Written Comments Contributors

Ash Grove Texas, L.P., Lorlee Bartos, Jack Cooper, Sandra DenBraber, Downwinders at Risk, Louise Dunn, Kim and Ken Feil, William Hornsby, League of Women Voters, North Texas Clean Air Steering Committee, Ms. Rice (indecipherable first name), the Sierra Club, and Ed Soph

LEAGUE OF WOMEN VOTERS®
OF TEXAS

June 24, 2010

Bryan W. Shaw, Chairman
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711

Dear Chairman Shaw and Commission Members:

Subject: June 24, 2010 Public Meeting on Air Quality in the DFW Area

On behalf of the League of Women Voters of Texas, I want to thank you for having this public meeting. LWV-TX supports citizen involvement in the rule-making process in order to facilitate crafting a workable plan for controlling air pollution.

We further support the regulation of pollution sources by control and penalties, inspection and monitoring, full disclosure of pollution data, incentives to accelerate pollution control, vigorous enforcement mechanisms, standards, and substantial fines for noncompliance.

The current clean air plan for the Dallas-Fort Worth area has failed. While most experts say ozone levels should not exceed 60 to 70 parts per billion, ozone pollution levels in the Dallas Fort Worth area last summer exceeded the old 85 parts per billion standard. The new air quality plan must be strengthened to require advanced pollution controls on stationary sources of air pollution, including cement kilns, and gas drilling and production activities. Measures must also be taken to reduce vehicular pollution, including inspection and maintenance of emission controls.

Thank you for the opportunity to speak. Please listen to our plea for cleaner air for all residents of the Dallas Fort Worth Area, particularly our children.

Sincerely,

Linda L. Hanratty,
Natural Resources Chair
League of Women Voters of Texas

League of Women Voters of Texas 1212 Guadalupe St. #107, Austin, TX 78701
512-472-1100 – lwvtexas@lwvtexas.org

Dear Sloogies –

I did not sign up to speak. I was hoping that something might have changed since the time a few years ago when I use to attend all these seances you held when you were lovingly referred to as "Train Wreck" (TRCC). Well, nothing has changed.

However, I do have a question: Where do you guys go to school to learn how to keep the total blank automaton look on your faces no matter what is said or asked? Just asking.....

Disrepectively,

Lawrence Reie

[redacted]

(Just in case you want to share the name of the school)

RECEIVED
JUN 28
AIR QUALITY
DIVISION

Texas Commission on Environmental Quality
Air Quality Division, Mr. Chance Goodin
MC-206, P.O. Box 13087
Austin, TX 78711-3087

June 26, 2010
William R. Hornsby
[redacted]

Re "Dallas-Fort Worth Eight-Hour Ozone State Implementation Plan Stakeholder Group"

Dear Mr. Chance Goodin:

My subdivision in Tarrant County (Sun Valley Estates) of 87 homes and about 400 residents is between two large ranches (Nance and Margaret Tadlock) located at 10999 Willow Springs Road, Fort Worth and 2200 W. Bonds Ranch Road, rural near Haslet, Texas.

Devon Energy Corporation has drilled more than 20 gas wells within 200 feet of our property. They have stolen much of our gas royalties using phony RRC ID signs putting about 4 times legal number of wells while we get the bad air, water and property damage. Enclosed is latest letter from Tony L. Walker.

Some of my royalty partners have been paid for only one well. I met with Tarrant County Commissioner Gary Fickes, Precinct Three last July about the unsafe pipelines. Two have been relocated away from busy Willow Springs Road before icy weather allowed car or Dan Nance cattle to cause fire and explosions. Right now I am working with Austin and Washington, D.C. to disallow sub-surface pipeline drilling using satellite images at the Devon desk of Charlie Rule in Oklahoma City. Enclosed are BEFORE, AFTER, AFTER and drawing on back of page.

The recent transmission gas well explosion in Wise County shows the blast patterns similar to the Gulf Oil Disaster also using remote drilling aka unconventional drilling. Devon is manipulating production by spewing natural gas with contaminants into the air and water supply. The U.S. Energy Department found evidence of overstating data.

When Devon and other cheaters Crosstex, Hart and Chesapeake, for example can manipulate environment readings making your findings unreliable. Contact if more info is needed.

Regards,

William R. Hornsby

Bryan W. Shaw, Ph.D., *Chairman*
Buddy Garcia, *Commissioner*
Carlos Rubinstein, *Commissioner*
Mark R. Vickery, P.G., *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

February 24, 2010

Mr. William Hornsby
[redacted]

Re: Devon Energy Gas Site on Dan Nance Ranch
Fort Worth, Tarrant County, Texas

Dear Mr. Hornsby:

Thank you for your letter documenting your concerns with a Devon Energy Gas Site on Dan Nance Ranch in Tarrant County dated February 6, 2010. We have completed our review of your concerns. We have determined that none of your current concerns fall within the TCEQ jurisdiction. Please know that we will continue to work within our authority to provide protection to human health and the environment.

Thank you for contacting the TCEQ with your concerns. If you have any additional questions or concerns feel free to contact our office at 817-588-5800.

Sincerely,

Tony L. Walker, R.E.M.
DFW Regional Director
Texas Commission on Environmental Quality

TLW/AMT

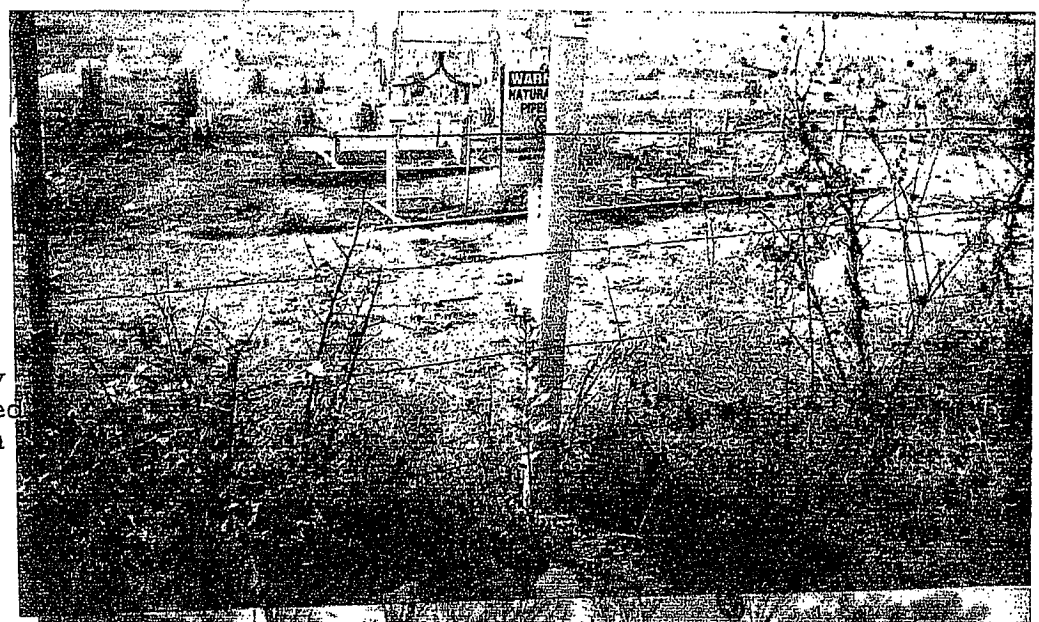
REPLY TO: REGION 4-DALLAS/FORT WORTH • 2309 GRAVEL DR. • FORT WORTH, TEXAS 76118-6951 • 817-588-5800 • FAX 817-588-5700

P.O. Box 13087 • Austin, Texas 78711-3087 • 512-239-1000 • Internet address: www.tceq.state.tx.us

BEFORE AUGUST 2009

Above ground level unsafe gas pipelines located at 10999 Willow Springs Road, Fort Worth, Texas.

The WARNING sign is hidden behind utility easement sign attached to barb wire fence in violation of setback rules. These can be knocked over by cows or vehicle causing fires and explosions.



AFTER FEBRUARY 2010

These are much safer. The cutoff/cuton valves are used to manipulate gas output thereby cheating royalty owners. The constant opening and closing spews natural gas into the air creating bad environment and breathing issues.

AFTER FEBRUARY 2010

The four gas well sites are read by production agents every three days. The remote valves override the correct readings before gas is sold.

From: "Sandra DenBraber" < >
To: <siprules@tceq.state.tx.us>
Date: 6/30/2010 7:31 PM
Subject: needed changes

Drilling for natural gas can be done safer and drilling can be done with power from the power grid not diesel generators and engines. along with green completion and vapor recovery.
NO ONE should be allowed to poison others with their pollution and especially when their pollution set off my carbon monoxide detector and almost killed me. That would have been murder because of GREED.
Cutting their pollution can help all.

Sandra DenBraber

31924
CEO

JACK COOPER

[redacted]

July 13, 2010

Mark Vickery, Executive Director
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

Mr. Vickery:

My wife, Susan T. Cooper, and I were present at the public hearing held by the TCEQ in Arlington on June 24th. However, I am not accustomed to public speaking and have prepared this statement for you instead, which I hope that you will carefully consider and heed.

There were about 44 speakers at the hearing, all but one of them furious at the TCEQ for being inactive, uncaring and irresponsible regarding bringing air quality standards of the Dallas / Fort Worth area into compliance with standards set by the EPA. Our area, as you well know, has not only been in non-attainment for twenty years; our air quality constantly deteriorates, mainly due to coal fired power plants south of us and cement kilns near Midlothian.

The one speaker who was not angry with the TCEQ represented the gas well industry.

The representatives of the TCEQ did not present themselves well at the hearing. They spoke of a plan which, when fully implemented, will be achieved in 2013 or 2014 – a long time from now. They made lame statements, such as, "We are looking into that. . ." And one representative cited studies that he is making about pollution being air borne. I assure you that we are no longer interested in studies. The time for studies is long past. We are interested in action – enforceable regulations and shutting down recalcitrant corporate polluters.

Texas should instead lead the way by concentrating on clean energy, wind and solar power

We hope to see positive and immediate changes from the TCEQ. Until then, we and others who are concerned about air quality will fight this issue with each difficult and painful breath within us.

Sincerely,

Jack Cooper

Jack Cooper

RECEIVED
JUL 15 2010
EXECUTIVE DIRECTOR

To: Texas Commission on Environmental Quality

Date: June 24, 2010

From: Jack Cooper
[redacted]

When I moved to Dallas in the 1950s, it was pleasant to see blue skies and fresh, clean air. However, the air over Dallas quickly became polluted by increased auto traffic and industrial pollution. For the past twenty years, an ugly, ominous brownish-gray blanket of polluted air has shrouded Dallas. And the Dallas/Fort Worth area has the deplorable reputation of being one of the major metropolitan areas in the U. S. with the poorest air quality.

According to the Union of Concerned Scientists, Texas ranks third among the States for importing coal from other States (See Union of Concerned Scientists printout, page 8, Figure 38.)

Coal-fired power plants discharge massive clouds of filthy blackness, and now it has come to my attention that the cement kilns near Midlothian are even worse.

Exacerbating matters, these great clouds of airborne filth are blown for hundreds of miles across Texas and even have the potential to dirty the air over our neighboring states of Louisiana and Oklahoma.

It might be argued that the plants will use "clean coal technology." According to the American Lung Association, these plants are not designed to use "clean coal technology." And no one can convince me that there is such a thing as "clean coal technology."

The most important consideration of all is that coal fired power plants and cement kilns will contribute to global warming. Global warming is bringing our Earth dangerously and precipitously close to the point of irreparable and irreversible damage. (Please see the movie, The Inconvenient Truth.)

There is no point in denying that global warming is real and the most threatening and urgent environmental crisis of our times. We have only one planet on which to live, and we must do everything possible to curb global warming – and quickly, before our planet is damaged irreversibly.

Here in Texas, the Union of the Concerned Scientists predicts:

"More frequent intense rainfall events are expected, with longer dry periods in between. Hurricane intensity (characterized by maximum wind speeds and rainfall totals) could increase slightly with global warming, although changes in future hurricane frequency are uncertain. Even if storm frequencies and intensities remain constant, the damages from coastal flooding and erosion will increase as sea level rises." (Please see enclosure.)"

In the strongest possible terms, I urge you to stop this process before it goes any farther, to impose the strictest and most enforceable standards on existing polluting plants and instead implement solar and wind power as viable sources of alternative energy.

All of your decisions, all of your actions must not be based on personal or political preferences but solely upon sound scientific evidence, concern for the viability of our planet and concern for the public good.

The website of the American Lung Association reads,

"Clean air and proper source control are both vital components to keep our lungs healthy. Poor indoor and outdoor air quality poses a threat to our respiratory systems because of the pollutants in the air we breathe. These pollutants affect everyone, but some are more susceptible to the negative health effects associated with poor air quality than others. The elderly, children, and anyone with allergies, asthma, COPD, or other lung disease are more vulnerable to these pollutants."

The Association further states, "We believe that people have the right to breathe air that is not harmful to their health."

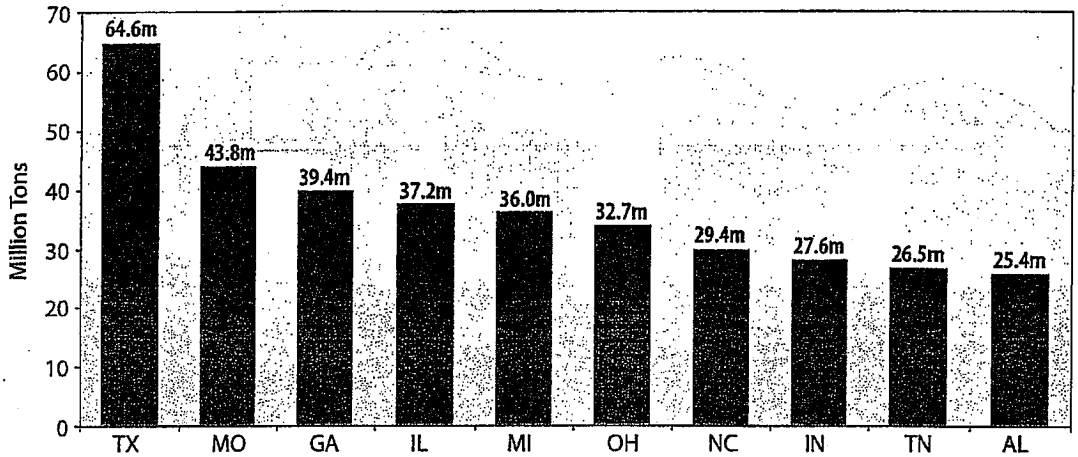
Texas has no shortage of sun and wind. I implore you to consider alternative energy sources, such as solar and wind power, and to consider the future of our people and our planet.

Sincerely,

Jack Cooper

Jack Cooper

FIGURE 4A. The 10 Most Coal-Dependent States: Net Coal Imports by Weight (2008)



Source: Based on data from Energy Information Administration. 2010. *Form EIA-923 (Schedule 2).* Online at *http://www.eia.doe.gov/cneaf/electricity/page/eia423.html.*

resulting from severe weather and transportation bottlenecks in Australia and China, two major coal-producing countries, in 2008—combined with growing global demand for electricity—contributed to higher prices at home as well (Wilenthe 2008).

The amount of coal burned in power plants nationwide dropped significantly in 2009 because of the recession, and probably because of clean energy policies in some states.[6] In fact, the share of coal-fired power in the nation's electricity mix fell from 48.2 percent in 2008 to 44.7 percent in 2009 (EIA 2010a; EIA 2010e). The spot, or short-term, price of coal also dropped back from highs seen in 2008. Expenditures on net coal imports for most states therefore also likely dropped in 2009 (state-specific data for 2009 were not yet available).

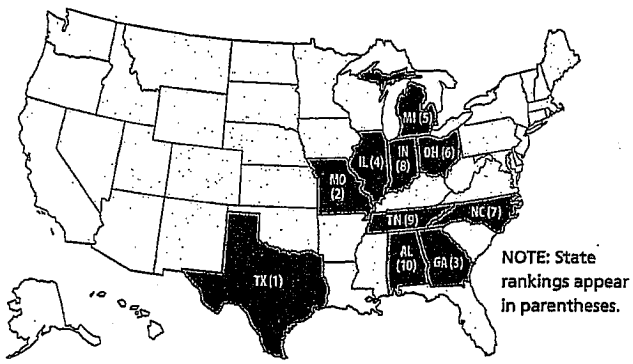
However, states dependent on imported coal with no policies for advancing clean energy technologies should expect expenditures to rebound as the economy recovers, unless Congress approves comprehensive climate and energy laws. Spot prices for coal from the Powder River Basin rose by about half from December 2009 to April 2010, and the EIA forecasts that coal use by the electricity sector will rise 4.2 percent in 2010, absent policy changes (EIA 2010f; EIA 2010g).

Eleven states drained at least $1 billion from their economies in 2008 to pay for imported coal.

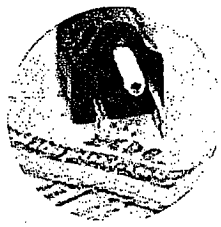
Ten States That Import the Most Coal by Weight

Operators of coal-fired power plants buy their fuel by the ton. Each ton produces enough electricity to power a typical home for just three to six months, depending on the quality of the coal. Low-sulfur, sub-bituminous coal from the West contains about one-third less energy, on average, than the bituminous coal typically found in the eastern United States. Plants that rely more heavily on western coal therefore require greater amounts. For example, a single commercial-size coal plant that could run on 1.4 million tons of eastern bituminous could require as much as 2.5 million tons of western sub-bituminous each year.[7]

FIGURE 4B. The 10 Most Coal-Dependent States: Net Coal Imports by Weight



NOTE: State rankings appear in parentheses.



