All Affected 1997 Eight-Hour Ozone Standard Nonattainment and Near Nonattainment Areas in the State of Texas

Project No. 2009-024-SIP-NR - State of Texas Portable Fuel Container (PFC) Rule Repeal SIP Revision for the 1997 Eight-Hour Ozone Standard

Reasons for the SIP revision:

On February 26, 2007, the United States Environmental Protection Agency (EPA) adopted federal regulations that limit the evaporative hydrocarbon emissions from gasoline, diesel, and kerosene portable fuel containers (PFCs) to 0.3 grams per gallon per day (72 *Federal Register* 8432). All PFCs manufactured on or after January 1, 2009, are required to comply with the federal standards. The current Texas PFC regulations are inconsistent with the federal standards because the Texas PFC regulations were based on PFC testing methods adopted by the California Air Resources Board (CARB) in 2001. The proposed statewide SIP revision would remove the state's PFC rule as an ozone control strategy from the SIP.

Under what authority are we proposing these changes?

The SIP revision is proposed under Texas Health and Safety Code (THSC), §382.002, concerning Policy and Purpose, which establishes the commission's purpose to safeguard the state's air resources, consistent with the protection of public health, general welfare, and physical property; §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air; §382.014, concerning Emission Inventory; §382.016, concerning Monitoring Requirements; House Bill 2481, §2, codified in THSC, §382.0173, concerning Adoption of Rules Regarding Certain SIP Requirements and Standards of Performance for Certain Sources; §382.054, concerning Federal Operating Permit; and Federal Clean Air Act (FCAA), 42 United States Code (USC), §§7401 *et seq.,* which requires states to submit plans establishing standards of performance for existing sources of pollutants for which National Ambient Air Quality Standards have not been established, and providing for the implementation and enforcement of such standards of performance.

The proposed repeal of these sections implements THSC, §§382.002, 382.011, 382.012, 382.014, 382.016, 382.0173, 382.054, and FCAA, 42 USC, §§7401 *et seq.*

Re: Docket No. 2009-0744-SIP

Is this SIP revision required by federal rule or state statute? Which ones?

No.

Are there any legal deadlines by which this SIP revision must be proposed, adopted, or effective?

There are no legal deadlines at this time.

What issue(s) or problem(s) are we trying to solve?

The state is proposing to repeal its PFC regulations and to rely on the implementation of the federal PFC regulations to control volatile organic compound (VOC) emissions from PFCs used within the state. The proposed statewide SIP revision would remove the state's PFC rule as an ozone control strategy from the SIP.

Why is it important that we do this SIP revision?

This SIP revision would demonstrate how the repeal of the current Texas PFC regulations and reliance on the new federal PFC standards will have no negative impact on the SIP.

Other important background or historical information.

The Texas PFC program, which became effective January 1, 2006, was included in the 2004 Rate of Progress (ROP) SIP revision for the Houston-Galveston-Brazoria (HGB) area, the Five Percent Increment of Progress (IOP) SIP revision for the Dallas-Fort Worth (DFW) area, the 2006 Victoria SIP revision, the 2004 Early Action Compact (EAC) SIP revision for the Austin area, the 2005 Beaumont/Port Arthur (BPA) Attainment Demonstration SIP revision, the Austin-Round Rock Eight-Hour Ozone Flex Memorandum of Agreement (MOA) Plan, the San Antonio EAC SIP revision, and the Northeast Texas EAC SIP revision.

The proposed statewide SIP revision would demonstrate that the repeal of the current Texas PFC regulations and reliance on the new federal PFC standards will have no negative impact on the SIP. The estimated emission reductions applicable to the implementation of the federal PFC rule in Texas are expected to be equivalent to the current Texas PFC rule in the early years and to provide greater reductions in the later years. Therefore, the proposed repeal of the state PFC rule would not have a negative impact on the emission reductions claimed in the Texas SIP.

The EPA, Region 6, indicated a PFC rule repeal and SIP revision would not be construed as a SIP relaxation. Emission reductions from the federal PFC rule are expected to ultimately exceed those from the state PFC rule because every fuel container sold or brought into the state from elsewhere will be required to meet the federal PFC standards.

Re: Docket No. 2009-0744-SIP

Scope of the SIP revision:

Changes required by federal rule:

None.

Changes required by state statute:

None.

Staff recommendations that are not expressly required by federal rule or state statute:
Revise the Texas SIP to reflect the PFC rule repeal.

Impact on the regulated community:

Who will be affected?

The proposed SIP revision would have no impact on the regulated community.

Does it create a group of affected persons who were not affected previously? How?

No.

Will there be a fiscal impact? If so, estimate.

There will be no fiscal impact from the proposed SIP revision.

Impact on the public:

Who will be affected?

The proposed SIP revision would have no impact on the regulated community.

Does it create a group of affected persons who were not affected previously? How?

No.

Will there be a fiscal impact? If so, estimate.

No.

Impact on agency programs:

The proposed SIP revision would have no impact on agency programs. The estimated emission reductions applicable to the implementation of the federal PFC rule in Texas are expected to be equivalent to the current Texas PFC rule in the early years and to provide greater reductions in the later years.

Re: Docket No. 2009-0744-SIP

Stakeholder meetings:

Have any stakeholder meetings been held?

No.

With whom?
N/A

What were the general sentiments?
N/A

Were any changes made in response to stakeholder concerns?
N/A

Policy issues:

What policy issues are affected?

None.

Are any policies that are not currently based on rule being made into a rule?

