

**EXAMINING THE SCIENCE OF EPA OVERREACH:
A CASE STUDY IN TEXAS**

HEARING
BEFORE THE
SUBCOMMITTEE ON OVERSIGHT
COMMITTEE ON SCIENCE, SPACE, AND
TECHNOLOGY
HOUSE OF REPRESENTATIVES
ONE HUNDRED THIRTEENTH CONGRESS
SECOND SESSION
FEBRUARY 5, 2014
Serial No. 113-64

Printed for the use of the Committee on Science, Space, and Technology



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**EXAMINING THE SCIENCE OF EPA
OVERREACH:
A CASE STUDY IN TEXAS**

WEDNESDAY, FEBRUARY 5, 2014

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY,
Washington, D.C.

The Committee met, pursuant to call, at 10:04 a.m., in Room 2318 of the Rayburn House Office Building, Hon. Lamar Smith [Chairman of the Committee] presiding.

Chairman SMITH. The Committee on Science, Space, and Technology will come to order.

LAMAR S. SMITH, Texas
CHAIRMAN

EDDIE BERNICE JOHNSON, Texas,
RANKING MEMBER

Congress of the United States
House of Representatives

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

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Examining the Science of EPA Overreach: A Case Study in Texas

Wednesday, February 5, 2014
10:00 a.m. – 12:00 p.m.
2318 Rayburn House Office Building

Witnesses

The Honorable Bryan Shaw, Chairman, Texas Commission on Environmental Quality

The Honorable David Porter, Commissioner, Railroad Commission of Texas

Mr. Kenneth Dierschke, President, Texas Farm Bureau

Dr. Elena Craft, Health Scientist, Environmental Defense Fund

Dr. Bernard Weinstein, Associate Director of the Maguire Energy Institute, Cox School of Business, Southern Methodist University

**U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
FULL COMMITTEE**

HEARING CHARTER

Examining the Science of EPA Overreach: A Case Study in Texas

Wednesday, February 5th, 2014

10:00 a.m. – 12:00 p.m.

2318 Rayburn House Office Building

PURPOSE

On Wednesday, February 5th at 10:00 a.m. in Room 2318 of the Rayburn House Office Building, the Committee on Science, Space and Technology will hold a hearing entitled *Examining the Science of EPA Overreach: A Case Study in Texas*. The purpose of this hearing is to focus on the scientific justification and cumulative impacts of regulations, policies and practices promulgated by the Environmental Protection Agency (EPA) and their effects on state sovereignty.

WITNESS LIST

- **The Honorable Bryan Shaw**, Chairman, Texas Commission on Environmental Quality
- **The Honorable David Porter**, Commissioner, Railroad Commission of Texas
- **Mr. Kenneth Dierschke**, President, Texas Farm Bureau
- **Dr. Elena Craft**, Health Scientist, Environmental Defense Fund
- **Dr. Bernard Weinstein**, Associate Director of the Maguire Energy Institute, Cox School of Business, Southern Methodist University

BACKGROUND

When the EPA was created in 1970, an overarching goal was to ensure that the federal government and states work together to efficiently promote environmental stewardship. Given the diversity of our environment, unique regional challenges, and role reserved for the states in regulating business and property, successful environmental safeguards require cooperative federalism.

The principle of cooperative federalism underlies the major environmental regulatory framework of the last four decades. Environmental statutes that incorporate this principle include the Clean Air Act (CAA),¹ the Federal Water Pollution Control Act or Clean Water Act (CWA),² the Resource Conservation and Recovery Act of 1976,³ the Noise Control Act,⁴ the

¹ <http://www2.epa.gov/laws-regulations/summary-clean-air-act>

² <http://www2.epa.gov/laws-regulations/summary-clean-water-act>

³ <http://www.epa.gov/oecaagct/lrca.html>

⁴ http://www.epa.gov/air/noise/noise_control_act_of_1972.pdf

Toxic Substances Control Act,⁵ and the Safe Drinking Water Act.⁶ For many of these statutes, Congress gave EPA the responsibility to set national standards while leaving much of the administration, implementation, and enforcement of those rules primarily in the hands of the states. However, under the CAA and CWA, for example, the Agency may be given the authority to “disapprove” a state’s strategy to meet national environmental goals in some situations.⁷

Air

Under the CAA, the federal government is given the responsibility to set health-based air quality standards while states retain primary authority to implement those standards. The CAA does not rely on any one method for protecting the environment, but creates varied approaches depending on the characteristics of sources, challenges with implementation, and the economic impacts of regulation.