The Billion-Dollar Club: 10 States That Spend the Most on Net Coal Imports

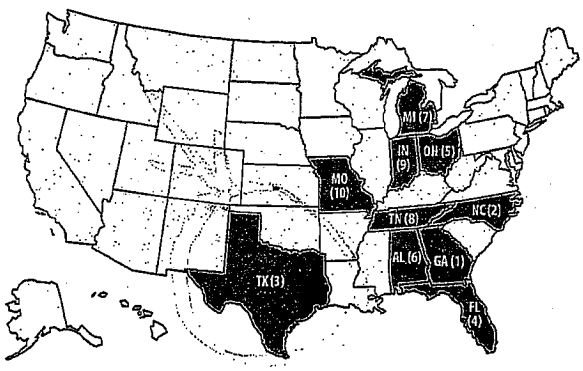
The 10 states that spend the most on net coal imports find themselves in an exclusive—though perhaps unwelcome—club: each drained at least $1 billion from its economy in 2008 to pay for imported coal (Figure 3B). Georgia comfortably claims the worst spot in this billion-dollar club. That state shelled out more than $2.6 billion to supply its fleet of coal-fired power plants—$270 million more than its closest competitor. Southeastern states, as well as several midwestern states, dominate the list.[4] (See Box 2, p. 14, for a ranking of America's most coal-import-dependent power providers.)

Four of these 10 states—Georgia, North Carolina, Florida, and Michigan—produce no coal, and therefore import 100 percent of what they burn. Small mining operations in Missouri and Tennessee produce coal for both in-state use and export. However, both states import more than 99 percent of the coal they burn. Texas, Ohio, Alabama, and Indiana all mine considerable amounts of coal within their borders, but still rank among the top coal-importing states because they burn far more than they produce. Texas imports 63 percent of the coal its power plants burn, while Alabama, Ohio, and Indiana import 79 percent, 71 percent, and 51 percent, respectively.

Many states on this list saw expenditures on coal imports rise steeply from 2002 to 2008. For example, the federal database shows that Georgia spent 87 percent more on coal imports in 2008 than six years earlier, with expenditures growing by $1.2 billion.[5] Over those six years, North Carolina's expenditures rose 88 percent (up $1.1 billion), while Alabama's jumped 170 percent (up $875 million).

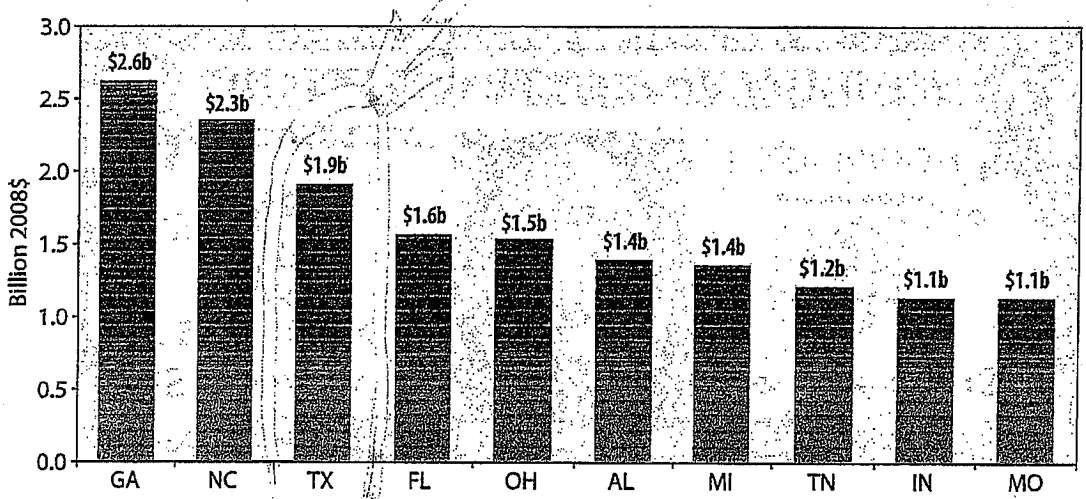
These increases reflect the fact that many states imported more coal in 2008 than in 2002 (see the next section). More importantly, however, they reflect the rising price of coal: average real prices across the nation grew 54 percent from 2002 to 2008 (EIA 2009c). Rising coal prices partly reflect higher transportation costs. But because coal is a global commodity, its price also reflects international events. Supply shortages

FIGURE 3A. The 10 Most Coal-Dependent States: Expenditures on Net Coal Imports



NOTE: State rankings appear in parentheses.

FIGURE 3B. The 10 Most Coal-Dependent States: Expenditures on Net Coal Imports (2008)



Source: Based on data from Energy Information Administration. 2010. *Form EIA-923 (Schedule 2).* Online at *http://www.eia.doe.gov/cneaf/electricity/page/eia423.html.*

EXTREME EVENTS

More frequent intense rainfall events are expected, with longer dry periods in between. Hurricane intensity (characterized by maximum wind speeds and rainfall totals) could increase slightly with global warming, although changes in future hurricane frequency are uncertain. Even if storm frequencies and intensities remain constant, the damages from coastal flooding and erosion will increase as sea level rises.

SEA-LEVEL RISE

Sea level will increase at a faster rate over the coming century. By 2100, ocean levels around Texas could be 17 inches higher than today, based on a continued average subsidence rate of 2 inches per century and a mid-range sea-level rise scenario. Even a relatively small vertical rise in sea level (a few inches to 1 foot) can move the shoreline inland by substantial distance (several tens of feet) along low-lying, flat coastal areas.

CLIMATE VARIABILITY

Temperature and precipitation will continue to vary, in part related to the ENSO (El Niño / Southern Oscillation) cycle.

More on Texas:
Introduction | **Climate Projections** | **Freshwater Resources** | **Human Health** | **Coastal Development** | **Fisheries** | **Agriculture & Forestry** | **Tourism & Recreation** | **TX Resources & Links**

Survey another state:
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Union of Concerned Scientists
National Headquarters
2 Brattle Square, Cambridge, MA 02238-9105

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>>> "Ed Soph" <> 7/26/2010 11:02 AM >>>
All cement kilns in Midlothian/Ellis County and all East Texas coal-fired power plants should be required to install Select Catalytic Reduction Technology.

Best Available Control Technology should be required on all aspects of gas drilling in the Barnett Shale.

Sincerely,

Ed Soph

From: Louise Dunn < >
To: <siprules@tceq.state.tx.us>
Date: 7/27/2010 1:57 PM
Subject: Dallas-Fort Worth Eight-Hour Ozone State Implementation Plan Stakeholder Group

Please put the health and well-being of Texans above the needs and greed of business people and politicians when you make decisions about air and water quality and EPA standards. Please don't fight what is best for the people. Texans need TCEQ to be on our side and to protect us from the greed and ambition of business and politics.

Reference: Dallas-Fort Worth Eight-Hour Ozone State Implementation Plan Stakeholder Group

Louise Dunn

NORTH TEXAS CLEAN AIR STEERING COMMITTEE RESOLUTION SUPPORTING THE COMMITTEE'S 2006 RECOMMENDATIONS FOR INCLUSION IN THE 2011 DALLAS-FORT WORTH STATE IMPLMENTATION PLAN FOR OZONE

WHEREAS, on October 20, 2006, the North Texas Clean Air Steering Committee reached a broad consensus in recommending 15 pollution control measures to the Texas Commission on Environmental Quality for inclusion in DFW's first State Implementation Plan to attempt to comply with the 1997 eight-hour federal ozone standard; and,

WHEREAS, many of these recommendations were not included in the State Implementation Plan submitted by the Texas Commission in Environmental Quality to the Environmental Protection Agency in 2006 and approved by the Environmental Protection Agency in 2007; and,

WHEREAS, in 2009, the 2006-2007 State Implementation Plan officially failed to attain compliance with the 1997 eight-hour federal ozone standard; and,

WHEREAS, the Texas Commission on Environmental Quality has set 5 PM on June 30, 2010, as the deadline for public comments on what pollution control strategies should be included in the new State Implementation Plan for compliance with the 1997 eight-hour federal ozone standard; and,

WHEREAS, the newly re-constituted North Texas Clean Air Steering Committee will be meeting for the first time in four years on July 29, 2010.

NOW THEREFORE, BE IT HEREBY RESOLVED THAT THE 2010 NORTH TEXAS CLEAN AIR STEERING COMMITTEE:

Section 1: Again urges the Texas Commission on Environmental Quality and the Environmental Protection Agency to consider all pollution control measures recommended by the 2006 Steering Committee for the new State Implementation Plan for compliance with the 1997 8-Hour Federal Ozone Standard.

Section 2: A copy of this resolution and the original 2006 recommendations by the North Texas Clean Air Steering Committee shall be faxed and e-mailed to the Texas Commission on Environmental Quality and the Region Six office of the Environmental Protection Agency before 5 pm on July 30, 2010.

Section 3: This resolution does not preclude future recommendations of other pollution control measures by the Steering Committee for the purposes of compliance with the 1997 eight-hour federal ozone standard.

Mike Eastland, Executive Director
North Central Texas Council of Governments
North Texas Clean Air Steering Committee

I hereby certify that the North Texas Clean Air Steering Committee adopted this resolution on July 29, 2010.

NORTH TEXAS CLEAN AIR STEERING COMMITTEE RESOLUTION SUPPORTING ADOPTION OF CALIFORNIA'S LOW EMITTING VEHICLE II STANDARDS

WHEREAS, the North Texas Clean Air Steering Committee (the Committee) was created after several counties in North Central Texas were declared to be in violation of the ozone standard under the Federal Clean Air Act; and,

WHEREAS, the Committee has worked closely with the Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency (EPA) in recommending and developing control measures to enable the region to achieve compliance of the ozone standard; and,

WHEREAS, photochemical modeling indicates that 73 percent of North Central Texas oxides of nitrogen (NOx) emissions are produced by mobile sources (of this, 63 percent is on-road mobile and 37 percent is non-road mobile); and,

WHEREAS, adoption of California Low Emitting Vehicle (LEV) II Standards will reduce passenger vehicle and light-duty commercial vehicle NOx emissions beyond that of the Federal Tier 2 Standards; and,

WHEREAS, purchasing vehicles in 2007 through 2009 to meet California LEV II Standards will reduce NOx and volatile organic compound emissions an additional 0.2 tons per day (tpd) and 1.4 tpd, respectively, in year 2009.

NOW, THEREFORE, BE IT HEREBY RESOLVED THAT THE NORTH TEXAS CLEAN AIR STEERING COMMITTEE EXPRESSES STRONG SUPPORT FOR:

Section 1. The Committee requests that the Texas Legislature adopt California LEV II Standards.

Section 2. Those persons who purchase vehicles meeting California LEV II Standards be exempt from payment of sales tax.

Mike Eastland

Mike Eastland, Executive Director
North Central Texas Council of Governments
North Texas Clean Air Steering Committee

I hereby certify that the North Texas Clean Air Steering Committee adopted this resolution on October 20, 2006.

NORTH TEXAS CLEAN AIR STEERING COMMITTEE RESOLUTION SUPPORTING ALLOCATION OF FUNDS FOR THE TEXAS CLEAN SCHOOL BUS PROGRAM

WHEREAS, the North Texas Clean Air Steering Committee (the Committee) was created after several counties in North Central Texas were declared to be in violation of the ozone standard under the Federal Clean Air Act; and

WHEREAS, the Committee has worked closely with the Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency (EPA) in recommending and developing control measures to enable the region to achieve compliance of the ozone standard; and

WHEREAS, heavy-duty diesel vehicles, including diesel school buses, are major sources of ozone forming nitrogen oxide (NOx) emissions in all Texas' nonattainment areas and particularly so in North Texas; and

WHEREAS, current research indicates that pollution from diesel vehicles has health implications for everyone, especially children who are particularly vulnerable to the effects of diesel emissions, which can cause respiratory disease and exacerbate long-term conditions such as asthma; and

WHEREAS, the North Texas nonattainment area has approximately 4,000 school buses operating within it's boundaries, of which 20 percent of this fleet are more than a decade old; and

WHEREAS, during the 79th Legislative Session of the State of Texas, House Bill 3469 established a Clean School Bus Program as part of the Texas Emissions Reduction Plan (TERP); and

WHEREAS, during the 79th Legislative Session of the State of Texas, House Bill 3469 was authorized funding through a portion of TERP revenues; and

WHEREAS, to date, the Texas Clean School Bus Program has remained unfunded during this biennium; and

WHEREAS, the TCEQ has estimated that school bus projects funded through TERP have resulted in NOx reductions at a cost of $5,800/ton of NOx reduced; and

WHEREAS, a portion of excess revenues collected from TERP and LIRAP programs should be allocated to fund the Texas Clean School Bus Program; and

WHEREAS, the Dallas-Fort Worth 1-Hour Attainment Demonstration State Implementation Plan (dated April 25, 2000) includes the Clean Vehicle Program as a voluntary emission reduction control strategy, which includes a dedicated clean school bus program; and

NOW, THEREFORE, BE IT HEREBY RESOLVED THAT THE NORTH TEXAS CLEAN AIR STEERING COMMITTEE EXPRESSES STRONG SUPPORT FOR:

Section 1: A portion of excess revenues collected from the TERP and LIRAP programs be allocated to fund the Texas Clean School Bus Program, House Bill 3469, established during the 79th Legislative Session of the State of Texas.

Mike Eastland, Executive Director
North Central Texas Council of Governments
North Texas Clean Air Steering Committee

I hereby certify that the North Texas Clean Air Steering Committee adopted this resolution on October 20, 2006.

NORTH TEXAS CLEAN AIR STEERING COMMITTEE RESOLUTION SUPPORTING CONTROLS ON EAST TEXAS COMBUSTION ENGINES

WHEREAS, the North Texas Clean Air Steering Committee (the Committee) was created after several counties in North Central Texas were declared to be in violation of the ozone standard under the Federal Clean Air Act; and,

WHEREAS, the Committee has worked closely with the Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency (EPA) in recommending and developing control measures to enable the region to achieve compliance of the ozone standard; and,

WHEREAS, the TCEQ identified that controls on stationary combustion engines over all of East Texas and within 200 km of North Central Texas non-attainment area reduces oxides of nitrogen (NOx) by 83 tons per day (tpd) and 40.9 tpd, respectively; and,

WHEREAS, photochemical modeling indicates control of oxide of nitrogen (NOx) emissions from stationary engines and gas turbines over all of east Texas and within 200 km of North Central Texas nonattainment area reduces ozone formation within the North Central Texas nonattainment area.

NOW, THEREFORE, BE IT HEREBY RESOLVED THAT THE NORTH TEXAS CLEAN AIR STEERING COMMITTEE EXPRESSES STRONG SUPPORT FOR:

Section 1. The Committee supports controls on East Texas combustion engines and combustion engines within 200 km of North Central Texas non-attainment area as identified by the Texas Commission on Environmental Quality.

Mike Eastland, Executive Director
North Central Texas Council of Governments
North Texas Clean Air Steering Committee

I hereby certify that the North Texas Clean Air Steering Committee adopted this resolution on October 20, 2006.

NORTH TEXAS CLEAN AIR STEERING COMMITTEE RESOLUTION ON EXISTING ELECTRIC GENERATING UNITS (EGUs)

WHEREAS, the North Texas Clean Air Steering Committee (the Committee) was created after several counties in North Central Texas were declared to be in violation of the ozone standard under the Federal Clean Air Act; and

WHEREAS, the Committee has worked closely with the Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency (EPA) in recommending and developing control measures to enable the region to achieve compliance of the ozone standard; and

WHEREAS, the North Central Texas ozone non-attainment area has experienced and expects to continue rapid and large population growth; and

WHEREAS, air quality monitoring and modeling indicate that regional transport of ozone air pollution can account for high background levels that contribute significantly to observed ozone levels in the Dallas-Fort Worth (DFW) nonattainment area; and

WHEREAS, a key source of emissions leading to elevated background ozone concentrations entering the DFW area is electric generating units in East and Central Texas, which as shown by TCEQ modeling, contribute on average about 2.3 parts per billion (ppb) to DFW future case ozone (see 7/6/06 presentation by TCEQ to the DFW Photochemical Modeling Technical Committee); and

WHEREAS, TCEQ's authority to require emissions reductions from power plants outside a nonattainment area is reflected in the promulgation of such rules in 2000, wherein the TCEQ concluded that "a body of evidence from aircraft measurements, seasonal modeling, back trajectories, and statistical studies indicate[ed] that electric generating facilities and cement kilns in central and eastern Texas contribute to the background level of NOx which impact the DFW area." 25 Tex. Reg. 4102 (May 5, 2000); and

WHEREAS, the current emission control measures under consideration by the TCEQ for the DFW 8-hour State Implementation Plan will not be sufficient to bring the area into attainment, resulting in ozone levels roughly 3 ppb higher than the allowable limit; and

WHEREAS, TCEQ modeling shows that additional controls on EGUs comparable to those in place in the Houston nonattainment area can reduce DFW ozone levels by approximately 1 ppb;

NOW, THEREFORE, BE IT HEREBY RESOLVED THAT THE NORTH TEXAS CLEAN AIR STEERING COMMITTEE EXPRESSES STRONG SUPPORT FOR:

Section 1: The North Central Texas Clean Air Steering Committee recommends that the TCEQ formally propose for public comment a requirement that all major electric generating units in East and Central Texas must meet fuel-specific emission requirements comparable to those in place in the DFW and Houston/Galveston nonattainment areas.

Mike Eastland, Executive Director
North Central Texas Council of Governments
North Texas Clean Air Steering Committee

I hereby certify that the North Texas Clean Air Steering Committee adopted this resolution on October 20, 2006.