No.

What are the consequences if this SIP revision is not approved to go forward?

The ozone control strategy used in the SIP for limiting VOC emissions from PFCs will be less stringent than the federal rule.

Are there alternatives?

- Do not repeal the PFC rule and do a SIP revision. However, manufacturers would be subject to both the Texas PFC rule and the federal rule.

Potentially controversial matters:
None anticipated.

Key points in proposed SIP revision schedule:

Anticipated proposal date: August 26, 2009
Anticipated *Texas Register* publication date: September 11, 2009
Public hearing date (if any): October 6, 2009
Public comment period: September 11 – October 12, 2009
Anticipated adoption date: February 3, 2010

Re: Docket No. 2009-0744-SIP

Agency contacts:

Lisa Shuvalov, Rule Project Manager, 239-4484, Air Quality Division
Chrissie Angeletti, Staff Attorney, 239-1204

Attachments

cc: Chief Clerk, 5 copies
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Daniel Womack
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Betsy Bird
Office of General Counsel
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Chrissie Angelletti

STATE OF TEXAS AIR QUALITY IMPLEMENTATION PLAN
FOR THE CONTROL OF OZONE AIR POLLUTION

FOR ALL AFFECTED 1997 EIGHT-HOUR OZONE STANDARD NONATTAINMENT AND NEAR NONATTAINMENT AREAS IN THE STATE OF TEXAS

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
P.O. BOX 13087
AUSTIN, TEXAS 78711-3087

TEXAS PORTABLE FUEL CONTAINER STATE IMPLEMENTATION PLAN REVISION

PROJECT NO. 2009-024-SIP-NR

Proposed August 26, 2009

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EXECUTIVE SUMMARY

On February 26, 2007, the United States Environmental Protection Agency (EPA) adopted a federal portable fuel container (PFC) rule (72 *Federal Register* 8432) that set new national standards for gasoline, diesel, and kerosene portable fuel containers. All PFCs manufactured on or after January 1, 2009, must comply with the 2007 federal standards. The current Texas PFC regulations are not consistent with the new federal standards, as they are based on older PFC testing methods that were adopted by California in 2001. Proposed rulemaking that repeals the Texas PFC rule accompanies this proposed Texas PFC Rule Repeal State Implementation Plan (SIP) revision. This proposed SIP revision incorporates the proposed repeal and demonstrates that replacement standards from reliance on the federal PFC rules will have no negative impact on attainment of the 1997 eight-hour ozone standard in the State of Texas. Because the federal PFC rule provides emissions reductions equivalent to or greater than those from the Texas PFC regulations, repeal of the state rule does not reduce emissions reductions claimed in the State of Texas Air Quality Implementation Plan for the Control of Ozone Air Pollution. Consequently, the proposed rule repeal and this proposed SIP revision will not have a negative impact on the emissions reductions claimed in the SIP.

This proposed Texas PFC SIP revision removes the state PFC rule from the ozone control strategy in the Texas Air Quality Implementation Plan for the Control of Ozone Air Pollution. The Texas PFC rule is cited as part of the ozone control strategy in the following Texas SIP revisions: the Post 1999 Rate-Of-Progress Demonstration Plan For The Houston-Galveston-Brazoria Nonattainment Area (2004), the Five Percent Increment of Progress (IOP) SIP revision for the Dallas-Fort Worth (DFW) area (2005), the Eight-Hour Ozone Maintenance Plan For The Victoria County Ozone Attainment Area (2006), the Austin Area Early Action Compact Ozone State Implementation Plan Revision (2004), the Beaumont-Port Arthur (BPA) Attainment Demonstration SIP revision (2005), the Eight-Hour Ozone Flex Program Austin-Round Rock Metropolitan Statistical Area (2008), the San Antonio Area Early Action Compact Ozone State Implementation Plan Revision (2004), and Northeast Texas Area Early Action Compact Ozone State Implementation Plan Revision (2004).

After staff discussions with the EPA it was determined that the repeal of the Texas PFC rule and this revision of the SIP would not result in an anti-backsliding issue. Because every fuel container sold or brought into the state is now required to meet federal PFC standards, the resulting emissions reductions are expected to exceed those derived from the state PFC rule.

SECTION V: LEGAL AUTHORITY

A. General

The Texas Commission on Environmental Quality (TCEQ) has the legal authority to implement, maintain, and enforce the National Ambient Air Quality Standards (NAAQS) and to control the quality of the state's air, including maintaining adequate visibility.

The first air pollution control act, known as the Clean Air Act of Texas, was passed by the Texas Legislature in 1965. In 1967, the Clean Air Act of Texas was superseded by a more comprehensive statute, the Texas Clean Air Act (TCAA), found in Article 4477-5, Vernon's Texas Civil Statutes. The legislature amended the TCAA in 1969, 1971, 1973, 1979, 1985, 1987, 1989, 1991, 1993, 1995, 1997, 1999, 2001, 2003, 2005, and 2007. In 1989, the TCAA was codified as Chapter 382 of the Texas Health & Safety Code.