According to the EPA, “It makes sense for state and local air pollution agencies to take the lead in carrying out the CAA. They are able to develop solutions for pollution problems that require special understanding of local industries, geography, housing, and travel patterns, as well as other factors. The states must involve the public and industries through hearings and opportunities to comment on the development of each state plan.”⁸ In her confirmation hearing, EPA Administrator Gina McCarthy described the partnership between states and the federal government as “one of the cornerstone principles of the Clean Air Act.”

The Agency has recently developed, proposed and finalized several CAA rules impacting Texas and other states, including: the Cross State Air Pollution Rule, National Ambient Air Quality Standards for particulate matter and ozone; Mercury and Air Toxics Standards; New Source Performance Standards for greenhouse gas emissions for new power plants; and greenhouse gas emission guidelines for existing power plants under CAA Section 111(d).

Water

The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. Under the CWA, EPA implements pollution control programs and sets water quality standards for all contaminants in surface waters. Over the past decade, different interpretations of the CWA have caused confusion about which waters and wetlands remain protected. In September 2013, EPA and the Army Corps of Engineers announced that it had sent a draft rule to clarify the jurisdiction of the Clean Water Act to the Office of Management and Budget for interagency review.⁹

Additionally, the Safe Drinking Water Act is the main federal law created to ensure the quality of Americans’ drinking water. Under the Safe Drinking Water Act, EPA sets standards for drinking water quality and EPA, states, and water systems then work together to make sure

⁵ <http://www.epa.gov/oecaagct/lsc.html>

⁶ <http://water.epa.gov/lawsregs/rulesregs/sdwa/>

⁷ Clean Air Act §110(k)(3), Clean Water Act §303(C)(3).

⁸ United States EPA, “The Plain English Guide to the Clean Air Act,” 2007.

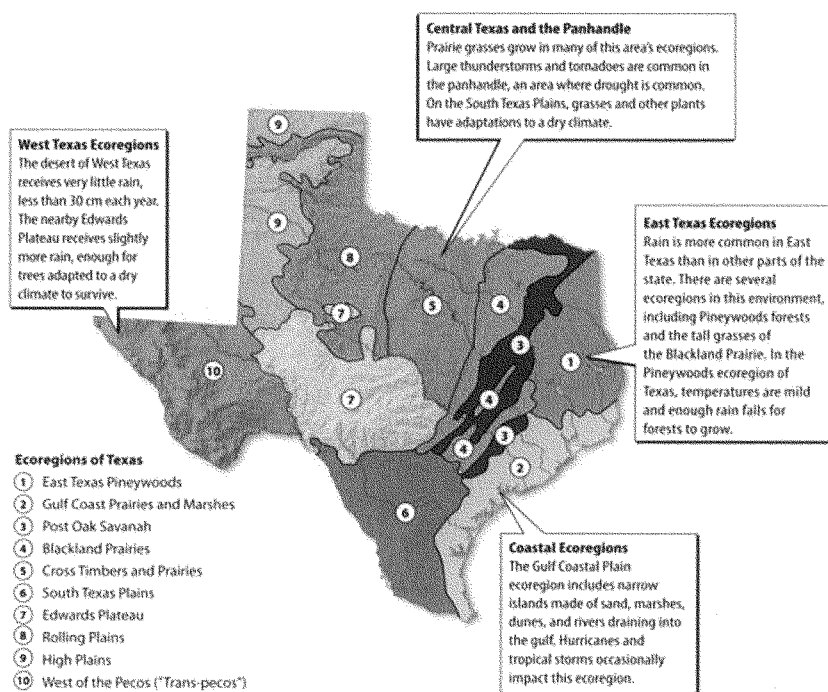
⁹ <http://water.epa.gov/lawsregs/guidance/wetlands/CWAwaters.cfm>.

that these standards are met.