NORTH TEXAS CLEAN AIR STEERING COMMITTEE RESOLUTION SUPPORTING TO EXPEDITE EPA'S "HIGHWAY DIESEL RULE" FINALIZED JANUARY 2001

WHEREAS, the North Texas Clean Air Steering Committee (the Committee) was created after several counties in North Central Texas were declared to be in violation of the ozone standard under the Federal Clean Air Act; and,

WHEREAS, the Committee has worked closely with the Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency (EPA) in recommending and developing control measures to enable the region to achieve compliance of the ozone standard; and,

WHEREAS, photochemical modeling indicates that 73 percent of North Central Texas oxides of nitrogen (NOx) emissions are produced by mobile sources (of this, 63 percent is on-road mobile and 37 percent is non-road mobile); and,

WHEREAS, highway diesel engines emit significant amounts (approximately 47 percent of the on-road mobile portion) of NOx emissions that contribute to ozone formation in North Central Texas non-attainment area; and,

WHEREAS, in 2001, EPA finalized the "Highway Diesel Rule" that beginning with 2007 model year heavy-duty highway vehicles, each new truck and bus will be more than 90 percent cleaner; and,

WHEREAS, that the rule phase-in period is based on a percent-of-sales basis: 50 percent of the sales in 2007 through 2009 and 100 percent of the sales in 2010; and,

WHEREAS, the California Air Resources Board (CARB) adopted standards identical to the Highway Diesel Rule in October 2001; and,

WHEREAS, an expedited Highway Diesel Rule in 2007 for North Central Texas non-attainment area may reduce year 2009 NOx emissions by an additional seven tons per day.

NOW, THEREFORE, BE IT HEREBY RESOLVED THAT THE NORTH TEXAS CLEAN AIR STEERING COMMITTEE EXPRESSES STRONG SUPPORT FOR:

Section 1. That the Committee requests the Texas Legislature to expedite the phase-in period of EPA's Highway Diesel Rule to 100 percent of the sales starting in year 2007.

Mike Eastland

Mike Eastland, Executive Director
North Central Texas Council of Governments
North Texas Clean Air Steering Committee

I hereby certify that the North Texas Clean Air Steering Committee adopted this resolution on October 20, 2006.

NORTH TEXAS CLEAN AIR STEERING COMMITTEE RESOLUTION SUPPORTING AN EXPANDED INSPECTION AND MAINTENANCE PROGRAM TO INCLUDE DIESEL VEHICLES

WHEREAS, the North Texas Clean Air Steering Committee (the Committee) was created after several counties in North Central Texas were declared to be in violation of the ozone standard under the Federal Clean Air Act; and

WHEREAS, the Committee has worked closely with the Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency (EPA) in recommending and developing control measures to enable the region to achieve compliance of the ozone standard; and

WHEREAS, the Dallas-Fort Worth Attainment Demonstration State Implementation Plan (dated April 25, 2000) contains emission reduction control strategies such as mandatory inspection and maintenance (I/M) programs and accelerated vehicle retirement initiatives to improve air quality; and

WHEREAS, photochemical modeling indicates that 73 percent of North Central Texas NOx emissions are produced by mobile sources (of this, 63 percent on-road mobile and 37 percent non-road mobile); and,

WHEREAS, during the 77th Legislative Session of the State of Texas, House Bill 2134 was signed by the Governor, thereby mandating that the TCEQ examine the efficacy of annually inspecting diesel vehicles for compliance with applicable federal emission standards, compliance with an opacity or other emissions-related standard established by commission rule, or both and shall implement that inspection program if the TCEQ determines the program would minimize emissions; and

WHEREAS, diesel-fueled vehicles are an increasing proportion of the on-road vehicle fleet; and

WHEREAS, studies estimate that high emitting diesel vehicles emit three times more NOx than normal vehicles.

NOW, THEREFORE, BE IT HEREBY RESOLVED THAT THE NORTH TEXAS CLEAN AIR STEERING COMMITTEE EXPRESSES STRONG SUPPORT FOR:

Section 1: The Texas Commission on Environmental Quality implement an I/M Program to test all on-road diesel vehicles in the nonattainment region in North Central Texas.

Mike Eastland, Executive Director
North Central Texas Council of Governments
North Texas Clean Air Steering Committee

I hereby certify that the North Texas Clean Air Steering Committee adopted this resolution on October 20, 2006.

NORTH TEXAS CLEAN AIR STEERING COMMITTEE RESOLUTION SUPPORTING LOW INCOME REPAIR AND REPLACEMENT ASSISTANCE PROGRAM (LIRAP) IMPROVEMENTS

WHEREAS, the North Texas Clean Air Steering Committee (the Committee) was created after several counties in North Central Texas were declared to be in violation of the ozone standard under the Federal Clean Air Act; and

WHEREAS, the Committee has worked closely with the Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency (EPA) in recommending and developing control measures to enable the region to achieve compliance of the ozone standard; and

WHEREAS, the Dallas-Fort Worth Attainment Demonstration State Implementation Plan (dated April 25, 2000) contains emission reduction control strategies such as mandatory inspection and maintenance (I/M) programs and accelerated vehicle retirement initiatives to improve air quality; and

WHEREAS, automobiles and light duty trucks are major sources of ozone forming nitrogen oxide (NOx) emissions in all Texas' nonattainment areas and particularly so in North Texas; and

WHEREAS, approximately 10 percent of these vehicles cause a very large portion of the NOx emissions; and

WHEREAS, a significant proportion of these high NOx emitting vehicles are owned by persons of low income levels; and

WHEREAS, during the 77th Legislative Session of the State of Texas, House Bill 2134 was signed by the Governor; thereby, creating the Low-Income Vehicle Repair and Retirement Assistance Program (LIRAP) to assist low income individuals with repairs or retirement of vehicles that fail emissions inspections; and

WHEREAS, during the 79th Legislative Session of the State of Texas, House Bill 1611 was signed by the Governor; thereby, making modifications to LIRAP and allowing surplus funds to be used to implement other air quality programs; and

WHEREAS, to date, LIRAP has repaired over 11,500 vehicles and replaced over 600 vehicles in North Central Texas; and

WHEREAS, vehicles repaired through LIRAP are shown to have a 70 percent reduction in NOx emissions, which equates to a reduction of approximately 0.23 tons of NOx emissions each day; and

WHEREAS, LIRAP and programs under House Bill 1611 need to be fully funded and certain legislative amendments and regulatory modifications are needed to make the program even more effective and productive in reducing mobile source emissions.

NOW, THEREFORE, BE IT HEREBY RESOLVED THAT THE NORTH TEXAS CLEAN AIR STEERING COMMITTEE EXPRESSES STRONG SUPPORT FOR:

Section 1. Legislative Amendments that:

- Appropriate all LIRAP funds collected for this purpose and utilize such funds for emission reductions pursuant to House Bill 1611 and for other programs that can reduce mobile source air pollution (see attachment for details); and
- Require I/M testing for 1981 and newer model year vehicles; and
- Enhance penalties for inspection station and inspector violations relating to improper issuance of inspection approval; and
- Toughen guidelines/penalties for storage facilities that violate inspection requirements on salvaged vehicles; and
- Require the removal of inspection and registration stickers at all impound/auction lots; and
- Modify title assumption process for local government law enforcement programs; and
- Allow Justice of the Peace jurisdiction over all mobile emissions misdemeanor violations.

Section 2. Regulatory Modifications that petition the Commission(s):

- Install final EPA I/M cutpoints, the pass/fail point established for each pollutant tested in an I/M program; and
- Expand the I/M program to include diesel vehicles; and
- Increase LIRAP replacement incentive; and
- Increase LIRAP income guidelines; and
- Allow 20 percent of allocated funds for LIRAP to be spent on administrative costs; and
- Treat LIRAP advertising as a programmatic cost and not as an administrative cost.

Mike Eastland, Executive Director
North Central Texas Council of Governments
North Texas Clean Air Steering Committee

I hereby certify that the North Texas Clean Air Steering Committee adopted this resolution on October 20, 2006.

NORTH TEXAS CLEAN AIR STEERING COMMITTEE RESOLUTION SUPPORTING LoTox AND/OR SELECTIVE CATALYTIC REDUCTION TECHNOLOGIES FOR ADDITIONAL CEMENT KILN EMISSIONS REDUCTIONS

WHEREAS, the North Texas Clean Air Steering Committee (the Committee) was created after several counties in North Central Texas were declared to be in violation of the ozone standard under the Federal Clean Air Act; and

WHEREAS, the Committee has worked closely with the Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency (EPA) in recommending and developing control measures to enable the region to achieve compliance of the ozone standard; and

WHEREAS, Point Sources of NOx emissions are among the causes of the region's ozone nonattainment status; and

WHEREAS, scientific evaluation and studies by TCEQ and EPA demonstrate that emissions from cement kilns in Ellis County directly contribute to elevated ozone levels in the North Central Texas ozone non-attainment area; and

WHEREAS, TCEQ has indicated that it is necessary for the cement kilns to reduce NOx emissions by as much as 80% in order for the area to attain the federal ozone standard by 2009; and

WHEREAS, a 2005 study commissioned by TCEQ concluded that technology exists which can reduce NOx emissions from cement kilns by up to 80%; and

WHEREAS, technology known as LoTox and Selective Catalytic Reduction (SCR), is believed to be compatible with Selective Non-Catalytic Reduction Control (SNCRC) technology.

NOW, THEREFORE, BE IT HEREBY RESOLVED THAT THE NORTH TEXAS CLEAN AIR STEERING COMMITTEE EXPRESSES STRONG SUPPORT FOR:

Section 1: That TCEQ require the kiln owners to have a pilot test(s) conducted for LoTox and/or SCR technologies, assuming that the technologies prove to be cost effective in achieving emission reductions at or below 1.9 lbs per clinker ton of cement produced and that they do not materially affect plant operations and/or facilities.

Section 2: That all efforts be made to seek funding assistance from outside sources to offset costs of the cement industry for said pilot test(s).

Section 3: That said pilot test(s) be conducted as quickly as possible and completed no later that September 2007 so that cost effective emission reductions demonstrated from the use of the pilot tested technology can be incorporated into the 2009-2010 State Implementation Plan.

Section 4: That EPA, TCEQ, the North Central Texas Council of Governments, cement plant owners and local environmental groups all be involved in administering and monitoring pilot testing.

Mike Eastland, Executive Director
North Central Texas Council of Governments
North Texas Clean Air Steering Committee

I hereby certify that the North Texas Clean Air Steering Committee adopted this resolution on October 20, 2006.

NORTH TEXAS CLEAN AIR STEERING COMMITTEE RESOLUTION SUPPORTING PREFERENCE IN PURCHASING POLICIES FOR CERTAIN CEMENT

WHEREAS, the North Texas Clean Air Steering Committee (the Committee) was created after several counties in North Central Texas were declared to be in violation of the ozone standard under the Federal Clean Air Act; and

WHEREAS, the Committee has worked closely with the Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency (EPA) in recommending and developing control measures to enable the region to achieve compliance of the ozone standard; and

WHEREAS, Point Sources of NOx emissions are among the causes of the region's ozone nonattainment status; and

WHEREAS, scientific evaluation and studies by TCEQ and EPA demonstrate that emissions from cement kilns in Ellis County directly contribute to elevated ozone levels in the North Central Texas ozone non-attainment area; and

NOW, THEREFORE, BE IT HEREBY RESOLVED THAT THE NORTH TEXAS CLEAN AIR STEERING COMMITTEE EXPRESSES STRONG SUPPORT FOR:

Section 1: That local governments and special districts within the region's ozone non-attainment area be strongly encouraged to include criterion in their bidding policies that rewards or give special consideration to cement from the companies operating kilns with the lowest NOx emission levels.

Mike Eastland, Executive Director
North Central Texas Council of Governments
North Texas Clean Air Steering Committee

I hereby certify that the North Texas Clean Air Steering Committee adopted this resolution on October 20, 2006.

NORTH TEXAS CLEAN AIR STEERING COMMITTEE RESOLUTION SUPPORTING RAIL EFFICIENCY THROUGH THE TEXAS RAIL RELOCATION AND IMPROVEMENT FUND

WHEREAS, the North Texas Clean Air Steering Committee (the Committee) was created after several counties in North Central Texas were declared to be in violation of the ozone standard under the Federal Clean Air Act; and

WHEREAS, the Committee has worked closely with the Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency (EPA) in recommending and developing control measures to enable the region to achieve compliance of the ozone standard; and

WHEREAS, during the 79th Legislative Session of the State of Texas, House Bill 1546 was signed by the Governor, thereby amending the Transportation Code to provide for the administration and use of the Texas rail relocation and improvement fund and the issuance of bonds and other public securities to finance the relocation, rehabilitation, and expansion of freight or passenger rail facilities, including commuter rail, intercity rail, and high speed rail; and

WHEREAS, House Bill 1546 took effect on November 8, 2005, after voter approval of a constitutional amendment proposed by House Joint Resolution 54; and

WHEREAS, many regions are facing significant rail congestion and delay from infrastructure bottlenecks in addition to increasing modal use for movement of our nations goods; and

WHEREAS, locomotive vehicles utilize diesel engines that contain no emission control technologies, resulting in the release of high levels of nitrogen oxides and particulate matter that impact regions' abilities to reach federal emissions standards; and

WHEREAS, emission reductions could be achieved and results credited through the implementation of improvements that make rail activities more efficient.

NOW, THEREFORE, BE IT HEREBY RESOLVED THAT THE NORTH TEXAS CLEAN AIR STEERING COMMITTEE EXPRESSES STRONG SUPPORT FOR:

Section 1: Revenues collected from the Rail Efficiency through the Texas Rail Relocation and Improvement Fund, House Bill 1546 established during the 79th Legislative Session of the State of Texas, be appropriated to fund the program.

Mike Eastland

Mike Eastland, Executive Director
North Central Texas Council of Governments
North Texas Clean Air Steering Committee

I hereby certify that the North Texas Clean Air Steering Committee adopted this resolution on October 20, 2006.

NORTH TEXAS CLEAN AIR STEERING COMMITTEE RESOLUTION SUPPORTING SELECTIVE NON-CATALYTIC REDUCTION TECHNOLOGY FOR CEMENT KILN EMISSIONS REDUCTIONS

WHEREAS, the North Texas Clean Air Steering Committee (the Committee) was created after several counties in North Central Texas were declared to be in violation of the ozone standard under the Federal Clean Air Act; and

WHEREAS, the Committee has worked closely with the Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency (EPA) in recommending and developing control measures to enable the region to achieve compliance of the ozone standard; and

WHEREAS, Point Sources of nitrogen oxide (NOx) emissions are among the causes of the region's ozone nonattainment status; and

WHEREAS, scientific evaluation and studies by TCEQ and EPA demonstrate that emissions from cement kilns in Ellis County directly contribute to elevated ozone levels in the North Central Texas ozone non-attainment area; and

WHEREAS, it is generally accepted in the cement industry and confirmed by a scientific study performed for TCEQ that Selective Non-Catalytic Reduction Technology is capable of reducing NOx emissions from kilns in a range of 30 percent to 50 percent.

NOW, THEREFORE, BE IT HEREBY RESOLVED THAT THE NORTH TEXAS CLEAN AIR STEERING COMMITTEE EXPRESSES STRONG SUPPORT FOR:

Section 1: That TCEQ require the kiln owners to install SNCR technology on all kilns in Ellis County.

Mike Eastland

Mike Eastland, Executive Director
North Central Texas Council of Governments
North Texas Clean Air Steering Committee

I hereby certify that the North Texas Clean Air Steering Committee adopted this resolution on October 20, 2006.

NORTH TEXAS CLEAN AIR STEERING COMMITTEE RESOLUTION SUPPORTING STATEWIDE PORTABLE EQUIPMENT REGISTRATION PROGRAM

WHEREAS, the North Texas Clean Air Steering Committee (the Committee) was created after several counties in North Central Texas were declared to be in violation of the ozone standard under the Federal Clean Air Act; and,

WHEREAS, the Committee has worked closely with the Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency (EPA) in recommending and developing control measures to enable the region to achieve compliance of the ozone standard; and,

WHEREAS, implementation of a statewide portable equipment registration program (PERP) will reduce North Central Texas non-attainment oxides of nitrogen (NOx) emissions by 0.8 tons per day in year 2009; and,

WHEREAS, registration of portable engines and equipment units can operate throughout the State and eliminate the requirement of permits from individual jurisdictions; and,

WHEREAS, equipment eligible for registration must be certified or controlled engine; and,

WHEREAS, equipment eligible for registration shall not exceed pre-determined emission limits and comply with Best Control Technology requirements.

NOW, THEREFORE, BE IT HEREBY RESOLVED THAT THE NORTH TEXAS CLEAN AIR STEERING COMMITTEE EXPRESSES STRONG SUPPORT FOR:

Section 1. The Committee to support adoption of a statewide portable equipment registration program.

Mike Eastland

Mike Eastland, Executive Director
North Central Texas Council of Governments
North Texas Clean Air Steering Committee

I hereby certify that the North Texas Clean Air Steering Committee adopted this resolution on October 20, 2006.

NORTH TEXAS CLEAN AIR STEERING COMMITTEE RESOLUTION SUPPORTING TEXAS EMISSIONS REDUCTION PLAN (TERP)

WHEREAS, the North Texas Clean Air Steering Committee (the Committee) was created after several counties in North Central Texas were declared to be in violation of the ozone standard under the Federal Clean Air Act; and,

WHEREAS, the Committee has worked closely with the Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency (EPA) in recommending and developing control measures to enable the region to achieve compliance of the ozone standard; and,

WHEREAS, mobile sources are a major source of ozone-forming nitrogen oxide (NOx) emissions in all of Texas' nonattainment areas and particularly in North Central Texas; and,

WHEREAS, photochemical modeling indicates that 73 percent of North Central Texas NOx emissions are produced by mobile sources (of this, 63 percent on-road mobile and 37 percent non-road mobile); and,

WHEREAS, the Texas State Legislature, through the Texas Emissions Reduction Plan (TERP), created the Emission Reduction Incentive Grants Program and Light-Duty Motor Vehicle Purchase or Lease Incentive Program to reduce NOx emissions and promote the operation of cleaner vehicle and equipment engines; and,

WHEREAS, to date, TCEQ has awarded $99,068,925 in TERP grants to heavy-duty diesel projects in the North Central Texas area to achieve a NOx emission reduction of approximately 10.2 tons per day in 2007, and;

WHEREAS, TCEQ has already committed to achieve a NOx emission reduction of 22.2 tons per day by 2007 in North Central Texas through TERP in the 1-Hour Ozone Attainment Demonstration State Implementation Plan (SIP) and the 5 percent Increment of Progress SIP, and;

WHEREAS, TERP will be most instrumental in the achievement of NOx emission reductions needed by North Central Texas in order to demonstrate attainment of the 8-Hour Ozone standard by June 15, 2010, and;

WHEREAS, TERP needs to be fully funded and certain legislative amendments and regulatory modifications are needed to make the program even more effective and productive.