Originally, the TCAA stated that the Texas Air Control Board (TACB) is the state air pollution control agency and is principal authority in the state on matters relating to the quality of air resources. In 1991, the legislature abolished the TACB effective September 1, 1993, and its powers, duties, responsibilities, and functions were transferred to the Texas Natural Resource Conservation Commission (TNRCC). With the creation of the TNRCC, the authority over air quality is found in both the Texas Water Code and the TCAA. Specifically, the authority of the TNRCC is found in Chapters 5 and 7. Chapter 5, Subchapters A - F, H - J, and L, include the general provisions, organization, and general powers and duties of the TNRCC, and the responsibilities and authority of the executive director. This chapter also authorizes the TNRCC to implement action when emergency conditions arise, and to conduct hearings. Chapter 7 gives the TNRCC enforcement authority. In 2001, the 77th Texas Legislature continued the existence of the TNRCC until September 1, 2013, and changed the name of the TNRCC to the Texas Commission on Environmental Quality (TCEQ).

The TCAA specifically authorizes the TCEQ to establish the level of quality to be maintained in the state's air and to control the quality of the state's air by preparing and developing a general, comprehensive plan. The TCAA, Subchapters A - D, also authorize the TCEQ to collect information to enable the commission to develop an inventory of emissions; to conduct research and investigations; to enter property and examine records; to prescribe monitoring requirements; to institute enforcement proceedings; to enter into contracts and execute instruments; to formulate rules; to issue orders taking into consideration factors bearing upon health, welfare, social and economic factors, and practicability and reasonableness; to conduct hearings; to establish air quality control regions; to encourage cooperation with citizens' groups and other agencies and political subdivisions of the state as well as with industries and the federal government; and to establish and operate a system of permits for construction or modification of facilities.

Local government authority is found in Subchapter E of the TCAA. Local governments have the same power as the TCEQ to enter property and make inspections. They also may make recommendations to the Commission concerning any action of the TCEQ that affects their territorial jurisdiction, may bring enforcement actions, and may execute cooperative agreements with the TCEQ or other local governments. In addition, a city or town may enact and enforce ordinances for the control and abatement of air pollution not inconsistent with the provisions of the TCAA and the rules or orders of the Commission.

Subchapters G and H of the TCAA authorize the TCEQ to establish vehicle inspection and maintenance programs in certain areas of the state, consistent with the requirements of the federal

Clean Air Act; coordinate with federal, state, and local transportation planning agencies to develop and implement transportation programs and measures necessary to attain and maintain the NAAQS; establish gasoline volatility and low emission diesel standards; and fund and authorize participating counties to implement vehicle repair assistance, retrofit, and accelerated vehicle retirement programs.

B. Applicable Law

The following statutes and rules provide necessary authority to adopt and implement the State Implementation Plan (SIP). The rules listed below have previously been submitted as part of the SIP.

Statutes

All sections of each subchapter are included, unless otherwise noted.

TEXAS HEALTH & SAFETY CODE, Chapter 382	September 1, 2007
TEXAS WATER CODE	September 1, 2007

Chapter 5: Texas Natural Resource Conservation Commission

Subchapter A: General Provisions
Subchapter B: Organization of the Texas Natural Resource Conservation Commission
Subchapter C: Texas Natural Resource Conservation Commission
Subchapter D: General Powers and Duties of the Commission
Subchapter E: Administrative Provisions for Commission
Subchapter F: Executive Director (except §§ 5.225, 5.226, 5.227, 5.2275, 5.231, 5.232, and 5.236)
Subchapter H: Delegation of Hearings
Subchapter I: Judicial Review
Subchapter J: Consolidated Permit Processing
Subchapter L: Emergency and Temporary Orders (§§ 5.514, 5.5145, and 5.515 only)

Chapter 7: Enforcement

Subchapter A: General Provisions (§§ 7.001, 7.002, 7.0025, 7.004, and 7.005 only)
Subchapter B: Corrective Action and Injunctive Relief (§ 7.032 only)
Subchapter C: Administrative Penalties
Subchapter D: Civil Penalties (except §7.109)
Subchapter E: Criminal Offenses and Penalties: §§ 7.177, 7.179-7.183

Rules

All of the following rules are found in 30, Texas Administrative Code, as of the following effective dates:

Chapter 7: Memoranda of Understanding, §§ 7.110 and 7.119	May 2, 2002
Chapter 19: Electronic Reporting	July 10, 2008
Chapter 35: Subchapters A-C, K: Emergency and Temporary Orders and Permits; Temporary Suspension or Amendment of Permit Conditions	July 20, 2006

Chapter 39: Public Notice, §§ 39.201; 39.401; 39.403(a) and (b)(8)-(10); 39.405(f)(1) and (g); 39.409; 39.411 (a), (b)(1)-(6), and (8)-(10) and (c)(1)-(6) and (d); 39.413(9), (11), (12), and (14); 39.418(a) and (b)(3) and (4); 39.419(a), (b), (d), and (e); 39.420(a), (b) and (c)(3) and (4); 39.423 (a) and (b); 39.601-39.605 — March 29, 2006

Chapter 55: Requests for Reconsideration and Contested Case Hearings; Public Comment, §§ 55.1; 55.21(a) - (d), (e)(2), (3), and (12), (f) and (g); 55.101(a), (b), and (c)(6) - (8); 55.103; 55.150; 55.152(a)(1), (2), and (6) and (b); 55.154; 55.156; 55.200; 55.201(a) - (h); 55.203; 55.205; 55.209, and 55.211 — July 5, 2006

Chapter 101: General Air Quality Rules — January 1, 2009

Chapter 106: Permits by Rule, Subchapter A — July 31, 2008

Chapter 111: Control of Air Pollution from Visible Emissions and Particulate Matter — July 19, 2006

Chapter 112: Control of Air Pollution from Sulfur Compounds — July 12, 2001

Chapter 113: Standards of Performance for Hazardous Air Pollutants and for Designated Facilities and Pollutants — May 14, 2009