EPA is also conducting an ongoing study to assess any potential impacts of hydraulic fracturing on drinking water resources. During her confirmation, Administrator McCarthy indicated that states "are the primary regulators of fracking activities."

ECOREGIONS OF TEXAS

Ecoregions are large areas containing a geographically distinct collection of environmental conditions. Ecoregion frameworks are valuable tools for environmental research, assessment, management, and monitoring of ecosystems and ecosystem components. They have been used for setting resource management goals, developing biological criteria and establishing water quality standards.¹⁰



¹⁰ EPA, Ecoregions of Texas, 2007. http://ftp.epa.gov/wed/ecoregions/tx/TXeco_Jan08_v8_Cmprsd.pdf

EPA notes that the “ecological and biological diversity of Texas is enormous. The state contains barrier islands and coastal lowlands, large river floodplain forests, rolling plains and plateaus, forested hills, deserts and a variety of aquatic habitats.”¹¹ The state of Texas is committed to representing the diverse needs and sensitivities across its ecoregions. The Science Committee received testimony about dramatic environmental improvements across the state.¹²

Additional Reading:

Griffith, G.E., Bryce, S.A., Omernik, J.M., Comstock, J.A., Rogers, A.C., Harrison, B., Hatch, S.L., and Bezanson, D., 2004, Ecoregions of Texas: Reston, Virginia, U.S. Geological Survey, available at: http://www.epa.gov/wed/pages/ecoregions/tx_eco.htm

Texas Attorney General Greg Abbott and Chairman Bryan Shaw of the Texas Commission of Environmental Quality’s Letter to EPA, August 2010, available at: <http://www.epa.gov/NSR/2010letters/tx.pdf>

Texas Public Policy Foundation Policy Perspective, *Texas vs. EPA Litigation Scorecard*, September 2012, available at: http://www.texaspolicy.com/sites/default/files/documents/2012-09-PP23-TexasvsEPALitigationScorecard-ACEE-JosiahNeeley_2.pdf

¹¹ EPA, Ecoregions of Texas, 2007. http://www.epa.gov/wed/pages/ecoregions/tx_eco.htm#Please%20note:

¹² <http://science.house.gov/sites/republicans.science.house.gov/files/documents/HHRG-113-SY18-WState-KWhite-20130214.pdf>

Chairman SMITH. Good morning to you all and welcome to today's hearing titled "Examining the Science of EPA Overreach: A Case Study in Texas."

Before I recognize myself for an opening statement, I do want to recognize someone in the audience. We have a State Representative, actually one of my State Representatives back home, Doug Miller, on the left on the front row. And, Doug, I appreciate your being here today.

I will recognize myself for an opening statement.

The devastating impact of EPA's overreach can be felt from state houses to farmhouses across the Nation. Americans are tired of the red tape that hampers economic growth. EPA's regulatory ambitions threaten states' rights and intrude on the everyday lives of our citizens. That is why today's hearing is important. And that is why this is not just a hearing about Texas. The Lone Star State is merely a case study. So while we will hear testimony today from the perspective of several Texans, the chilling impacts of federal intrusion are felt by residents of every state.

Perhaps the worst examples of massive government expansion are found in EPA's air rules. New regulations rely on unproven technologies and secret science to justify the tremendous cost. Even EPA admits its new power plant rules will have very little benefit; however, they will have a very real impact on the energy bills of hardworking American families.

The EPA's efforts to demonize hydraulic fracturing are another example of an agency putting partisan politics above sound science. After recklessly making wild claims of contamination, EPA was forced to retract those claims when the facts came out. The Agency's "shoot first, ask questions later" attitude is not responsible.

Clearly, the EPA is too busy expanding its own powers to slow down long enough to listen to its own scientists. This problem is evident with the Agency's draft Clean Water Act rule. EPA didn't even wait on the Scientific Advisory Board's review and instead steamrolled ahead, muzzling voices of dissent along the way.