NOW, THEREFORE, BE IT HEREBY RESOLVED THAT THE NORTH TEXAS CLEAN AIR STEERING COMMITTEE EXPRESSES STRONG SUPPORT FOR:

Section 1. Legislative Amendments that:

- Extend authorization of TERP beyond the current program sunset year of 2010
- Fully fund TERP for currently authorized and future fiscal years by appropriating all revenue collected under this program.
- Extend eligibility to heavy-duty diesel vehicles operating primarily between Texas nonattainment areas.
- Extend project activity life by allowing TERP to fund and use Geographic Positioning Systems (GPS).

Section 2. Regulatory Modifications that petition the Commission(s):

- Allow project cost-effectiveness up to $13,000 per ton of NOx reduced, while maintaining cost-effectiveness as a competitive aspect of the program.
- Activate and fund the Texas Clean School Bus Program.
- Activate and fund the Light-Duty Motor Vehicle Purchase or Lease Incentive Program.

Mike Eastland, Executive Director
North Central Texas Council of Governments
North Texas Clean Air Steering Committee

I hereby certify that the North Texas Clean Air Steering Committee adopted this resolution on October 20, 2006.

NORTH TEXAS CLEAN AIR STEERING COMMITTEE RESOLUTION SUPPORTING ADOPTION OF TRUCK LANE RESTRICTION

WHEREAS, the North Texas Clean Air Steering Committee (the Committee) was created after several counties in North Central Texas were declared to be in violation of the ozone standard under the Federal Clean Air Act; and,

WHEREAS, the Committee has worked closely with the Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency (EPA) in recommending and developing control measures to enable the region to achieve compliance of the ozone standard; and,

WHEREAS, photochemical modeling indicates that 73 percent of North Central Texas oxides of nitrogen (NOx) emissions are produced by mobile sources (of this, 63 percent is on-road mobile and 37 percent is non-road mobile); and,

WHEREAS, on-road heavy-duty trucks emit significant amounts (approximately 47 percent of the on-road mobile portion) of NOx emissions that contribute to ozone formation in North Central Texas non-attainment area; and,

WHEREAS, following EPA's on-road mobile emission model (version 6.2.03), on-road heavy-duty diesel trucks emit greater amounts of NOx emissions at speeds higher than 55 miles per hour; and,

WHEREAS, since the late 1990's, the Texas Department of Transportation (TxDOT) has maintained a policy favorable to the establishment of truck lane restrictions on major Texas truck routes; and,

WHEREAS, In May of 1997, State law was enacted providing a local initiative process for establishing truck lane restrictions to a single facility in Houston, Interstate Highway 10 (I.H. 10); and,

WHEREAS, in May 2003, additional legislation was passed to support the ability to pursue truck lane restrictions within the State of Texas; and,

WHEREAS, the current rules for truck lane restrictions in the State of Texas, as established by the legislature and applied by TxDOT, allow counties, groups of municipalities, or TxDOT to establish truck lane restrictions by conducting a traffic study and requesting approval from the Texas Transportation Commission; and,

WHEREAS, facilities must be controlled-access roadways with a minimum of three travel lanes in each direction with trucks restricted to two or more lanes; and,

WHEREAS, lane restrictions allow a truck to utilize the restricted lane to pass, exit, or enter the roadway; and,

WHEREAS, the Mayors of Dallas, Grand Prairie, Arlington, and Fort Worth requested that TxDOT initiate a restriction barring trucks from the far left lane of Interstate Highway 30 from the eastern side of Dallas to the western side of Fort Worth; and,

WHEREAS, the truck lane restriction pilot study on Interstate Highway 20 and Interstate Highway 30 was initiated as a partnership between TxDOT and the North Central Texas Council of Governments; and,

WHEREAS, the 18 mile truck lane restriction pilot study on Interstate Highway 30 received a NOx emission reduction of 61.2 pounds per day.

NOW, THEREFORE, BE IT HEREBY RESOLVED THAT THE NORTH TEXAS CLEAN AIR STEERING COMMITTEE EXPRESSES STRONG SUPPORT FOR:

Section 1. The Committee acknowledges the air quality benefit associated with implementation of truck lane restrictions on designated roadways in North Central Texas non-attainment area to reduce ozone formation.

Section 2. The Committee requests the North Central Texas Council of Governments work with the Texas Department of Transportation to identify additional facilities that meet the truck lane restriction requirements within the North Central Texas non-attainment area.

Mike Eastland, Executive Director
North Central Texas Council of Governments
North Texas Clean Air Steering Committee

I hereby certify that the North Texas Clean Air Steering Committee adopted this resolution on October 20, 2006.

NORTH TEXAS CLEAN AIR STEERING COMMITTEE RESOLUTION SUPPORTING VARIOUS ENERGY EFFICIENCY MEASURES

WHEREAS, the North Texas Clean Air Steering Committee (the Committee) was created after several counties in North Central Texas were declared to be in violation of the ozone standard under the Federal Clean Air Act; and

WHEREAS, the Committee has worked closely with the Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency (EPA) in recommending and developing control measures to enable the region to achieve compliance of the ozone standard; and

WHEREAS, the North Central Texas ozone non-attainment area has experienced and expects to continue rapid and large population growth; and

WHEREAS, this growth has created and will continue to create a huge demand for electric power and the resulting need for additional electric generating units; and

WHEREAS, these additional plants are costly to build and emit pollutants which produce negative effects on air quality; and

WHEREAS, public and private consumers would experience lower electricity rates and all of the benefits of a cleaner environment if energy conservation techniques were to be widely utilized so that fewer electric generating units would be needed.

NOW, THEREFORE, BE IT HEREBY RESOLVED THAT THE NORTH TEXAS CLEAN AIR STEERING COMMITTEE EXPRESSES STRONG SUPPORT FOR:

Section 1: That it fully supports legislation that would empower the State Energy Conservation Office to establish appliance efficiency standards, by rule, for residential and commercial products.

Section 2: That it fully supports modifying Section 388.005 of the Health and Safety Code to provide that all local governments, special districts, school districts, institutions of higher learning and other political subdivisions within an ozone non-attainment area implement energy conservation measures under Section 302.004(b), Local Government Code.

Section 3: That it fully supports the update of Section 388 of the Health and Safety Code to allow the State Energy Conservation Office to update building efficiency codes, after consultation with affected parties, by rule and to implement a variety of methods for the building industry to use in increasing energy efficient buildings by 15 percent.

Section 4: That it fully supports amending Section 388 of the Health and Safety Code to create a specific energy rating program for new and extensively remodeled existing homes in Texas and to allow the State Energy Conservation Office to adopt by rule a system for evaluating the affect of energy savings techniques and to certify home efficiency raters.

Mike Eastland, Executive Director
North Central Texas Council of Governments
North Texas Clean Air Steering Committee

I hereby certify that the North Texas Clean Air Steering Committee adopted this resolution on October 20, 2006.

>>> "Bartos, Lorlee" < > 7/30/2010 11:10 AM >>>
1) Selective Catalytic Reduction Technology (SCR) on all the Midlothian cement kilns. SCR is in effective operation on kilns in Europe, removing 90% + of smog-forming pollution.
2) SCR on all East Texas coal plants. Older, more polluting plants need this technology
as well.
3) Extensive controls on all aspects of gas development in the Barnett Shale. 90% controls are available and in use.

Comments on Stationary Source Control Measures
for the DFW State Implementation Plan
to Comply with the 1997 Eight-Hour Federal Ozone Standard
cgoodin@tceq.state.tx.us

Submitted by Downwinders at Risk
PO Box 763844
Dallas, TX 75376
972-230-3185

I. Adopt all the control measures recommended by the by the North Texas Clean Air Steering Committee in 2006, including:

* SNCR on all Midlothian cement kilns

* Pilot-Testing SCR pollution control technology at the Midlothian cement kilns with the intent of installing it on the kilns if the test is successful

*Bringing older East Texas coal plants into compliance with DFW power plant emission standards

* Implementing tougher energy efficiency standards

* A diesel engine inspection program

* Adopting California diesel emission standards in Texas

II. Require Reasonably Available Control Technology

The definition of reasonably available control technology ("RACT") was established in a memorandum from Roger Strelow, Assistant Administrator for Air and Waste Management, U.S. EPA, to EPA Regional Administrators, December 9, 1976 [BNA Environmental Reporter].

The EPA refers to the establishment of RACT in this document in more recent rulemakings, including FR 63 23668, April 30, 1998.

EPA defines RACT in the Strelow Memorandum as:

> "RACT...the lowest emissions limitation that a particular source is capable of meeting by the application of control technology that is reasonably available, considering technological and economic feasibility."

The memorandum then reviews the issue of source similarity and **pilot testing:**

> "RACT may require technology that has been applied to similar, but not necessarily identical source categories**...An extensive research and development program should not be necessary before a RACT control can**

> **be applied to a source.**..This does not, however, preclude requiring a short-term evaluation program to permit the application of a given technology to a particular source."

The memorandum addresses whether RACT must be off-the-shelf technology:

> "RACT encompasses stringent, or even 'technology forcing' requirement that goes beyond simple 'off-the-shelf' technology...In every case **RACT should represent the toughest controls considering technological and economic feasibility that can be applied to a specific situation. Anything less than this is by definition less than RACT and not acceptable for areas where it is not possible to demonstrate attainment."**

The memorandum encourages the Regions to intensely implement control technology to achieve attainment with the National Ambient Air Quality Standards to protect public health:

> "The air quality standards [for ozone, carbon monoxide, and particulate matter] are not being attained in many of these RACT areas. Therefore, we cannot relax the intensity of the air pollution control effort. **We should ensure that all sources contributing to the nonattainment situation are required to implement restrictive available control measures even if it requires significant sacrifices."**

The Clean Air Act requires States to provide for the implementation of all reasonably available control measures (RACM) in SIPs (42 U.S.C. 7502, Section 172 (c) (1)). The lack of implementation of RACM requires disapproval by EPA of state SIPs.

> "(c) Nonattainment Plan Provisions.- The plan provisions (including plan items) **required** to be submitted under this part shall comply with each of the following: (1) In general.- Such plan provisions shall 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."

There are numerous reasonably available control measures for the coal plants, gas development and cement kilns that the State failed to adopt in its unsuccessful 2007 SIP. Downwinders urges the TCEQ not to fail to adopt such measures in this repeat SIP. In particular, this first "do-over" SIP for the 85ppb standard should require the pilot-testing of SCR technology at the Midlothian cement kilns – an action which would reduce NOx emissions in and of itself - and use the second SIP based on the new lower ozone standard to require the implementation of SCR is the pilot-test is successful. This is exactly the path recommended by the 2006 North Texas Clean Air Steering Committee.

III. Specific Control Measures for Stationary Sources

A. Coal-Fired Power Plants

Emissions from EGUs throughout Texas, especially those in east and central Texas, impact ozone concentrations in DFW because of regional transport of ozone and ozone precursors.

Currently the TCEQ is not requiring the same levels of EGU NOx controls it has mandated for the Dallas-Fort Worth area or the Houston area to be applied statewide or in east and central Texas.

In October 2006, the North Texas Clean Air Steering Committee passed a recommendation that:

> "…. the commission propose a requirement that all major electric generation units in east and central Texas must meet fuel-specific emissions requirements comparable to those in place in the DFW and Houston- Galveston-Brazoria (HGB) nonattainment areas."

The State's response to the resolution (Submitted SIP, Response to Comments, p. 19) was:

> "These sources have already been addressed as part of Senate Bill 7 (76th Legislature). The electric generating facilities in east and central Texas were required to reduce NOx emissions by 50 percent from their 1997 levels by 2003. Modeling conducted as a part of the development of this SIP revision indicates that NOx reductions made inside the DFW nine-county region are far more effective toward attaining the ozone standard."

However, in another part of the Submitted SIP, the State admits that controls at east and central Texas EGUs could have a major impact on reducing ozone concentrations in DFW (Submitted SIP, Response to Comments, p. 30):

> "Preliminary modeling indicated that HGB level NOx emissions specifications applied to electric generating facilities in east and central **Texas may result in up to 1 ppb reduction at monitors within the DFW eight-hour nonattainment area.**However, these sources were already addressed as part of Senate Bill 7 (76th Legislature), requiring electric generating facilities in east and central Texas to reduce NOX emissions by 50 percent from their 1997 levels by the year 2003."

The State is acknowledging that placing additional controls on EGUs in east and central Texas could reduce ozone concentrations up to 1 ppb in DFW.

Downwinders at Risk proposes that the SIP honor the request of the NTCASC and adopt the same NOx control regulations on EGUs in east and central Texas as are in effect for DFW and HGB. Controls of these levels would reduce NOx emissions region-wide by approximately 140 tpd. These reductions would help the DFW area get into attainment and have the additional benefit of helping the Tyler-Longview, San Antonio, Austin, Houston-Galveston-Brazoria, and Beaumont-Port Arthur areas in Texas stay or get into attainment.

III. B. Barnett Shale Gas Emissions

1. Getting an Accurate Inventory of Emissions from Barnett Shale Facilities

On May 23, 2007, the day the TCEQ adopted the Submitted SIP, public testimony and documents presented to the Commissioners revealed that the State's emissions inventory for DFW may have seriously under-counted the number of IC engines operating production or distribution compressors in the DFW area, perhaps by a factor of 10 or more. This testimony suggested that hundreds or perhaps thousands of point sources may not have been included in the already flawed photochemical modeling of the Submitted SIP. Public testimony also revealed that this massive under count of engine numbers and engine emissions likely extends outside of DFW to the emissions inventories in east and central Texas. The TCEQ is beginning to work on corrections to the engines emissions inventory and has a public meeting scheduled in Arlington on July 9, 2007, to discuss the issue.

Given the gross error in the submitted engines emissions inventory, it is difficult to know exactly what emissions reductions could be achieved from NOx controls an electrification of the gas compressor fleet.

However, if the current emissions inventory, industry comments to the Proposed SIP, and reports by HARC are used to develop a conservatively low estimate, compressor engine NOx emissions in the DFW non-attainment area are approximately 16 tpd, and emission from on-shore units in all of east and central Texas outside of DFW are approximately150 tpd. With the identified problems in the emissions inventory, current efforts to fix the massive under-count are expected to only increase these emissions estimates.

Despite the fact that TCEQ is trying now to perform a first-ever inventory of Barnett Shale NOx and VOC emissions, we still do not have a good idea how much pollution is really being created and might not have one until critical deadlines for this SIP expire . Therefore, any modeling involving this 85ppb SIP should add 15-20% more NOx and VOCs from Barnett Shale sources to the total pollution inventory in order to provide a cushion for past and current underestimations.

2. Impact of Barnett Shale Emissions on DFW Ozone Levels

Barnett Shale emissions of NOx and VOCs have been estimated to be as large as the totals produced by the DFW passenger and truck vehicle fleet. These emissions are concentrated for now on the western side of DFW, and are most dense in the northwest quadrant of the Metroplex.

The most problematic ozone monitors for the DFW area, that is, the monitors that are recording the highest levels of ozone and the largest number of ozone violations are in the same northwest quadrant, roughly an area from I-20 in the south and Hwy360 on the east.

It is likely no coincidence that the worst-performing monitors are in the middle of the largest urban gas play in the US, emitting the equivalent of a whole other metropolitan fleet of vehicles, and frequently downwind of coal plants, cement kilns and center city pollution.

3. Barnett Shale Controls

a. Require electric compressors

Natural-gas fired reciprocating internal combustion engines (IC Engines) and natural gas-fired turbines are used to operate compressors, which provide the energy to move the natural gas in the pipelines from the point of production to the point of use. When examining NOx emissions from gas pipeline compressor engines, it's important to understand that the work is performed by the compressors, which by themselves produce no emissions. The emissions come from the exhaust of the IC engines, which are fueled with a small amount of the readily available natural gas.

Traditionally, NOx emission reductions from gas pipeline compressor engines have bee achieved by advances in engine design, and in some cases, by the installation of catalytic and non-catalytic reduction techniques, such as SNCR, SCR, and NSCR. However, in areas like DFW where air quality concerns are important, another option is available to pipeline operators.

Over the last 20 years compressor manufacturers have made great advances in the design and operation of electrically-powered pipeline compressors. The power to run the compressors does not come from IC engines and the combustion of natural gas, which produced NOx emissions, but rather from electrically-powered motors. The electrification of the natural gas production and distribution pipeline systems in Texas has the potential to deliver huge reductions in NOx emissions in DFW and throughout all of east and central Texas, where our ozone problems are most acute.

In remote areas without ready access to electricity, the use of natural gas-fire compressor engines makes sense and is the most cost effective and often the only way to produce the power needed to run the pipeline compressors. However, access to electricity is neither a concern in the DFW Metroplex nor at most locations in east and central Texas. The cost of providing electricity to production or distribution compressors that are presently relying on natural gas is offset by the fuel savings of not having to burn fuel to run the engines. Costs for electrification are also offset by reduced maintenance costs when switching from a combustion engine to an electric motor to run compressor.

On its website, the Interstate Natural Gas Association of America makes this assessment of the potential for compressor electrification (INGAA 2007):

> "Electric motor/centrifugal compressor - In this package the centrifugal compressor is driven by a high voltage, electric motor. One advantage of electric motors is they need no air emission permit since no hydrocarbons are burned as fuel. However, a highly reliable source of electric power must be available, and near the station, for such units to be considered for an application."