Chapter 114: Control of Air Pollution from Motor Vehicles — June 6, 2008

Chapter 115: Control of Air Pollution from Volatile Organic Compounds — July 19, 2007

Chapter 116: Permits for New Construction or Modification — May 29, 2008

Chapter 117: Control of Air Pollution by Control of Air Pollution from Nitrogen Compounds — March 4, 2009

Chapter 118: Control of Air Pollution Episodes — May 14, 2004

Chapter 122: Federal Operating Permits Program — August 3,2006

SECTION VI. CONTROL STRATEGY

A. Introduction (No change)

B. Ozone (Revised)

1. *Dallas-Fort Worth* (Revised)
2. *Houston-Galveston-Brazoria* (Revised)
3. *Beaumont-Port Arthur* (Revised)
4. *El Paso* (No change)
5. *Regional Strategies* (No change)
6. *Northeast Texas* (Revised)
7. *Austin Area* (Revised)
8. *San Antonio Area* (Revised)

C. Particulate Matter (No change)

D. Carbon Monoxide (No change)

E. Lead (No change)

F. Oxides of Nitrogen (No change)

G. Sulfur Dioxide (No change)

H. Conformity with the National Ambient Air Quality Standards (No change)

I. Site Specific (No change)

J. Mobile Sources Strategies (No change)

K. Clean Air Interstate Rule (No change)

L. Transport (No change)

M. Regional Haze (No change)

LIST OF ACRONYMS

ACT -- Alternative Control Techniques
AD -- Attainment Demonstration
AF -- Air-to-Fuel
APU -- Auxiliary Power Units
ARPDB -- Acid Rain Program Data Base
ATCM – Airborne Toxic Control Measure
auto-GC -- Automated Gas Chromatograph
BACT -- Best Available Control Technology
BCCA-AG -- Business Coalition for Clean Air-Appeal Group
BMP -- Best Management Practices
BPA -- Beaumont-Port Arthur
Btu/hr -- British Thermal Units per Hour
Btu/scf -- British Thermal Units per Standard Cubic Feet
CAE -- Cetane Additive Enhanced Diesel Fuel
CAIR -- Clean Air Interstate Rule
CAMx -- Comprehensive Air Model with Extensions
CARB -- California Air Resources Board
CBD -- Houston's Central Business District
CFR -- Code of Federal Regulations
CMAQ -- Congestion Mitigation and Air Quality
CO -- Carbon Monoxide
CTG -- Control Technique Guidelines
DECS -- Diesel Emission Control Strategy
DERC -- Discrete Emissions Reduction Credits
DFW -- Dallas-Fort Worth
DFW AD SIP – DFW Attainment Demonstration SIP Revision
DPM -- Diesel Particulate Matter
DRRP -- Diesel Risk Reduction Program
DV -- Design Value
DVc -- Current Design Value
DVf -- Future Design Value
EAC -- Early Action Compact
EDMS -- Emissions and Dispersion Modeling System
E-GRID-2007 -- Emissions and Generation Resource Integrated Database
EE/RE -- Energy Efficiency/Renewable Energy
EGAS -- Economic Growth Analysis System
EGF -- Electric Generating Facilities
EGU -- Electric Generating Units
EI -- Emissions Inventory
EPA -- United States Environmental Protection Agency
EPS3 -- Emissions Processing System, Version 3
ERC -- Emission Reduction Credits
ERCOT -- Electric Reliability Council of Texas
ESAD -- Emission Specification for Attainment Demonstration
ESL -- Energy Systems Laboratory, the Texas A&M University System
F -- Fahrenheit
FAA -- Federal Aviation Administration
FCAA -- Federal Clean Air Act

FCV -- Fuel Cell Vehicle
FGR -- Flue Gas Recirculation
FHWA -- Federal Highway Administration
FR -- Federal Register
FT -- Fischer-Tropsch Diesel Fuel
GIS -- Geographic Information System
GloBEIS -- Global Biosphere Emissions and Interactions System
gpm -- Gallons per Minute
GTM -- Gross Ton Mile
HAP -- Hazardous Air Pollutant
HARC -- Houston Advanced Research Center
HDT -- Heavy-Duty Truck
HECT -- Highly Reactive Volatile Organic Compound Emissions Cap and Trade Program
HGB -- Houston-Galveston-Brazoria
H-GAC -- Houston-Galveston Area Council
HOV -- High Occupancy Vehicle
hp -- Horsepower
HPMS -- Highway Performance Monitoring System
HRVOC – Highly Reactive Volatile Organic Compound
HSC -- Houston Ship Channel
IC -- Internal Combustion
ICI -- Industrial, Commercial, and Institutional
IECC -- International Energy Conservation Code
I/M -- Inspection and Maintenance
km -- Kilometer
K_Vs -- Vertical Exchange Coefficient
LAER -- Lowest Achievable Emission Rate
lb/MMBtu -- Pound per Million British Thermal Units
LDAR -- Leak Detection and Repair
LIDIR -- Light Detection and Ranging
LDEQ -- Louisiana Department of Environmental Quality
LDGV -- Light-Duty Gasoline Vehicle
LDT -- Light-Duty Truck
LDV -- Light-Duty Vehicle
LED -- Low Emission Diesel
LEV -- Low Emission Vehicle
LEV II -- California's Low Emission Vehicle II Program
LIRAP -- Low Income Repair and Assistance Program
LNB -- Low Nitrogen Oxides (NO_X) Burners
LNC -- Low Nitrogen Oxides (NO_X) Combustors
LNG -- Liquefied Natural Gas
LTO -- Landing and Take-Off
MACT -- Maximum Achievable Control Technology
Mcf -- Thousand Cubic Feet
MCR -- Mid-Course Review
MDPV -- Medium-Duty Passenger Vehicle
MECT -- Mass Emissions Cap and Trade Program
MM5 -- Fifth Generation Meteorological Model
MMBtu/hr -- Million British Thermal Units per Hour
MMcf -- Million Cubic Feet
MMS -- Minerals Management Service