Similarly, the Williams natural gas pipeline company writes about compressor electrification with this analysis (Williams 2007):

> "The compressor is driven by either a gas turbine, electric motor, or reciprocating engine. A gas turbine is very similar to a jet engine found on an airplane except that instead of using the thrust to push the airplane, the jet turns a large fan to spin or rotate the compressor. An electric motor is a larger version of the electric motors you see every day just as the reciprocating engine is similar to your car engine

> just larger. The gas turbine and reciprocating engines typically use natural gas from the pipeline, where the electric motor uses power from an electric transmission line. **Selection of this piece of equipment is based on air quality, available power, and the type of compressor selected. Typically electric motors are used when air quality is an issue.** Gas turbines are used when electric power is not readily available. Reciprocating engines are used when smaller compressors are needed."

When designing a new compressor station in New Jersey in 2005, **Williams elected to use electric motor compressors because of air quality concerns** (Williams 2007):

> "Four main buildings are proposed as part of the new facility:
> • A compressor building to house the compressors. The compressor drive package will consist of two 5,000 horsepower electric motors each driving a reciprocating compressor.
> • A one-story switchgear building for electric power
> • A two-story auxiliary/office building
> • A one-story control building
> The project has been designed to minimize any adverse impact to surrounding communities. **The facility will be powered by quiet, non-polluting electric motors.**"

b. Extend the 2009 Engine Rule to Counties Outside the D-FW Metropolitan Area

Regulations adopted by TCEQ for the D-FW metropolitan area and scheduled to take effect in early 2009 will limit NOx emissions from engines larger than 50 horsepower.(7) Rich burn engines will be restricted to 0.5 g/hp-hr, lean burn engines installed or moved before June 2007 will be restricted to 0.7 g/hp-hr, and lean burn engines installed or moved after June 2007 will be limited to 0.5 g/hp-hr. Applying these rules to engines outside the metropolitan area would reduce 2009 NOx emissions from a large number of engines, in particular, rich burn engines between 50 to 500 hp. Emissions of NOx in 2009 from the engines outside the metropolitan area would drop by approximately 6.5 tpd by extending the D-FW engine rule, an amount greater than mobile source emissions in all of Johnson County (4 tpd), or more than 50% of the emissions from Dallas-Fort Worth International Airport (12.6 tpd).

Extending the D-FW engine rule to counties outside the metropolitan area would likely result in many engine operators installing NSCR systems on rich burn engine exhausts. These systems would not only reduce emissions of NOx, but they would also be expected to reduce emissions of VOC, the other ozone and particulate matter precursor, by approximately 75% or greater. Additional co-benefits of NSCR installations would include lower emissions of organic HAP compounds like benzene and formaldehyde, lower emissions of methane, and lower emissions of carbon monoxide. The level of HAP, methane, and carbon monoxide control would also be expected to be 75% or greater with typical NSCR installations.

Analyses of NSCR installations and operating costs by numerous agencies have indicated that the technology is very cost effective. For example, the Illinois Environmental Protection Agency estimated in 2007 that NSCR could control NOx from 500 hp engines at approximately $330/ton. The U.S. EPA in 2006 estimated that NSCR could control NOx from 500 hp engines at approximately $92 to 105/ton. A

2005 report examining emissions reductions from compressor engines in northeast Texas estimated NOx cost effectiveness for NSCR at $112-183/ton and identified VOC reductions as an important co-benefit. These costs are well under the cost effectiveness values of $10,000 to $20,000 per ton often used as upper limits in PM2.5, ozone, and regional haze (visibility) regulatory programs. The simultaneous HAPs and methane removal that would occur with NSCR use provide further justification for extending the D-FW engine rule to counties outside the metropolitan area.

Downwinders at Risk recommends that the SIP include regulations for NOx emissions reductions of 90% from current levels across the entire natural gas compressor engine fleet in DFW and east and central Texas. These regulations should cover all gas compressor engine units (rich burn, lean burn, and turbines; small, medium, and large HP), based on electrification of much of the fleet. These regulations would provide approximately 14 tpd of additional NOx reductions within DFW, and 135 tpd across east and central Texas. Since IC engines are also VOC emission sources, from unburned fuel and incomplete combustion product emissions, an electrification program would have the benefit of reducing VOC emissions by approximately 2 tpd in DFW and 20 tpd in east and central Texas.

These reductions would help the DFW area get into attainment, and have the additional benefit of helping the Tyler-Longview, San Antonio, Austin, Houston-Galveston Brazoria, and Beaumont-Port Arthur areas in Texas stay or get into attainment. These reductions are achievable with a combination of engine replacement or retrofit, the installation of control technology like SCR, or electrification of the compressor units.

The State has previously implemented regulations that established 90% NOx emissions reductions based on the electrification of internal combustion engine sources. In 1999, the State adopted rules that required the owners and operators of airports in DFW to reduce emissions from ground support equipment (GSE) by 90% (24 Texas Register 11938, Chapter 114, Rule Log Number 1999-055E-114-AI). The rule, and the associated agreed.

c. Vapor Recovery Units

Vapor recovery units (VRU) can be highly effective systems for capturing and separating vapors and gases produced by oil and condensate tanks. Gases and vapors from the tanks are directed to the inlet side of a compressor, which increases the pressure of the mixture to the point that many of the moderate and higher molecular weight compounds recondense back into liquid form. The methane and other light gases are directed to the inlet (suction) side of the well site production compressors to join the main flow of natural gas being produced at the well. In this way, VRU use increases the total production of gas at the well, leading to an increase in gas available for metering and revenue production. In addition, liquids produced by the VRU are directed back into the liquid phase in the condensate tank, increasing condensate production and the income potential from this revenue stream. **Vapor recovery units are estimated to have control efficiencies of greater than 98%.**

The gases and vapors emitted by oil and condensate tanks are significant sources of air pollutants, and the escape of these compounds into the atmosphere also reduces income from hydrocarbon production. With a wellhead value of approximately $7/MMBtu, the 7 tpd of methane that is estimated to be emitted in 2009 from condensate tanks in the Barnett Shale have a value of over $800,000 per year. **Even more significantly, a price of condensate at $100/bbl makes the 30 tpd of VOC emissions in 2009 from the tanks in the Barnett Shale potentially worth over $10 million per year.**

While flaring emissions from tanks in the Barnett Shale would provide substantial environmental

benefits, especially in terms of VOC and methane emissions, capturing these hydrocarbons and directing them into the natural gas and condensate distribution systems would provide both an environmental benefit and a very large potential revenue stream to oil and gas producers.

d. Enclosed Flares

Enclosed flares are common pollution control and flammable gas destruction devices. Enclosed flares get their name because the flame used to ignite the gases is generated by burner tips installed within the stack well below the top. The flames from enclosed flares are usually not visible from the outside, except during upset conditions, making them less objectionable to the surrounding community compared to open (unenclosed) flares.

Using a flare to control emissions from tanks involves connecting the vents of a tank or tank battery to the bottom of the flare stack. The vapors from oil and condensate tanks are sent to the flare, and air is also added to provide oxygen for combustion. The vapors and air are ignited by natural gas pilot flames, and much of the HAP, VOC, and methane content of the tank vapors can be destroyed. The destruction efficiency for flares can vary greatly depending on residence time, temperature profile, mixing, and other factors. Properly designed and operated flares have been reported to achieve 98% destruction efficiencies. Applying 98% destruction efficiency to the Barnett Shale oil and condensate results in potential emission reductions of 30 tpd of VOC, 0.6 tpd of HAPs, and 7 tpd of methane. These reductions are substantial and would provide large benefits to the ozone and PM precursor, HAPs, and greenhouse gas emission inventory of the Barnett Shale area. The use of flares, however, also has several drawbacks. One of these is that tank vapor flares need a continuous supply of pilot light natural gas, and reports have estimated pilot light gas consumption at around 20 scfh/flare.

The URS analysis indicated that flares were able to cost effectively reduce VOC emissions at $40/ton, while VRU units produced no real costs and quickly generated additional revenue from the products recovered by VRU operation. There was a less-than 1-year payback on the use of a VRU system, followed by years of the pollution control device becoming steady revenue source.

e. Well Completions

Procedures have been developed to reduce emissions of natural gas during well completions. These procedures are known by a variety of terms, including "the green flowback process" and "green completions." To reduce emissions, the gases and liquids brought to the surface during the completion process are collected, filtered, and then placed into production pipelines and tanks, instead of being dumped, vented, or flared. The gas cleanup during a "green" completion is done with special temporary equipment at the well site, and after a period of time (days) the gas and liquids being produced at the well are directed to the permanent separators, tanks, and piping and meters that are installed at the well site. Green completion methods are not complex technology and can be very cost effective in the Barnett Shale. The infrastructure is well-established and gathering line placement for the initial collection of gas is not a substantial risk since wells are successfully drilled with a very low failure rate.

Emissions during well completions depend on numerous site-specific factors, including the pressure of the fluids brought to the surface, the effectiveness of on-site gas capturing equipment, the control efficiency of any flaring that is done, the chemical composition of the gas and hydrocarbon liquids at the drill site, and the duration of drilling and completion work before the start of regular production.

Some recent reports of the effectiveness of green completions in the U.S. are available, including one by

the U.S. EPA which estimated 70% capture of formerly released gases with green completions, and another report by Williams Corporation which found that 61% to 98% of gases formerly released during well completions were captured with green completions. Barnett Shale producer Devon Energy is using green completions on its wells, and they reported $20 million in profits from natural gas and condensate recovered by green completed wells in a 3 year period.

If green completion procedures can capture 61% to 98% of the gases formerly released during well completions, the process would be a more environmentally friendly alternative to flaring of the gases, since flaring destroys a valuable commodity and prevents its beneficial use. Green completions would also certainly be more beneficial than venting of the gases, since this can release very large quantities ofmethane and VOCs to the atmosphere. Another factor in favor of capturing instead of flaring is that flaring can produce carbon dioxide (a greenhouse gas), carbon monoxide, polycyclic aromatic hydrocarbons, and particulate matter (soot) emissions.

III. C. The Midlothian Cement Kilns

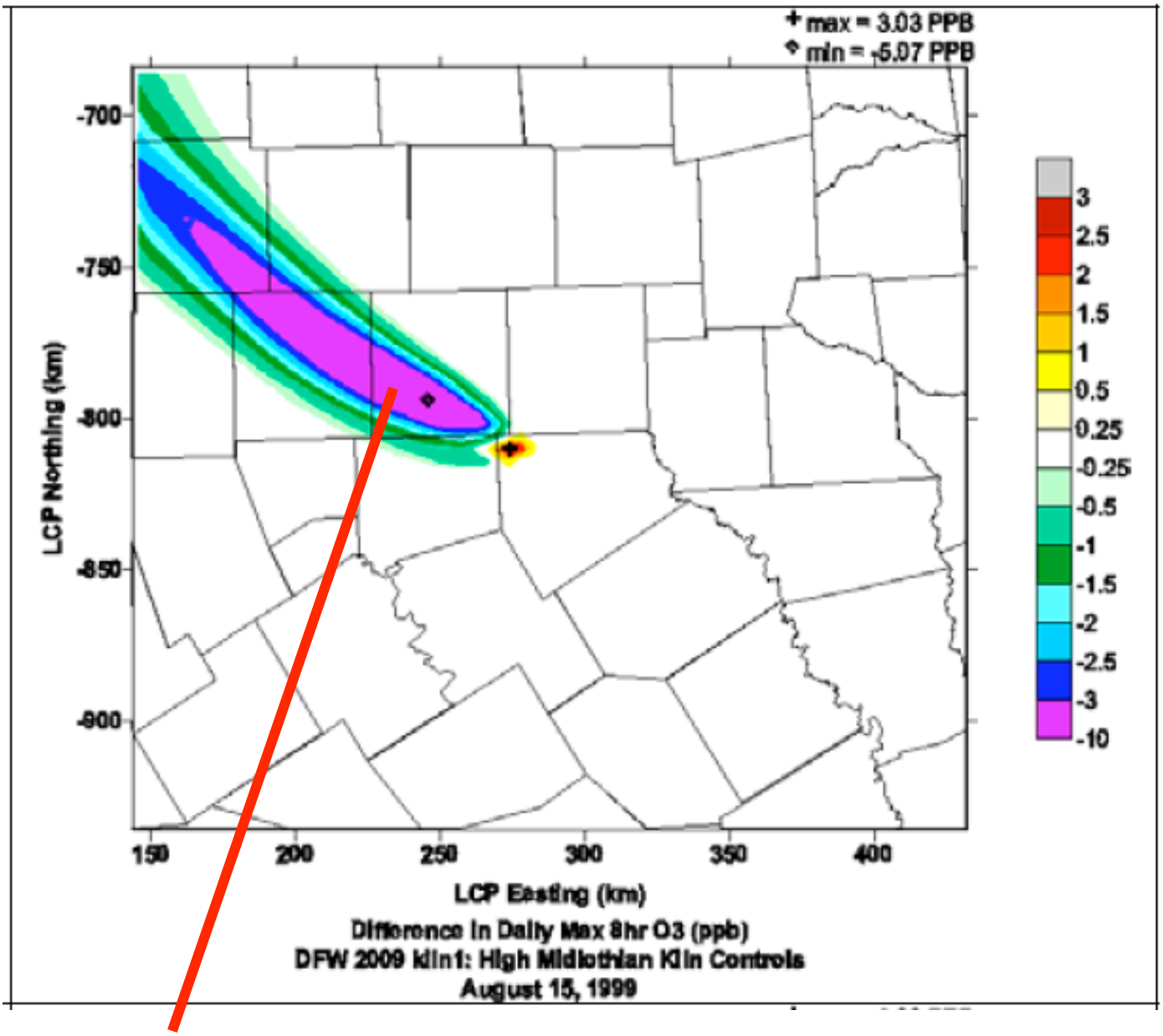
1. Cement Kiln Impacts on Tarrant, Denton, Parker, and Wise Counties

In its reply to citizens who wanted to see state-of-the art control on the cement kilns in 2006, the TCEQ attempted to diminish the importance and potential impacts of requiring additional cuts in NOx emissions. One way they did this was by examining the impact of emissions reductions from the plants on average, across the entire DFW nonattainment area (Submitted SIP, Response to Comments, p. 59):

> "The commission also conducted two modeling sensitivity analyses based on the results of the Cement Kiln Study, included as Appendix I of the DFW eight-hour ozone attainment demonstration SIP. These modeling sensitivity analyses reflected a low level of control (assuming SNCR control and approximately 10 tpd of NOx reduction) and a high level of control (assuming SCR control and approximately 20 tpd of NOX reduction), respectively. With 10 tpd of NOX reduction, the DFW nine-county average response was -0.08 ppb. With 20 tpd of NOX reduction, the average response was -0.31 ppb."

Unlike automobile emissions in DFW, the three cement plants are located in very close proximity and their impacts on ozone are therefore concentrated in linear regions directly downwind from Midlothian. As the State very well knows, compliance with the ozone standard for a nonattainment area is determined by each monitor in an area showing attainment, not by the average ozone levels across all the monitors. The average impact of the cement kilns on average ozone levels across the 9-county area is *irrelevant*.

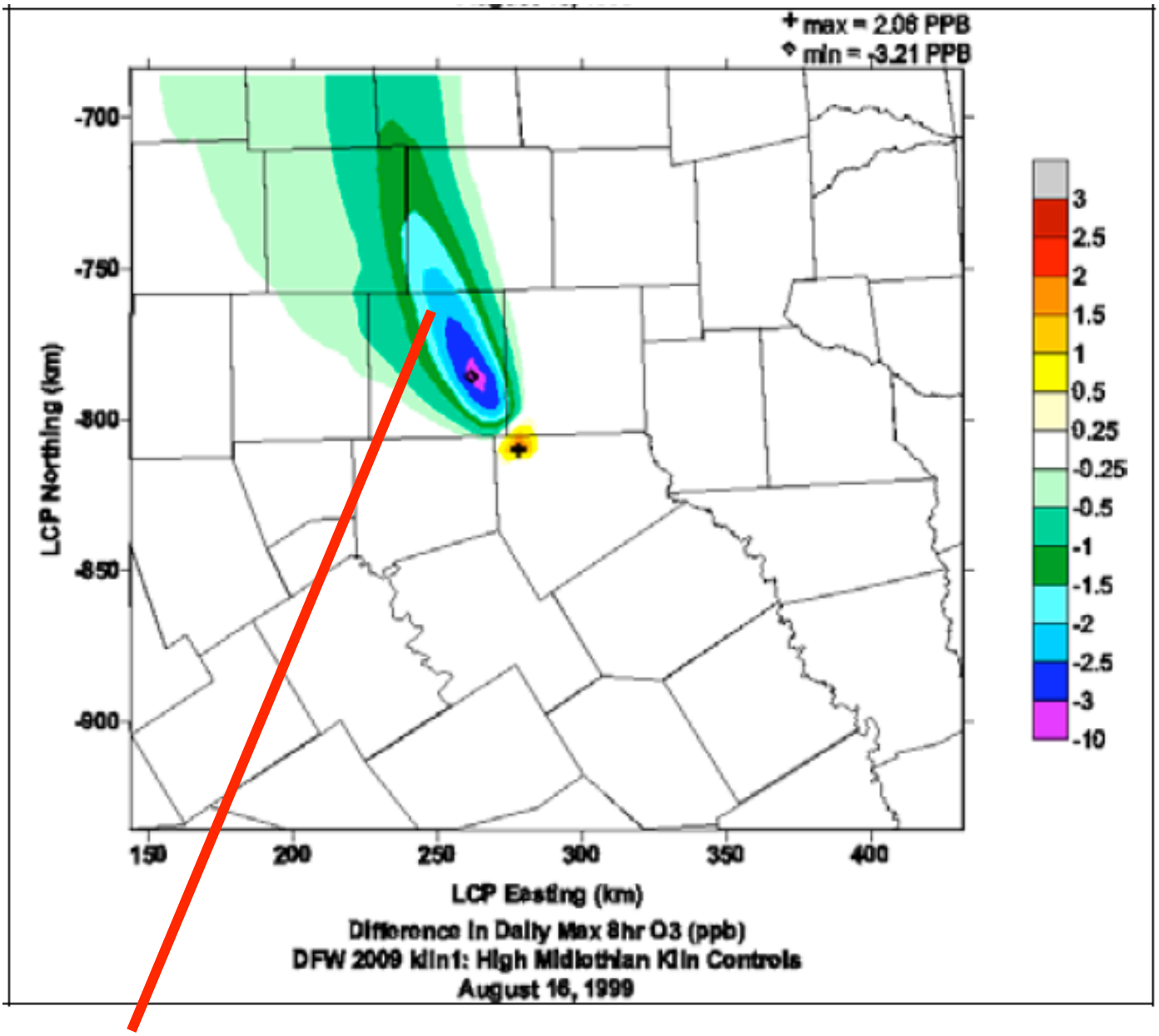
The State commissioned a February 22, 2006, study by outside experts to examine the potential impact of high level cement kiln NOx controls on individual monitors across the DFW nonattainment area (ENVIRON 2005). As the next two figures from the report show, adding advanced NOx control technology to the cement kilns could dramatically reduce 8-hour ozone concentrations in broad regions of Tarrant, Parker, Denton, and Wise counties, especially in the Cities of Arlington and Fort Worth.