MOA -- Memorandum of Agreement
MON -- Miscellaneous Organic National Emission Standards for Hazardous Air Pollutants (NESHAP)
mph -- Miles per Hour
MVEB -- Motor Vehicle Emissions Budget
MW -- Megawatts
MY -- Model Year
NAAQS -- National Ambient Air Quality Standard
NCTCOG – North Central Texas Council of Governments
NEGF -- Non-Electric Generating Facility
NEI -- National Emissions Inventory
NESHAP -- National Emission Standards for Hazardous Air Pollutants
ng/J -- Nanogram per Joule
NMIM -- National Mobile Inventory Model
NOAA -- National Oceanic and Atmospheric Administration
Non-EGU -- non-Electric Generating Unit
NO_X -- Nitrogen Oxides
NO_y -- Nitrogen Species
NSCR -- Non-Selective Catalytic Reduction
NTRD -- New Technology Research and Development Program
O_3 -- Ozone
OGV -- Ocean-Going Vessel
PAYD -- Pay As You Drive
PBL -- Planetary Boundary Layer
PEI -- Periodic Emissions Inventory
PFC -- Portable Fuel Container
PERP -- Portable Engine Registration Program
PiG -- Plume-in-Grid
PM -- Particulate Matter
$PM_{2.5}$ -- Particulate Matter 2.5 microns and less
ppb -- Parts Per Billion
ppbC -- Parts Per Billion Carbon
ppbv -- Parts Per Billion by Volume
ppm -- Parts Per Million
PSCF -- Potential Source Contribution Factors
PSDB -- Point Source Database
psia -- Pounds per Square Inch Absolute
PUC -- Public Utility Commission
RACT -- Reasonably Available Control Technology
RACM -- Reasonably Available Control Measure
RFP -- Reasonable Further Progress
RMSE -- Root Mean Square Error
ROP -- Rate-of-Progress
RRF -- Relative Reduction Factor
SB -- Senate Bill
SCAQMD -- South Coast Air Quality Management District
scfm -- Standard Cubic Feet per Minute
SCR -- Selective Catalytic Reduction
SEP -- Supplemental Environmental Programs
SETPMTC -- Southeast Texas Photochemical Modeling Technical Committee
SIC -- Standard Industrial Classification

SIP -- State Implementation Plan
SNCR -- Selective Non-Catalytic Reduction
SOV -- Single Occupancy Vehicle
STP -- Surface Transportation Program
SWCV -- Solid Waste Collection Vehicle
TAC -- Texas Administrative Code
TACB -- Texas Air Control Board
TCAA -- Texas Clean Air Act
TCEQ -- Texas Commission on Environmental Quality (commission)
TCM -- Transportation Control Measure
TDM -- Travel Demand Model
TERP -- Texas Emissions Reduction Plan
TexAQS 2000 -- Texas Air Quality Study 2000
TexAQS II -- Texas Air Quality Study 2006
TKE -- Turbulent Kinetic Energy
TNMHC -- Total Non-methane Hydrocarbon
TNRCC -- Texas Natural Resource Conservation Commission
tpd -- tons per day
tpy -- tons per year
TSE -- Truck Stop Electrification
TTI -- Texas Transportation Institute
TUC -- Texas Utility Code
TxDOT -- Texas Department of Transportation
TxLED -- Texas Low Emission Diesel
USC -- United States Code
VMEP -- Voluntary Mobile Source Emissions Reduction Program
VMT -- Vehicle Miles Traveled
VOC -- Volatile Organic Compound
VRU -- Vapor Recovery Unit
ZEB -- Zero Emission Bus
ZEV -- Zero Emissions Vehicle

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CHAPTER 1: BACKGROUND AND INTRODUCTION

1.1. GENERAL

"The History of the Texas State Implementation Plan (SIP)," a comprehensive overview of the SIP revisions submitted to the United States Environmental Protection Agency (EPA) by the State of Texas may be viewed on the Texas Commission on Environmental Quality's (TCEQ) Web site at: http://www.tceq.state.tx.us/implementation/air/sip/sipintro.html#History.