Ozone reduced 1 to 5 ppb across much of Tarrant, Parker, and Wise Counties by SCR NOx controls on the cement kilns on Day 1 of ENVIRON study.

The ozone maps and grid analysis performed by ENVIRON demonstrated the wide impact that cement kiln emissions have in large regions of the DFW area, and also the potential benefits of 90% NOx reductions. In addition to these broad analyses, ENVIRON also determined the impact on air quality at the 9 individual ozone monitoring locations that were operational in 1999. Their results indicate that 90% NOx reductions would have significant impacts at numerous monitors, especially those in Tarrant County.

Impacts at Official Monitoring Sites of 90% NOx Reductions from Elli County Cement Kilns. (ENVIRON 2005, Supplemental Table)



Ozone reduced 1 to 3 ppb across much of Tarrant and Denton Counties by SCR NOx controls on the cement kilns on Day 2 of ENVIRON study.

In addition to the ozone maps provided in the ENVIRON report, one of the most critical Parts of their study was an analysis of the impacts of cement controls on individual grid locations in the DFW study area. They concluded that applying 90% NOx reductions to the cement kilns reduced concentrations by at least 1 ppb at 166 grid locations that were above the ozone standard in the DFW area. In contrast, applying only 40% reductions (which incidentally, is even more stringent than the 36% control strategy the State adopted in the Submitted SIP) only resulted in 23 grids showing a 1 ppb decrease.

ENVIRON's analysis demonstrates that the number of areas that would see dramatic improvements in air quality by applying 90% NOx reductions compared to 40% reductions would increase by a factor of 7.

Impacts of 90% and 40% NOx Reductions from the Ellis County Cement Plants (ENVIRON 2005, Table 6, p. 13)

Table 6. Number of exceedance[1] grid cells that reduce the daily maximum 8-hour ozone by at least 1 ppb in DFW.

Scenario Run	2009 Future Base run44.fy2009.a1	High Cement Kiln Control run44.fy2009.a1.kiln1	Low Cement Kiln Control run44.fy2009.a1.kiln2
990815	---	0	0
990816	---	84	21
990817	---	48	2
990818	---	14	0
990819	---	18	0
990820	---	2	0
990821	---	0	0
990822	---	0	0
Totals	---	166	23

[1] Exceedance cells are 2009 baseline grid cells exceeding 85 ppb

The ozone maps and grid analysis performed by ENVIRON demonstrated the wide impact that cement kiln emissions have in large regions of the DFW area, and also the potential benefits of 90% NOx reductions. In addition to these broad analyses, ENVIRON also determined the impact on air quality at the 9 individual ozone monitoring locations that were operational in 1999. Their results indicate that 90% NOx reductions would have significant impacts at numerous monitors, especially those in Tarrant County.

Impacts at Official Monitoring Sites of 90% NOx Reductions from Ellis County Cement Kilns. (ENVIRON 2005, Supplemental Table)

Daily Change (ppb)	High Kiln Control Scenario						Compared to 2009base.a1		
Site	990815	990816	990817	990818	990819	990820	990821	990822	Avg Change
Frisco C31	0.00	0.00	0.20	-0.20	0.00	0.00	0.00	0.00	0.00
Hinton C60	0.00	-0.10	0.20	-0.40	-0.10	0.00	0.00	0.00	-0.05
Dallas N C63	0.00	0.00	0.20	-0.30	-0.10	0.00	0.00	0.00	-0.03
Redbird C402	0.00	-0.30	0.20	-1.10	-0.10	0.10	0.00	0.00	-0.15
Denton C56	0.00	-0.20	-0.20	0.00	-0.10	0.00	0.00	-0.20	-0.09
Midlothian C94	-1.30	-0.30	-0.90	0.20	-1.40	0.60	0.00	0.30	-0.35
Arlington C57	0.00	-3.00	-1.10	-0.60	0.10	0.10	0.00	-3.20	-0.96
FtW NW C13	-1.30	-2.40	-0.90	0.00	0.00	0.00	0.00	-2.30	-0.86
FtW Keller C17	0.00	-1.20	-0.50	0.00	-0.10	0.00	0.00	-0.20	-0.25
Average (ppb)	-0.29	-0.83	-0.31	-0.27	-0.20	0.05	0.00	-0.62	-0.30

2-3 ppb reductions possible on multiple days in Arlington and Fort Worth with 90% controls on kilns

ENVIRON showed that 90% NOx emissions reductions from the cement plants had significant impacts on multiple days at several monitoring locations, including the Arlington C57 monitor and the Fort Worth NW C13 monitor. ENVIRON predicted that ozone levels at these monitors would drop 2-3 ppb with 90% controls on the kilns.

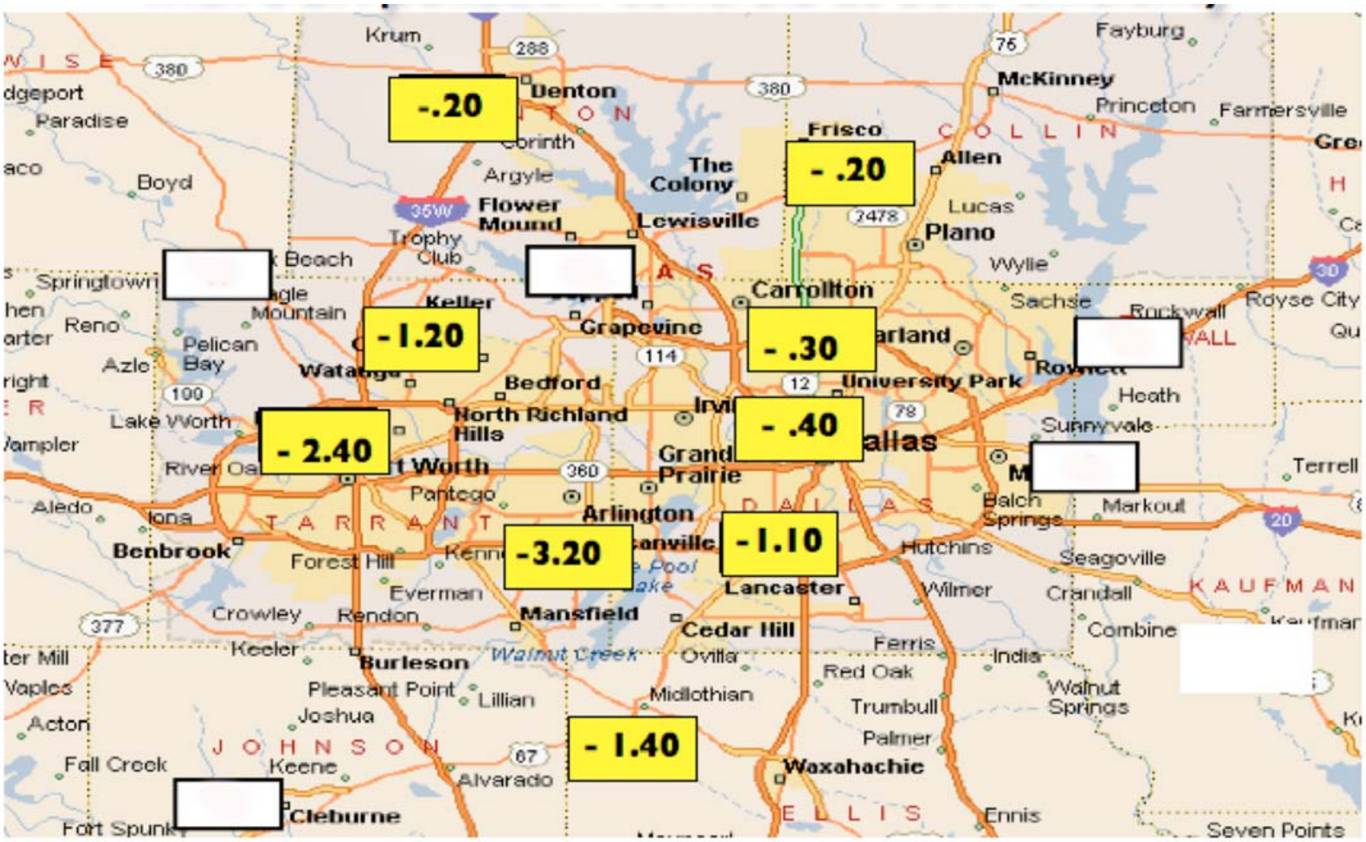
In this table, ENVIRON also calculated the average impacts of 90% cement kiln controls for an 8-day period, and also averages on each day for the 9 monitors across the DFW area overall. While these average values are interesting, it is vital to remember that compliance with the ozone standard is not determined with weekly or longer averages. Neither is compliance determined by averaging ozone concentrations across all the monitors in a region. Daily ozone values over 8-hour periods at individual monitors are used to determine compliance with the ozone standard. The daily ozone values at each monitor are use to determine compliance, independent of what happened at other monitors, or what happened the day before, the day after, or for the entire week.

Overall, the ENVIRON analysis demonstrated that the impacts of emissions from the cement plants on individual monitors is significant, and also that 90% NOx reductions can have substantial benefits to monitors in Tarrant County that are among the most stubborn to bring into compliance with the ozone standard.

1a. Specific Impacts on Monitors Driving this DFW SIP

According to the TCEQ, a "June 2006 Extended Episode" will be the photochemical modeling baseline for not only this 85ppb SIP, but also the one DFW must write to comply with the new federal standard expected in August. In that June 2006 episode, Eagle Mountain Lake, a relatively new monitor, and Denton South Airport are the sites with the highest ozone levels. It's important to note however that it's the Keller site, along with Eagle Mountain Lake, which are responsible for the failure of the SIP in 2009, and in general, it's the grouping of monitors within the northwest quadrant of the DFW Metroplex that are the most problematic.

As the EVINRON modeling demonstrates, it's precisely those monitors that are the most beneficially affected by adopting SCR technology on the kilns. Using a TCEQ map of DFW showing monitor sites, you can see how much, and where, ozone levels would decrease with an 80-90% reduction in cement plant NOx:



In fact, this beneficial impact was so great that the Star-Telegram wrote in March, 2006 that:

> "Using detailed computer models, state regulators have concluded that **requiring the three cement kilns in Midlothian to add modern pollution controls would apparently lower ozone levels in Fort Worth and Arlington almost enough to meet federal standards by 2009."**

In other words, this one control measure on the Midlothian cement kilns would bring Tarrant County into compliance with the 85ppb standard almost single-handedly.

Because there was no monitor at Eagle Mountain Lake in 1999 for this comparative modeling episode, we don't have a post SCR result. However, by simple extrapolation, one can estimate reasonably that SCR on the kilns would decrease ozone between .1 and 2 ppb of ozone – approximately the margin of violation in 2009. Denton's ozone levels drop by .2, Keller's by 1.2, NW Ft. Worth by almost 2.5, and 3.2 in Arlington.

<u>Indeed, there was no other single control measure considered in 2006 that reduced Tarrant County ozone levels more than SCR on the Midlothian cement kilns.</u>

In June 2006, the month the TCEQ is now using to base the next two DFW SIPs on, there were 72 violations of the 85 ppb standard, including 14 "orange" days, and 2 "red" days.

Out of those 16 most serious days, the Midlothian cement kiln plumes affected the monitor recording the highest level of ozone on nine of them, including both “red” days. We know this because the TCEQ has provided “point source plume” maps on its website of these days that trace the path of the plumes from every major industrial site in the nine-county DFW non-attainment area.

In the TCEQ’s own episode for this SIP, the kilns are at the scene of the crime over half the time when things get really bad.

At the Denton monitor site, 3 out of 8 violations were affected by the kilns in June 2008. At Eagle Mountain Lake, 2 out of 8. FW Northwest 5 out of 8, and Parker County 2 out of 8. Most of the time, the kilns were impacting these monitors when each of them recorded the day’s highest individual ozone level.

When, and where ozone levels are highest, the kilns are large contributing factors most of the time. This is especially true in Tarrant County, where DFW ozone problems are the most chronic.

B. New Kiln Controls

1. SNCR on TXI # 5

There’s no reason why TXCI cannot install SNCR on Kiln 5. It’s now the only kiln in Midlothian without the technology. Even Ash Grove’s 40-year old wet kiln operates SNCR.

2. SCR

a. TCEQ unreasonably excluded SCR controls for cement kilns in its 2006-7 SIP

The 2006-7 SIP required that the cement plants reduce emissions by 9.69 tpd. This means that the cement plants were collectively expected to reduce their emissions by 36%. The State based its 36% reduction strategy on 9 of the 10 cement kilns at the cement plants using selective non-catalytic reduction technology (SNCR) or equivalent controls and one of the cement kilns (TXI #5, the largest cement kiln in Region VI) did not implement any post-combustion NOx controls.)

The State defended its 36% reduction strategy throughout the Submitted SIP by claiming that more advanced levels of controls available via Selective Catalytic Reduction are either technologically unavailable or economically unreasonable. There were numerous faults with the State's analysis of SCR NOx control technology for the cement plants in Ellis County.

The State's arguments defending the 36% reduction strategy (Submitted SIP, Chapter 4and Response to Comments) include statements such as:

> "In most cases, the commission anticipates that the source cap limitations will be attainable with SNCR and will not require costly and time consuming research and development of other technologies."
>
> "The Cement Kiln Study describes SCR and LoTOx technologies, which can reduce NOx emissions by roughly 80 to 85 percent; however, neither has been applied to wet kilns anywhere in the world. Furthermore, neither has been sufficiently tested on cement kilns similar in design and feed materials to Ellis

> County kilns to conclude with certainty that those levels of reductions are achievable..."

The blue-ribbon panel of outside experts that wrote the Cement Kiln Study (ERG Inc., 2006) concluded that SCR was available technology because it had been tested and implemented full-scale in Europe and because it had proven effective on similarly fired industrial and utility units in the U.S., like coal-fired power plants and waste incinerators (Submitted SIP, Cement Kiln Study, Appendix I, Tables 1-1 to 1-16 and Chapter 4.0, July 14, 2006). These cement-industry insiders unanimously concluded that the physical and chemical characteristics of cement kiln flue gases from the cement plants in Ellis County made the gases amenable to NOx reductions with SCR and LoTOx.

In addition to this positive assessment of cement kiln NOx control with SCR by the authors of the Cement Kiln Study in July 2006, there have been more recent developments in cement kiln NOx controls that further demonstrate its availability to reduce NOx emissions from cement kilns.

b. CEMEX Permit Application

CEMEX is the third largest cement manufacturer in the world and it operates numerous cement plants across the U.S. and in Texas. CEMEX submitted a permit application ton the State of Florida on October 12, 2006, for the construction of a cement kiln in Hernando County, Florida. The cement kiln was planned for an area that is in attainment with the ozone standard, in a State where every county is in attainment. CEMEX had to perform a BACT analysis in the application, including an evaluation of the effectiveness of SCR technology (CEMEX 2006). This application was filed just weeks before publication by the State of Texas of the Proposed DFW SIP in December 2006, so it is possible that its contents were unknown to the State or EPA at that time.

In the State of Texas's response to comments received on the Proposed DFW SIP (Submitted SIP, Response to Comments, p. 27), the State wrote:

> "The commission could find no evidence to support Downwinders claim that CEMEX “admitted” that SCR has been proven effective in cement plants."
> Because CEMEX's permit application represents an important and recent assessment by a major player in the U.S. cement industry on the applicability of SCR technology, copies of the relevant pages are copied here for EPA review.

On Page 116 of the permit application, CEMEX describes SCR as a "proven effective" control technology for cement plant NOx control:

> "The two add-on NOx control technologies that have been **proven** effective by full scale application on cement plants are SNCR and SCR. Both technologies are based on the injection of an ammonia based compound into a hot gas stream and the subsequent reduction of NOx to elemental nitrogen by the ammonia. SNCR is effective in a temperature range of 850-1150°C and operates without a catalyst. SCR on the other hand, operates in a temperature range of 300-500°C and employs a catalyst to facilitate the reaction between ammonia and NOx."

On Page 107 of the permit application, CEMEX describes SCR as currently "available" NOx control technology for cement plants:

"6.4.3 Description of Control Technologies
A summary of **available** NOx control technologies and their associated control efficiencies is listed in Table 32. Control technologies for NOx can be divided into two categories: design features, and post-combustion controls. The **available** types of NOx controls are:
Design Features:
• Plant design;
• Combustion control;
• Low-NOx burners with indirect firing; and
• Fuel selection and feed mix.
Post-combustion controls:
• Selective non-catalytic reduction (SNCR); and
• Selective catalytic reduction (SCR)."

c. Linero et al 2007 Report

In addition to the CEMEX permit application, another important and recent development regarding cement kilns is the successful first year of operation of the full-scale SCR unit at the Cementeria di Monselice cement plant in northern Italy, installed in June 2006. In the Submitted SIP, the State assessed SCR technology with statements such as these (Submitted SIP, Response to Comments):

> "No SCR or LoTOx units are operating on cement kilns anywhere in the U.S. The commission does not consider either SCR or LoTOx to be demonstrated technologies for the cement kilns in Ellis County."
>
> "Clearly, SCR and LoTOx are commercially available--they are in use on numerous types of industrial equipment. However, neither SCR nor LoTOx has been applied to wet process cement kilns, and only SCR has even been attempted on dry process cement kilns, with ambiguous results. Little technical information is available on these SCR applications."

Mr. Al Linero, P.E., of the Florida Department of Environmental Protection, visited and has been in was in close communication with officials at the Monselice cement. He co-authored a collaborative report on the SCR installation entitled "High Dust SCR Succeeds at Cementeria di Monselice" which he presented on June 26, 2007 at the Air and Waste Management Association Annual Conference and Exhibition in Pittsburgh, PA. The report was co-authored by a cement company official, an SCR manufacturer, and it was motivated by plant efforts to develop good public relations with local and regional governments and regulators. The Linero et al report is the only collaborative study written about the Italian facility, with authorship representing government, a cement company, and a control technology engineer, and oversight by local and regional environmental regulators (Linero et al 2007a, Linero et al 2007b). The complete paper by Linero et al is available on the website of references for this report. The Conclusions are repeated here because they tell an effective story now that the plant has just completed its first year of full-scale SCR operations:

"CONCLUSIONS

The SCR installation has proven its multi-pollutant control capabilities. Beside the extremely high and efficient NOx-removal capabilities, NH3 present in flue gas from raw material is completely used in the SCR process, thus considerably lowering the aqueous ammonia consumption, the related operating cost, a fine particulate precursor and potential odorant. In addition, 75 % oxidation of VOC is recorded. Almost all ozone precursors (NOX and VOC) can be eliminated from the stack emissions of Cementeria di Monselice with the installed SCR process. These features will enable the cement industry to make use of a much wider range of raw materials and fuels whilst maintaining applicable emission standards and minimizing impacts on the environment.

SCR installation at Cementeria di Monselice at a glance:

Operating Time as end of October 06: > 3,600 h

Availability: 100%

NOx removal efficiency: up to 97%

NH3 emissions before SCR was in operation 20 - 50 mg/m3

NH3 after commissioning of the SCR < 1 mg/m3

Savings in 25% NH3(aq) consumption corresponding to 20 - 60 kg/h

VOC-oxidation: 75%

Other Benefits Less air toxics, less Odor

Indicative operating costs for 90% NOX-removal efficiency: 1 – 1.3 €/t clinker"

d. SCR Manufacturers Say the Technology is Proven for Kilns

In a September 30th 2008 letter to then EPA Administrator Stephen Johnson, Carolyn Slaughter of the Institute of Clean Air Companies, representing the largest manufacturers of pollution control equipment, wrote that:

> "Selective Catalytic Reduction (SCR) technology represents **a mature NO_x abatement technology** and is an effective technology for reducing NO_x emissions from cement kilns. While there is no domestic experience applying SCR on cement kiln there is a growing body of European experience. **SCR can reduce NO_x emissions from cement kilns by greater than 90 percent,** which is consistent with the removal efficiencies achieved with SCR in the electricity generation industry. There are over 300 SCR systems installed on coal, oil and natural gas-fired utility boilers and there are many more applications of the technology in other industrial sectors such as nitric acid plants, steel sinter plants, waste incinerators, and refinery heaters. **SCR catalysts have been proven to handle high levels of dust from coal combustion**. SCR is reliable and durable under severe operating conditions. The typical operating temperatures for an SCR range from 500 to >950°F, **which favor its use on cement kilns as the gas temperature between the rotary kiln and the stack are within this range. High temperatures in the rotary kiln create high concentrations of NO_x, making SCR particularly suitable to removing significant levels of NO_x as much as 90 percent or more."**

Ms. Slaughter's letter also listed the co-benefits of SCR technology:

> **"**In addition to NO_x reduction capabilities, there are a number of emission reduction co-benefits associated with the installation of SCR, including

- Destruction of the other pollutants e.g. ozone inducing VOCs;
- Reduction of air toxics such as dioxin and furan and benzene;
- Facilitating the removal of mercury (Hg) by catalytic oxidation; and
- Minimization of formation of fine PM by NO_x and ammonia control.

SCR is superior in every way to current NOx reduction technology being used in the Midlothian cement kilns, beginning with being twice as effective in reducing NOx itself and continuing with the added benefits of significantly reducing other kinds of harmful air pollution.

e. More, not Fewer Kilns with SCR are Being Built in Europe

In 2001, there was one cement plant in the world using SCR. Now there are nearly half a dozen. According to a 2009 German cement industry summary (VSZ Activity Report 2007-2009 p.43)

> "In Italy, two SCR systems have already been installed in cement works and a third is in the planning stage. In Austria, various pilot investigations have already been started. If these are successful, they will be followed by the construction of demonstration plants. As a result of the contact between the German and Austrian cement industry associations, VDZ and VÖZ, it is ensured that the experiences from the Austrian SCR projects can also be used by the German cement industry. Two SCR demonstration projects are also planned for Germany. The first system in the raw gas arrangement is scheduled to commence operation in early 2010. The second system in the clean gas arrangement (tail end with waste heat utilisation) is planned for 2011."

Ash Grove's wet kilns now have SNCR control technology because one other wet kiln in the entire world – in France – was using such a system. Based on this precedent, a half-dozen SCR units on European kilns should be more than enough to justify that technology being brought to Midlothian.

f. LaFarge Cement is Conducting an SCR Pilot Test in Joppa, Illinois

In January of this year LaFarge Cement and EPA reached a settlement agreement that will result in a pilot-test of SCR technology at the company's Joppa cement plant. A small SCR unit will be retrofitted to a Lafarge dry kiln built in 1960 and now used for specialty cement. Although the exhaust flow will be smaller than a modern cement plants, industry should be able to scale up the unit for a more typical kiln.

This SCR breakthrough was fueled, in part, by the wide distribution of the 2006 TCEQ Midlothian Kiln NOx report and its encouraging assessment of the technology. It's disappointing that the state's report resulted in a testing of SCR in Illinois before it was done in Texas.

g. Hybrid SCR-SNCR units

SCR-SNCR hybrids could be built on all current Midlothian kilns once TXI installs SNCR on its Kiln #5. These hybrid SCR units are smaller and cheaper than full-scale SCR since they are sharing the workload with a SNCR system first. Such a system would still result in 90% plus reduction in cement plant NOx.

3. Cost Effectiveness

The SCR assessments by CEMEX in their late 2006 permit application, and the June 2007 report by Linero et al on the full-scale SCR operation at the Monselice cement plant are critical documents that support the conclusions of the July 2006 Cement Kiln NOx Study experts that SCR can effectively reduce NOx

emissions from the cement plants in Ellis County.

In addition to the assertions in the Submitted SIP about the technical feasibility of SCR, the State also attacks the cost effectiveness of advanced NOx control at the cement plants with SCR or LoTOx (Submitted SIP, Response to Comments). For example:

> "In terms of cost per ton of NOx emissions reduced, SNCR is more cost effective than SCR and LoTOx. Cost effectiveness estimates for SNCR presented in the cement kiln study range from $1,400 to $2,300 per ton of NOx. Cost effectiveness for SCR, on the other hand, was estimated to be considerably higher: **$1,600 to $5,500** per ton of NOx. LoTOx cost effectiveness estimates ranged from **$2,100 to $3,000** per ton. The commission considers the costs for SCR and LoTOx to be **unacceptably high** compared to the readily available alternative."

In these statements, the State made the surprising determination that costs of $1600 to $5500 per ton of NOx removed for SCR and $2100 to $3000 per ton of NOx removed for LoTOx were "unreasonably high". This contradicts the most recent guidance and practice in states with stubborn ozone reductions problems like California and Texas. For example, the State of Texas's own TERP program is paying for NOx reductions in nonattainment areas at costs up to $13,000 per ton (TCEQ 2006). A similar program in California is paying for NOx reductions up to $14,300 per ton (SCAQMD 2006). Outside of Texas and California, the State of Wisconsin recently published cost effectiveness guidelines for ICI units at up to $7000 per ton for its RACT, BART, and CAIR programs (Wisconsin 2007). In 2003, the State of Oklahoma developed cost effectiveness guidelines for the Central Oklahoma EAC at up to $10,000 per ton of NOx from EGUs (Oklahoma 2003).

As has already been stated, hybrid SCR-SNCR units would be even cheaper to build and operate than singular SCR units, meaning prices could be reduced by as much as a third to half.

4. Summary of Recent Developments Regarding SCR

It’s regrettable that the State ignored the most recent information available and chose to move forward with a 36% reduction strategy for the Ellis County cement kilns in its 2006-7 DFW SIP. A 90% reduction strategy would have for the first time substantially lowered the tpd NOx reductions from the kilns compared to their historical NOx emissions levels. There were numerous flaws in the State's arguments in the Submitted SIP regarding the technological feasibility and cost effectiveness of advanced NOx controls for the kilns. The most recent studies, assessments, and control technology installations prove that 90% reductions are technologically and economically achievable, and that controls at these levels on the kilns would result in major reductions in ozone levels throughout Tarrant, Parker, Wise, and Denton Counties, including the very monitors now at the heart of this “do-over” SIP.

TCEQ should require pilot testing of an SCR or SCR-SNCR hybrid unit at one or more representative Midlothian cement kilns as an integral part of this first, 85ppb SIP. If this testing proves successful – meaning significantly more NOx is reduced for a reasonable amount per ton –then SCR should be required for installation in all current and future North Texas cement kilns as part of the second SIP aimed at achieving compliance with the tougher federal ozone standard expected to be announced in August.

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July 30, 2010

Re: Informal comments on 2010 Dallas-Fort Worth Eight-Hour Ozone State Implementation Plan Stakeholder Group

Attention TCEQ Air Quality Division:

The Lone Star Chapter of the Sierra Club is submitting informal comments as requested by the TCEQ on the 2010 Dallas-Fort Worth Eight-Hour Ozone State Implementation Plan proposed by the Stakeholder Group.

Summary of comments

1) Require effective NOx emissions controls on large NOx industrial plants through installation of Selective Catalytic Reduction Technology (SCR). For example, SCR NOx controls need to be installed on all the Midlothian Portland cement kilns and the East-Central Texas coal-fired plants (especially older ones). SCR is in effective operation on Portland cement kilns in Europe, removing 90%+ of smog-forming pollution.

2) Extensive VOC and NOx controls on all aspects of natural gas development in the Barnett Shale counties. 90% controls are available and in use.

3) Adopt all the recommendations from the 2006 Clean Air Steering Committee that were not taken into consideration by the TCEQ four years ago. Update these recommendations based on newer pollution control technologies and best practices.

4) Create long-term emissions control strategies that go further to mitigating ozone than what's required (<85 ppb). Consider the next EPA 8-hour ozone standard likely to be 70 ppb and will be announced by EPA on August 31, 2010 in the current SIP planning.

5) Aim the SIP plan where smog pollution is worst in four DFW counties: Tarrant, Denton, Wise, and Parker Counties. (Asthma rates for children under 14 are three times higher (22%) in western DFW area than across the state of TX)

Detailed comments

1) Require effective NOx emissions controls on large NOx industrial plants through installation of Selective Catalytic Reduction Technology (SCR). For example, SCR NOx controls need to be installed on all the Midlothian Portland cement kilns and the East Texas coal-fired plants (especially older ones). SCR is in effective operation on Portland cement kilns in Europe, removing 90%+ of smog-forming pollution.

A. Portland Cement Kilns Rank as the Largest Nitrogen Oxides Point Sources in the DFW Region

Midlothian Portland Cement Kilns in Ellis county include three large cement mfg operations: Texas Industries, Ash Grove Cement and Holcim Cement have a total of 11 cement kilns that need SCR for NOx stack emissions controls. The Ellis County Portland Cement kilns are located in one of the worst possible locations for impacting the DFW Region with NOx emissions being upwind during the summer ozone season.

The Midlothian Portland Cement Kilns are the three largest emitters of NOx in the 9-county DFW ozone nonattainment region and among the largest NOx sources in North Texas, excluding power plants. In 2008, the three Midlothian cement plants reported more than 7,000 tons of NOx emissions. The 7,446 tons NOx from the Midlothian cement kilns accounts for 71% of DFW industrial NOx among 10,489 tons total from 342 sources, and the Midlothian cement kiln NOx % shows overwhelmingly the massive character of their NOx emissions. Clearly it appears that the largest industrial NOx reductions within the DFW Region with the greatest air quality impact are adopting SCR controls at Midlothian.

Holcim cement - 3184 tons
TXI cement - 2877 tons
Ash Grove cement - 1385 tons
Total Midlothian cement kilns = 7446 tons

B. Coal-fired Power Plants Rank as the Largest Nitrogen Oxides Point Sources in Texas

Coal-fired power plants are a major air quality concern in North Texas and the DFW ozone nonattainment region in particular, since they are the single largest point source of industrial stack NOx emissions in Texas, according to the TCEQ's 2008 Point Source Emissions Inventory.

The 17 existing coal plants with 36 boilers reported a total of 123,309 tons of NOx in 2008 and their NOx emissions represented 33.1% of industrial NOx reported among the 372,664 NOx tons emitted by 1932 plants statewide. The 14 coal plants in the Eastern airshed emitted 80.4% of Texas coal plant NOx emissions accounting for 99,113 tons and the three coal plants located in the Panhandle-Oklahoma/Texas border reported 19.6% or 23,200 tons NOx. The 14 coal plants in the East Texas airshed therefore emitted 26.4% of statewide industrial NOx and are the largest source of smog-forming pollution in the East Texas region.

Additional new coal units recently built or under construction have been inadequately controlled for NOx emissions and SCR needs to be evaluated at all new and proposed coal units.

By comparison to the East-Central Texas coal plant NOx emissions of 99,113 tons, DFW industrial NOx is only 10,489 tons in 2008 or over 9 times smaller than the coal plants. Certainly regional background transport impacts are serious on the DFW Region's ozone levels from the East-Central Texas coal plant NOx emissions, especially on hot summer ozone days when the coal boilers are running at a high operating capacity.

The top Texas industrial sources of NOx in 2008 include the 17 existing coal plants among the top 30 sites and the top 11 NOx point sources are coal-fired power plants:
#1 Luminant Martin Lake - 15,802 tons
#2 NRG Limestone - 14,267 tons
#3 Luminant Monticello - 12,885 tons
#4 AEP/SWEPCO Welsh - 10,222 tons
#5 SWPS Harrington - 8,426 tons
#6 CPS Sommers/Deely/Spruce - 8,316 tons
#7 PSOk Oklaunion - 8,313 tons
#8 SWPS Tolk - 7,457 tons
#9 LCRA Fayette - 6,717 tons
#10 Luminant Big Brown - 6,426 tons
#11 NRG Parish - 5,076 tons
#13 AEP/SWEPCO Pirkey - 4,300 tons
#14 Luminant Sandow #4 - 4,030 tons
#15 Coleto Creek - 3,863 tons
#17 San Miguel - 3,068 tons
#26 TMP Gibbons Creek - 2,158 tons
#29 Twin Oaks - 1,975 tons

East Texas Coal-fired power plants include a total of 26 existing older boilers and 7 new coal boilers that are already fully permitted with four new units fully operational in 2010:

• Luminant's Monticello (3), Martin Lake (3), Big Brown (2), and Sandow (2) with a total of ten existing coal units in Titus, Rusk, Freestone and Milam counties respectively; Luminant is operating Oak Grove's two units in Robertson County;
• AEP/SWEPCO's Pirkey (1) and Welsh (3) with a total of four existing coal units in Harrison and Titus Counties respectively;
• LCRA operates Sam Seymour (3) with three existing coal units in Fayette County;
• NRG operates Limestone (2) with two existing and one (1) proposed coal units in Limestone County;
• Sempra Energy operates Twin Oaks station's (2) two existing coal units in Robertson County;
• Texas Municipal operates (1) one existing coal unit in Grimes County;
• LS Power is operating Sandy Creek coal plant's (1) one new unit in McLennan County;
• City Public Service of San Antonio's (3) three existing and one (1) new coal unit in Bexar County;
• San Miguel Electric Coop operates (1) one existing coal unit in Atascosa County;
• Coleto Creek operates one (1) existing coal units and one (1) new unit proposed in Goliad County;

2) Extensive VOC and NOx controls on all aspects of natural gas development in the Barnett Shale counties since these inadequately or poorly controlled emissions have grown rapidly in the DFW region. 90% controls are available and in use.

A. SIC Code 1311 Natural Gas Compression and Related Facilities

Barnett Shale facilities such as compressor stations and others accounted for 2234 tons of industrial NOx in 2008 and 21.3% of DFW Regional NOx among the 120 related facilities under SIC 1311. However, there were 52 sources reporting industrial NOx emissions at these sites. NOx controls need to be evaluated and required at the largest NOx-emitting compressor stations.

These 120 Barnett Shale natural gas compressor and related facilities under SIC 1311 reported 2079 tons of industrial VOCs and accounted for 25.4% of industrial VOCs (8181 tons) in the DFW region. Again, the largest industrial VOC sources in particular need VOC controls and potentially the smaller facilities as well.

Old drilling rigs may also be a significant source of NOx and VOCs and an emissions inventory needs to account for these types of large mobile sources if the industrial or mobile source EIs have not accounted for these emissions.

In particular, the continuing addition of new natural gas compressor sites and related facilities in the DFW nonattainment region means the increase in

additional NOx emissions that needs to be carefully addressed in the DFW Ozone SIP process and controls fully evaluated. Barnett Shale facilities such as natural gas compressor stations and related sources have the potential to become large NOx sources if not controlled.