The Texas Portable Fuel Container (PFC) regulations became effective on January 1, 2006, as part of the Texas ozone control strategy described in the 2004 Rate of Progress (ROP) SIP revision for the Houston-Galveston-Brazoria (HGB) area and was estimated to reduce volatile organic compounds (VOC) emissions by 12.4 tons per day (tpd) for Texas by 2007. The Five Percent Increment of Progress (IOP) SIP revision for the Dallas-Fort Worth (DFW) area (2005) estimates a 2.79 tpd VOC emissions reduction in the DFW nine-county area and 0.63 tpd VOC reduction in the DFW 100-kilometer area by 2007 from the Texas PFC rules. The Austin Area Early Action Compact Ozone State Implementation Plan Revision (2004) includes an estimated 0.89 tpd VOC reduction by 2007 from the state rule. The state PFC rule control measure is also cited in several other Texas SIP revisions, including: the Eight-Hour Ozone Maintenance Plan For the Victoria County Ozone Attainment Area (2006), the Beaumont-Port Arthur (BPA) Attainment Demonstration SIP revision (2005), the Eight-Hour Ozone Flex Program Austin-Round Rock Metropolitan Statistical Area (2008), the San Antonio Area Early Action Compact Ozone State Implementation Plan Revision (2004), and Northeast Texas Area Early Action Compact Ozone State Implementation Plan Revision (2004). Emissions reductions associated with the state PFC rule are not quantified in the later mentioned SIP revisions. Table 1.1: *Texas SIP Revisions that Cite the State PFC Rule*, provides reference information for Texas SIP revisions that identify the state PFC rule in the ozone control strategy.

On February 26, 2007, the EPA adopted a federal PFC rule (72 *Federal Register* 8432), setting new national standards for gasoline, diesel, and kerosene PFCs. All PFCs manufactured on or after January 1, 2009, must comply with those 2007 federal standards. The federal standards are similar to PFC regulations that were adopted by the State of California in 2005.

Current Texas PFC regulations are based on outdated PFC testing methods and are not consistent with the 2007 federal standards. Proposed rulemaking repealing the Texas PFC rule, Rule Project No. 2008-032-115-EN Portable Fuel Container (PFC) Rule Repeal, accompanies this proposed Texas PFC SIP. This SIP revision proposes removal of the state PFC rule from the Texas ozone control strategy and demonstrates that 2007 federal PFC standards provide equal to or greater emissions reductions than those resulting from state regulations. Sufficient replacement reductions are expected from the federal rule because every PFC sold or brought into the state must meet federal PFC standards. Repeal of the state rule does not negatively affect Texas' attainment of the 1997 eight-hour ozone standard. Commission adoption of the rule repeal and this SIP revision does not weaken the SIP for the control of ozone. (See Appendix A.)

Table 1.1: Texas SIP Revisions that Cite the State PFC Rule

TCEQ Project Number	SIP Title	Reference	
		Section	Page(s)
2006-023-SIP-NR	Eight-Hour Ozone Maintenance Plan SIP Revision for the Victoria County Ozone Attainment Area	3.3.7	3-8
2004-096-SIP-AI	Five Percent Increment Of Progress Demonstration for the Dallas-Fort Worth Ozone Nonattainment Area Eight -Hour Ozone Standard	5.2.2	5-3
2004-049b-SIP-NR	Post 1999 Rate-Of-Progress Demonstration Plan for the Houston-Galveston-Brazoria Nonattainment Area	Associated Rule Change (2003-033-114-AI)	
2004-086-SIP-NR	Austin Area Early Action Compact Ozone SIP Revision	5.3.3.A3	5.9
2005-020-SIP-NR	Beaumont-Port Arthur Ozone Attainment Demonstration SIP Revision	5.2.1	5-1
2004-085-SIP-NR	San Antonio Area Early Action Compact Ozone SIP Revision	5.3.3.A4	5.8
2004-077-SIP-NR	Northeast Texas Area Early Action Compact Ozone SIP Revision	3.6	3-3
2007-020-MIS-NR	Eight-Hour Ozone Flex Program Austin-Round Rock Metropolitan Statistical Area	3.2.2	36

1.2 HEALTH EFFECTS

In 1997, the EPA revised the National Ambient Air Quality Standards for ozone from a one-hour to an eight-hour standard based on scientific data that indicated that the eight-hour standard provides better protection of public health from longer-term exposures to moderate levels of ozone. To support the eight-hour ozone standard, the EPA provided information that indicated that even low levels of ozone can significantly decrease lung capacity temporarily in some healthy adults and cause inflammation of lung tissue, aggravate asthma, and make people more susceptible to respiratory illnesses such as bronchitis and pneumonia.

Children are at a higher risk from exposure to ozone since they breathe more air per pound of body weight than adults and because children's respiratory systems are still developing. Children also spend a considerable amount of time outdoors during summer and during the start of the school year (August-October) when ozone levels are typically higher. Adults most at risk to ozone exposure are outdoor workers, people outside exercising, and individuals with pre-existing respiratory diseases.

1.3 PUBLIC/STAKEHOLDER PARTICIPATION

The commission will hold a public hearing on this proposed SIP revision for the State of Texas at the TCEQ central office, 12100 Park 35 Circle, in Austin, Texas on October 6, 2009, at 2:00 p.m. in Building E, Room 201. The public hearing will be structured for receipt of oral and written comments by interested persons. Individuals may present oral statements when called upon in order of registration. Open discussion will not be permitted during the public hearing itself; however, commission staff members will be available to discuss the proposal for 30 minutes prior to the hearing. Persons with special communication or accommodation needs should contact Joyce Spencer, Air Quality Division, at (512) 239-5017, at their earliest convenience.

Comments may be submitted to Lisa Shuvalov, MC 164, Air Quality Division, Chief Engineer's Office, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087, or faxed to (512) 239-1500. Electronic comments may be submitted at: http://www5.tceq.state.tx.us/rules/ecomments/. File size restrictions may apply to comments being submitted via the eComments system. All comments pertaining to this Texas SIP Revision proposed for the State of Texas should reference Project Number 2009-024-SIP-NR. The comment period closes on October 12, 2009. Copies of this proposed revision may be obtained from the commission's Web site, at *http://www.tceq.state.tx.us/implementation/air/sip/Hottop*. For further information, please contact Lisa Shuvalov at (512) 239-4484.

1.4 SOCIAL AND ECONOMIC CONSIDERATIONS

For a detailed explanation of any social or economic issues involved with the proposed rulemaking to repeal the Texas portable fuel container rule, Rule Project No. 2008-032-115-EN *Portable Fuel Container (PFC) Rule Repeal*, please refer to the preamble preceding the rule proposal package accompanying this proposed SIP revision.

1.5 FISCAL AND MANPOWER RESOURCES

The state has determined that its fiscal and manpower resources are adequate and will not be adversely affected through the implementation of this plan.

CHAPTER 2: TEXAS PORTABLE FUEL CONTAINER RULE REPEAL

2.1 PORTABLE FUEL CONTAINER (PFC) REQUIREMENTS

PFC regulations control volatile organic compound (VOC) emissions by requiring specific container features that limit emissions escape. There are several basic VOC-limiting features that PFC regulations may require. Current Texas regulations, 30 Texas Administrative Code Chapter 115, Subchapter G, Division 2, and United States regulations, (72 *Federal Register* 8432), both limit PFCs to one opening per container. In addition, Texas and federal regulations both require spouts on PFCs to automatically close and seal when not in use. Another VOC emissions-limiting feature is a spout that automatically shuts off during fuel tank filling when a specific fuel level is achieved. This auto shut-off feature is required by the Texas PFC rule, but it is not required by the federal regulations. Finally, a permeation seal or barrier to prevent the passage of VOC emissions through plastic container walls is an emissions-limiting feature required by the 2007 federal PFC standards but not by the state rule.

Table 2.1: *Comparison of State and Federal PFC Regulations* compares rule requirements for specific PFC features. As shown, state and federal PFC rules differ in requirements for the permeation barrier seal and the spout automatic shut-off.

Table 2.1: Comparison of State and Federal PFC Regulations

Control Feature	State rule	Federal rule
One opening per container	Required	Required
Spout: auto close and seal	Required	Required
Spout: automatic shut-off	Required	Not required
Permeation barrier seal	Not required	Required

2.2 EMISSIONS REDUCTIONS FROM PFC REGULATIONS

Table 2.2: *Statewide VOC Emissions Reductions(tpd): Federal vs. State PFC Rules*, and Table 2.3: *HGB Area VOC Emissions Reductions: Federal vs. State PFC Rules*, each reveal differences between estimated volatile organic compounds (VOC) emissions reductions, in tons per ozone season day (tpd) resulting from the state and federal PFC rules. Table 2.2 reveals statewide emissions reductions expected from the Texas and U.S. rules. Table 2.3 provides estimated VOC emissions reductions information for the eight-county Houston-Galveston-Brazoria (HGB) area anticipated in the 2002 through 2019 period. The estimated reductions for the years shown reflect applicable subjective percentages associated with rule effectiveness, differences in control types, and effective dates.

Table 2.2: Statewide VOC Emissions Reductions (tpd): Federal vs. State PFC Rules

Statewide	2002	2008	2011	2014	2017	2018	2019
State	78.22	70.06	55.65	52.07	54.51	55.32	56.14
Federal	78.22	87.25	76.43	56.06	58.69	59.56	60.44

Table 2.3: HGB Area VOC Emissions Reductions (tpd): Federal vs. State PFC Rules

HGB	2002	2008	2011	2014	2017	2018	2019
State	19.45	17.40	13.78	12.87	13.48	13.68	13.88
Federal	19.45	21.70	19.14	14.30	14.97	15.19	15.41

2.3 EFFECT ON TEXAS OZONE CONTROL STRATEGY

Proposed concurrently with this SIP revision is rulemaking that repeals the current Texas PFC regulations, Rule Project No. 2008-032-115-EN PFC Rule Repeal. This Texas PFC Rule Repeal SIP revision proposes removal of the state PFC rule from Texas' ozone control strategy and demonstrates that the 2007 federal PFC standards provide sufficient replacement emissions reductions for Texas upon repeal of the state PFC rule.

The federal PFC rule provides emissions reductions for Texas greater than those resulting from the Texas PFC rule because every PFC sold or brought into the state must now meet the 2007 federal standards. Table 2.2 and Table 2.3 both show that the 2007 federal PFC rule provides VOC emissions reductions equal to those benefited from the Texas PFC rule in 2002. The tables also demonstrate that expected emissions reductions from the federal rule are greater in 2008 and beyond than the state rule reductions.

Repeal of the state PFC rule will not negatively affect Texas' attainment of the 1997 eight-hour ozone standard. Commission adoption of the proposed rule repeal and SIP revision will not weaken the control strategy in the State of Texas Air Quality Implementation Plan for the Control of Ozone Air Pollution. EPA Region 6 staff agrees that the rule repeal does not relax the Texas ozone control strategy.

Appendix A
***Federal Register* Rule vs. *Texas Register* Rule**
Portable Fuel Containers

After close inspection of the *Federal Register* 40 CFR Parts 59, 80, 85, and 86 (Control of Air Pollution from Mobile Sources) and the *Texas Register* 30 TAC Chapter 115: Control of Air Pollution from Volatile Organic Compounds, Subchapter G: Consumer Related Sources, Division 2: Portable Fuel Containers, it has been determined that the *Federal Register* rule is more stringent than the *Texas Register* rule regarding Portable Fuel Containers.