B. SIC Code 1321 Natural Gas Processing Facilities - four plants.

Barnett Shale facilities such as natural gas processing sites accounted for 100 tons of industrial NOx in 2008 and nearly 1% of DFW Regional industrial NOx (10,489 tons) among the 4 related facilities under SIC 1321. Nonetheless, NOx controls need to be evaluated and required at the largest NOx-emitting natural gas processing plants.

The 4 Barnett Shale natural gas processing plants and related facilities under SIC 1321 reported 81 tons of industrial VOCs and accounted for about 1% of industrial VOCs (8181 tons) in the DFW region. However, the largest VOC sources in particular may need VOC controls and potentially the smaller facilities as well.

Particularly with the addition of new natural gas processing sites in the DFW nonattainment region, the increase in additional VOC emissions needs to be addressed in the DFW Ozone SIP process and controls fully evaluated. Barnett Shale facilities such as natural gas processing sites have the potential to become large VOC sources if not controlled.

3) Adopt all the recommendations from the 2006 Clean Air Steering Committee that were dumped by the state four years ago. The TCEQ needs to update these recommendations based on newer pollution control technologies and best practices. The TCEQ needs to take seriously the recommendations of local officials, citizens and air quality experts.

4) Create long-term emissions control strategies that go further to mitigating ozone than what's required (<85 ppb). Consider the next EPA 8-hour ozone standard likely to be 70 ppb and will be announced by EPA on August 31, 2010 in the current SIP planning.

5) Aim the SIP plan where smog pollution is worst in four DFW counties: Tarrant, Denton, Wise, and Parker Counties. (Asthma rates for children under 14 are three times higher (22%) in western DFW area than across the state of TX)

Additionally, it was voted on July 29, 2010, by the North Texas Clean Air Steering Committee yesterday, at their kick-off meeting, that the 2006 Clean Air Steering Committee recommendations be submitted to TCEQ for this comment deadline.

The TCEQ commented that they were already considering the 2006 Clean Air Steering Committee recommendations in their current planning.

Sincerely,

Neil J. Carman, Ph.D.
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Lone Star Chapter of Sierra Club

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Re: Initial Control Strategy Development for DFW Ozone Nonattainment Area

Dear Mr. Goodin:

We are writing on behalf of Ash Grove Texas, L.P., which appreciates TCEQ's interest in gathering information as early as possible in its next round of air quality planning for the DFW ozone nonattainment area. Ash Grove operates one of three cement manufacturing plants in Midlothian, Ellis County, which is located within the designated DFW nonattainment area. Ash Grove's kilns use the wet process, the others use dry. We are submitting these informal comments in the interest of reminding TCEQ about Ash Grove's history of controlling its NOx emissions, and to provide current information about NOx control options for cement plants generally. Those seeking purportedly easy solutions for DFW's ozone nonattainment often tout yet further controls on Ash Grove's kilns, but such controls are neither easy nor solutions.

I. Ash Grove History

Ash Grove's Midlothian Plant has a proven history of reducing NOx emissions. From 1996 (a year before EPA promulgated the current 0.08 ppm ozone standard) until 2006, the Plant reduced its annual NOx emissions by around 45%. These emission reductions occurred as a result of methodical and judicious implementation of various technologies, such as optimized computer controls for the kilns, improvements to kiln burners, and installation of one of the most successful tire-derived fuel systems in the country. The use of tire-derived fuel, injected mid-kiln, not only reduces NOx emissions generated at the burning zone of the kiln, but safely eliminates millions of scrap tires that otherwise might end up in Texas landfills and illegal dumpsites.

But Ash Grove's NOx reductions did not end in 2006. In 2007, after substantial investigation of the French cement plant that pioneered the first use of Selective Non-catalytic Reduction (SNCR) on wet-process cement kilns, Ash Grove purchased and installed

an SNCR system on its three Midlothian kilns. Ash Grove started operating this SNCR system—the first ever pm a wet cement kiln in the U.S.—during the 2008 ozone season, one full year before it was required under the 2007 SIP. SNCR operation has resulted in an *additional* 35% reduction in NOx emissions, on top of the roughly 45% reduction achieved from the other control measures already discussed.

As a result of Ash Grove's efforts, the Midlothian Plant is among the best-controlled cement plants in Texas, measured in amount of NOx emissions per ton of cement produced: Only 3 of 21 operating kilns in Texas did any better in 2008. Ash Grove was the first in the U.S. and now is among the very few wet process kilns in the world to successfully run SNCR. As compared to the experience of those who have experimented with Selective Catalytic Reduction (SCR) technology, it is clear that Ash Grove made the right choice.

II. SNCR Is the Best Available NOx Control Technology for Cement Kilns

Ash Grove did not install SNCR on all three of its kilns without carefully evaluating all options available to reduce NOx emissions. In 2006, Ash Grove representatives visited the cement plants in Europe that pioneered each of the two competing technology options under consideration, SCR at the Solnhofen Plant in Germany and SNCR at the Lumbres Plant in France. As a result of these visits and after carefully evaluating the technical challenges, costs, and expected results associated with each technology option for its Midlothian Plant, Ash Grove concluded that SNCR was the best option, for several reasons:

- **Catalyst Degradation is a Major Problem for Cement Kiln Application of SCR.** SNCR does not rely on a catalyst to reduce NOx emissions, so there is no degradation of reduction efficiency over time. Ash Grove observed this degradation during its site visit to the Solnhofen Plant, and the problem has persisted to the point that Solnhofen instead has been operating an SNCR system instead of SCR since 2006. The SCR system operated only for very short periods, and required extensive offline repairs and replenishment. As a result, the highest rate of compliance with the applicable NOx limit jumped from 90.8 percent in 2005 using SCR, to 96.4 percent in 2006, when the plant switched to using SNCR.

- **Catalytic Systems Generate Unintended Emission Consequences**. For SCR to work at the Midlothian Plant, the gas leaving the kiln would need to be reheated from its current exhaust temperature of around 350 °F, to the catalysis temperature of around 650 °F. It is not possible to increase the temperature of the exhaust gases from the kiln by several hundred degrees by choosing to run the kiln hotter, at least without severely affecting the operational performance of the kiln. Accordingly, any

SCR installation also would require a reheat system, with its attendant fuel costs and higher emissions.

The catalyst used in all SCR systems also contributes to the production of sulfuric acid gas, at least if there is SO_2 gases present in the kiln exhaust stream. The expected increase in sulfuric acid production would require the installation of a scrubber system at a significant capital and operating cost.

- **Capital Costs of SNCR are Substantially Lower**. An SNCR system does not need a catalyst or a catalyst tower. The SNCR reagent used at Ash Grove (water-based solutions of ammonia or urea) is pumped into a point in the kiln where the temperature of the gases already is hot enough to allow NOx reductions to occur without affecting the process. The capital cost to install an SNCR system were significantly lower than for SCR, and the operating and maintenance costs also are lower. Of course the incremental cost associated with SCR now would be astronomical in terms of NOx removal because Ash Grove's SNCR is operating so efficiently. And because there is no catalytic production of sulfuric acid with an SNCR system, there is no need to install yet another emission control device for this unintended co-product.

- **SCR Has Not Been Demonstrated at All in Any Substantially Similar Application.** Any rational consideration of a major capital expenditure requires proof that the technology to be purchased will work in the application for which it is being considered; indeed, demonstration of the technology is a major consideration in any BACT analysis conducted for new source permitting. Even worldwide experience offers no such demonstration.

  If the Solnhofen experience demonstrates anything, it is that SCR does NOT work consistently on cement plants. And whatever Solnhofen had demonstrated would not likely be useful to Ash Grove's Midlothian Plant due to the substantial differences in kiln design and raw materials.

  SCR has been installed on two other plants in Europe, but neither of these provides a demonstration of likely success if applied to Ash Grove's Midlothian Plant. Like Solnhofen, each is substantially different from Ash Grove in terms of design and raw materials.

  The experience with the high-dust SCR system at Monselice, Italy, a small preheater kiln plant, parallels that of Solnhofen. The Monselice SCR started around the time

that Solnhofen gave up (in June 2006). A primary purpose of the catalytic system was to control ammonia (and odor), not NOx. Like Solnhofen, Monselice also has experienced significant problems with dust buildup on the catalyst, and has had to replace and regenerate the catalyst often and perform manual cleaning:

June 2006	SCR began operation.
July 2007	Catalyst was removed and sent for regeneration. New catalyst installed.
February 2008	The second set of catalyst was removed, and the regenerated catalyst was installed. The SCR was modified to reduce the catalyst bed from 24 m^3 to 16 m^3 in an attempt to reduce pressure drop across the catalyst.
October 2008	Installed a larger pitch catalyst in the first layer. Installed heated compressed air cleaning system to try to reduce sticky buildup on the catalyst particularly during the winter months.
April 2009	Replaced second and third catalyst layers with larger pitch. System still requires catalyst bypass 2 to 3 times per year for manual removal of the dust buildup on the catalyst. These cleaning periods are approximately 72 hours in duration.

Monselice, in short, remains in the shakedown mode more than five years after installing SCR, and has been unable to achieve sustained operations and performance using that technology.

The other European cement plant to try SCR, in Sarche, Italy, is a 700 ton per day Lepol kiln, much smaller and of much different design than Ash Grove's Midlothian Plant. A Lepol kiln consists of a shorter kiln system with a traveling grate heater preceding the kiln. None of the kilns in Texas are of this type. The Sarche SCR system started operation in 2007, primarily to control ammonia emissions and odors and to reduce visible emissions; that is, the catalyst was installed to reduce ammonia gases generated from the processing of the raw materials available to that facility. Because the kiln process generates NOx as well, ammonia is reduced by reacting with NOx in the SCR unit. The same could occur in an SNCR reaction if the ammonia and NOx were in contact at the right temperature. However, most of the ammonia at the Sarche facility is released at a temperature too low for the *non*-catalytic reduction of NOx and ammonia. Therefore, Sarche needed to use catalyst to achieve its objection

of reducing ammonia. The Midlothian Plant's exhaust, in contrast, would need substantial reheating.

In addition to fundamental design differences, raw material differences also prevent reliance on any successful performance of SCR in Europe to draw conclusions about performance at facilities in Texas. None of the three SCR units in Europe are installed on kilns that process high-sulfur raw materials, such as those in Midlothian. The sulfur in raw materials exits the kilns, regardless of kiln type, as sulfur dioxide (SO_2) in the kiln gases. The SCR catalyst will oxidize the SO_2 to SO_3. The SO_3 then reacts with moisture in the stack gases to form H_2SO_4, which corrodes duct work and steel stacks. There are catalyst formulations to minimize the conversion of SO_2 to SO_3, but some conversion will occur. Therefore, the Midlothian kilns would likely require a wet scrubber to address SO_3/H_2SO_4, at a significant additional cost.

Ash Grove is aware of a dry process cement plant located in Joppa, Illinois, that has *agreed* to install an SCR system as part of a consent decree with EPA. If built, this will be the only full-scale application of SCR on a cement kiln in the U.S. But the technology is certainly not yet proven: Under the terms of the consent decree, the Joppa SCR is not required to be installed until 2013, which means that it is at best still is design phase, and not yet proving anything about actual performance.

But even if it were put into successful operation, it would not prove up SCR for Ash Grove's Midlothian Plant any more than do the experiences in Europe. As with the European plants, the designs are not comparable: Ash Grove has only wet kilns in Midlothian, whereas the Joppa plant consists of two long dry kilns. As noted, Ash Grove would need to reheat the exit gas to achieve catalysis temperatures, whereas Joppa already operates with much higher exhaust gas temperatures and so will not have to reheat its exhaust gases.

And there is no guarantee that the new SCR at Joppa—if installed and operated—will achieve NOx levels as low as those already achieved with SNCR at Ash Grove. The Joppa consent decree compels no specific level of NOx reductions; instead, the facility is required to monitor the performance of the SCR unit and establish a new NOx limit based on site-specific conditions. Ash Grove already has demonstrated the ability to achieve NOx emission rates lower than those achieved by SCR-equipped plants, even during the periods when those SCR systems are working.

- **Ash Grove's SNCR System Achieves Lower NOx Emission rates than the SCR Systems Attempted in Europe.** It makes no sense to impose any further technical

risk or cost in search of lower NOx emissions from Ash Grove's Midlothian Plant, when SNCR works so well. Ash Grove's Midlothian Plant achieves an outlet NOx emission rate of about 280 mg/Nm^3 using SNCR. Even when their SCR systems actually function, none of the SCR systems tried in Europe are able to do as well: *Ash Grove's emission rate is over 40 % less than achieved by Solnhofen (500 mg/Nm^3), 30% less than Monselice (400 mg/Nm^3), and almost 50% less than Sarche (540 mg/Nm^3).*

- **Ash Grove's Decision to Choose SNCR is Affirmed by National Practice.** No BACT determination has compelled installation of SCR on a cement kiln anywhere in the U.S., no doubt because of the various factors discussed above.

III. Any Further Reductions in NOx Emissions from Midlothian Cement Plants Offer No Marginal Ozone Attainment Benefit.

Regulation should never impose undemonstrated technology at great cost, especially when—as here—it would accomplish none of the intended goals of the regulation even if the technology succeeds. TCEQ and other experts have understood that, historically, the ozone monitoring sites that drove DFW's ozone status were dominated by concentrated mobile source emissions. Even total elimination of Ash Grove's NOx emissions had no meaningful effects on the DFW ozone design values. Even the maximum attributed ozone reduction (eliminating all of Ash Grove's NOx emissions) is far below the ability of the monitor to even detect, and amounts to modeling "noise," at best.

IV. Conclusions

Although the impact from Ash Grove's NOx emissions on the attainment status of the region is immeasurable, Ash Grove has continued to reduce its emissions by implementing emission control technologies that are economically sustainable and reliable. Ash Grove's Midlothian Plant has achieved 60% reductions in its NOx emissions over the last decade. As a result, its NOx emissions per unit of product are now among the lowest of any kiln in the State. The Midlothian Plant not only produces a product essential to the growth and maintenance of the region, but contributes significant positive effect on the State's environment by providing reuse of millions of scrap tires. When considering additional NOx reductions from Ellis County cement kilns, TCEQ should continue to consider the modeled impact of such reductions on ozone design values, and weigh that against the very real economic and operational impact on the facilities that need to comply with even tighter NOx emission limits.

Although SCR has been promoted in the past as an alternative or even superior technology to SNCR in controlling NOx emissions at cement plants, in practice, SCR is significantly more difficult to implement, requires more capital investment, is likely to require significant catalyst maintenance, and—ultimately—it has not been shown to consistently and reliably offer Ellis County kilns a better solution than SNCR to reduce NOx emissions.

Again, we are grateful for the opportunity to help inform your judgment, as TCEQ continues its efforts to achieve ever-lower ozone standards in the DFW area. Should you have any questions, please contact me at (512) 542-8552, or Curtis Lesslie at (913) 319-6065.

Very truly yours,

Molly Cagle

Molly Cagle

cc: Curtis Lesslie
Jacqueline Clark
Francisco Pinto
Eric Groten

Jamie Zech - DFW 8hr Ozone SIP/VOC Storage comments for attainment goals

From: "Kim & Ken Feil" <[redacted]>
To: [redacted]
Date: Saturday, June 26, 2010 12:53 AM
Subject: DFW 8hr Ozone SIP/VOC Storage comments for attainment goals
CC: [redacted]

This is a follow up to a question that was raised as to whether Vapor Recovery Systems are needed for "dry gas" verses the "wet gas". Dan at Hy-Bon in Midland TX is at 1 800 725 1878 told me that Vapor Recovery Systems reduce emissions on.....
1. "ALL" storage tanks
2. Condensate tanks
3. When venting their casings whether wet or dry gas... fugitive emissions still needs to be captured.

Texas Railroad Commission allows 25 tons per well per year of emissions. Gas drilling companies will use that as their excuse to not volunteer to invest in green systems for cleaner air. But mathematically, to pull off the sheer number of wells that are tapping into the Barnett Shale AND be in compliance with the EPA, our leaders need to recognize that this is the opportunity to not "throw the baby out with the bath water."

I attended your day session at the library in Arlington last Thursday and was the lady who asked questions about wet gas verses dry gas and the economic feasibillity of Vapor Recovery Systems for natural gas drilling.

My SIX requests for items to be considered to assist in reducing VOC's to make att

1. Mandatory Vapor Recovery Systems
http://www.epa.gov/etv/pubs/600s07029.pdf Average Gas Recovery 175 Mscf/day, Value of Recovered Gasa $650,000/year, Total Installed Cost of EVRU™ at Site $108,000

2. Free VOC blood baseline testing for concerned citizens with follow up findings documented with Arlington Health Department. (This would be a good incentative for self-regulators to know the public has proof if they are not doing their job)

3. Mandate drillers to adopt "Drill Right Texas" best practices
http://www.earthworksaction.org/Texas_OGAP.cfm
Which also asks that "No-bleed pneumatic valves and fittings should be used on pipeline networks."

4. Mandate the drilling companies to join the TCEQ's Natural Gas STAR Program

and do away with voluntary reporting
http://www.epa.gov/gasstar/tools/recommended.html

5. Dr AL Armendariz from EPA http://www.physorg.com/news153514020.html
A. Reducing greenhouse gas emissions through the use of green completion methods on all well completions.
B. Replace internal combustion engines with electric motors for compression power.
C. Use vapor recovery units on condensate tanks.
D. Reduce fugitive emissions of methane, VOC, and HAPs with a program to replace natural gas actuated pneumatic valves with units actuated with compressed air.

6. I spoke in the Arlington City Council chambers on March 16th at the Ozone Public Hearing and asked for spectrometers to be used at our drilling sites to quickly analyze harmful vapors and residues. At the very least our police and fire department should have these devices which are small, portable and affordable.
http://www.1stdetect.com/products.php

[redacted]
Aka environmental rapper at City Council meeting
http://www.youtube.com/watch?v=0haB0s7ofqU