Texas Register 30 TAC Chapter 115: Control of Air Pollution from Volatile Organic Compounds, Subchapter G: Consumer Related Sources, Division 2, established requirements relating to the design criteria for portable fuel containers and portable fuel container spouts. These rules established only design criteria for "no-spill" portable gas cans and did not establish performance-based standards. These design criteria include the following requirements: that each portable fuel container have only one hole in the vessel in order to reduce emissions that occur when vent holes (a small hole in the vessel that is used to expedite the flow of fuel out of the portable fuel container) are left open, leading to evaporative emissions and possibly spillage of fuel; that each portable fuel container spout have an automatic shut-off device to prevent over-filling; that each portable fuel container spout automatically close and seal when removed from the fuel tank, seal without leakage when affixed to the portable fuel container vessel, and meet fuel flow rate and cut off level standards. Unlike the *Federal Register* rule, the *Texas Register* rule

established no emission standards to ensure that complying with the design criteria would in practice reduce emissions to a particular acceptable level. In addition, the *Texas Register* rule regarding portable fuel containers applied to gas cans only and not diesel and kerosene containers. Moreover, the *Texas Register* regulations did not require the control of permeation rates through the walls of portable fuel containers because the cost of compliance was expected to be large and the reduction in emissions small, relative to other provisions. As a result, these rules ensured that portable fuel containers manufactured under these standards released fewer amounts of fuel as a result of spillage and evaporation only. The *Texas Register* rule established that no person shall sell, supply, offer for sale, distribute, or manufacture in Texas any portable fuel container or portable fuel container spout that was manufactured on or after December 31, 2005, unless it complies with the standards described in the rule.

The *Federal Register* rule regarding portable fuel containers established a performance based standard of 0.3 grams per gallon per day of hydrocarbons, rather than simply establishing particular design criteria like the *Texas Register* rule did. In addition, it was determined that the *Federal Register* rule is more stringent because the standards it establishes apply for portable gasoline containers as well as portable diesel and kerosene containers. This was done because portable diesel and kerosene containers could easily be used for gasoline since these containers are manufactured by the same manufacturers as are gasoline containers and are identical to gasoline containers, except for color (diesel containers are yellow and kerosene containers are blue). Unlike the *Texas Register* rule, the *Federal Register* rule also clarifies that utility jugs are considered portable fuel containers and therefore subject to the program. Utility jugs are designed and marketed

for use with gasoline, often to fuel recreational equipment such as all-terrain vehicles and personal watercraft. In addition to the performance-based standard of 0.3 grams per gallon per day of hydrocarbons, the *Federal Register* rule also established test procedures and a certification and compliance program, in order to ensure that containers meet the emission standard over a range of in-use conditions. The *Texas Register* rule established no such procedures and programs. The *Federal Register* rule established a system of regulations for portable fuel containers that includes test conditions designed to assure that the intended emission reductions occur over a range of in-use conditions such as operating at different temperatures, with different fuels, and considering factors affecting durability. Whether the performance-based standard of 0.3 grams per gallon per day of hydrocarbons is complied with is to be determined based on the emissions from the portable fuel container over a diurnal test cycle. The diurnal test measures hydrocarbon emissions from the portable fuel container due to permeation and evaporative losses from the container as a whole. In addition, the *Federal Register* established three durability aging cycles to help ensure durable permeation barriers: slosh, pressure-vacuum cycling, and ultraviolet (UV) exposure. The purpose of these durability/deterioration cycles is to help ensure that the technology chosen by the manufacturers is durable in-use, representing best available control, and the measured emissions are representative of in-use permeation rates. The *Federal Register* rule also established a durability demonstration for portable fuel container spouts to help ensure quality spout designs that do not fail in-use and result in spillage. Unlike the *Texas Register* rule, the *Federal Register* rule takes into consideration that emissions from portable fuel containers are usually higher in containers that have been in use for a longer period of time, as opposed

to only considering emissions from new portable fuel containers. Unlike the *Texas Register* rule, the *Federal Register* rule did not establish automatic shut-off requirements because they were found to be counterproductive at the time. Automatic shut-off is a feature that stops the flow of fuel when the fuel reaches the top of the receiving tank in order to prevent over-filling. However, it was determined that due to a wide variety of receiving fuel tank designs, the auto shut-off spouts do not work well with a variety of equipment types, resulting in fuel spillage and customer dissatisfaction. Instead, the *Federal Register* rule determined that automatic closing cans, even without automatic shut-off requirements, would lead to reduced spillage. Automatic closure is a feature that allows the spout to automatically close and remain sealed when removed from the target fuel tank, and remains completely closed when not dispensing fuel. The emission standards established by the *Federal Register* were based on the performance of best available control technologies, such as durable permeation barriers, automatically closing spouts, and cans that are well-sealed. It was assumed that the emission standards established by the *Federal Register* rule will result in the use of these control technologies. The adoption of the performance-based standards for portable fuel containers (gas cans, as well as diesel and kerosene containers) established by the *Federal Register* aimed to reduce hydrocarbon emissions from evaporation, spillage, and permeation.

In conclusion, inspection and comparison of the *Federal Register* 40 CFR Parts 59, 80, 85, and 86 (Control of Air Pollution from Mobile Sources) and the *Texas Register* 30 TAC Chapter 115: Control of Air Pollution from Volatile Organic Compounds, Subchapter G: Consumer Related Sources, Division 2: Portable Fuel Containers, reveals

that the *Federal Register* rule regarding Portable Fuel Containers is more stringent than the *Texas Register* rule.