The EPA's Draft Water Rule is a massive power grab that undermines states' rights and gives the federal government control over Americans' private property. EPA wants to tell Americans what to do in their own backyard. But states and communities across the country are fighting back to reclaim control of their own resources. For instance, working toward a cleaner environment in Texas does not have to be at the expense of economic growth.

State regulators know how to protect the environment within their borders better than federal employees in Washington, D.C. Texas has the second-largest population in the Nation, is home to six of the largest U.S. cities and our economic growth far outpaces the national average. But even with the Nation's largest industrial sector, Texas had made vast improvements in air quality. For example, from 2000 to 2012, ozone levels in Texas decreased by 23 percent. The rest of the Nation averaged only an 11 percent decrease in ozone levels.

This success was reached through a collaborative effort that included the Texas State Legislature, state agencies, local governments, industry, and universities. These groups worked together to design and implement creative and targeted regulatory controls.

Localized data provides state regulators with the information they need to create effective, targeted air and water quality management.

Unfortunately, too many within this Administration believe that the only way to protect our environment is through federal government intervention and centralized ownership. In the real world, competition drives innovation, private ownership inspires stewardship, and smaller government empowers free people. We cannot lose track of these fundamental truths.

Our Constitution requires a collaborative relationship, not a federal takeover. This is why we should listen to voices from the states. It is in everybody's best interest for agencies like the EPA to help support these state efforts, not hinder them.

That concludes my opening statement.

[The prepared statement of Mr. Smith follows:]

PREPARED STATEMENT OF CHAIRMAN LAMAR S. SMITH

The devastating impact of EPA's overreach can be felt from state houses to farmhouses across the nation. Americans are tired of the red tape that hampers economic growth. EPA's regulatory ambitions threaten states' rights and intrude on the every-day lives of our citizens.

That's why today's hearing is important. And that's why this is not just a hearing about Texas. The Lone Star State is merely a case study. So while we will hear testimony today from the perspective of several Texans, the chilling impacts of federal intrusion are felt by residents of every state.

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The EPA's efforts to demonize hydraulic fracturing are another example of an Agency putting partisan politics above sound science. After recklessly making wild claims of contamination, EPA was forced to retract those claims when the facts came out. The Agency's "shoot first, ask questions later" attitude is irresponsible.

Clearly, the EPA is too busy expanding its own powers to slow down long enough to listen to its own scientists. This problem is evident with the Agency's draft Clean Water Act rule. EPA didn't have time to wait on the Scientific Advisory Board review and instead steamrolled ahead, muzzling voices of dissent along the way.

The EPA's draft water rule is a massive power grab that undermines state's rights and gives the federal government control over Americans' private property. EPA wants to tell Americans what to do in their own back yard.

But states and communities across the country are fighting back to reclaim control of their own resources. For instance, working toward a cleaner environment in Texas does not have to be at the expense of economic growth.

State regulators know how to protect the environment within their borders better than federal employees in Washington DC. Texas has the second largest population in the nation, is home to six of the largest U.S. cities and our economic growth far outpaces the national average. But even with the nation's largest industrial sector, Texas had made vast improvements in air quality.

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This success was reached through a collaborative effort that included the Texas state legislature, state agencies, local governments, industry and universities. These groups worked together to design and implement creative and targeted regulatory controls. Localized data provides state regulators with the information they need to create effective, targeted air and water quality management.

Unfortunately, too many within this administration believe that the only way to protect our environment is through federal government intervention and centralized ownership. This is the wrong way.

In the real world, competition drives innovation, private ownership inspires stewardship and smaller government empowers free people. We cannot lose track of these fundamental truths.

Our Constitution requires a collaborative relationship, not a federal take-over. This is why we must listen to voices from the states. It's in everybody's best interest for agencies like the EPA to help support these state efforts, not hinder them.

Chairman SMITH. Without objection, I would like to ask unanimous consent to put a letter in the record, and this is a letter from Range Resources concerning EPA's investigation into the impacts of hydraulic fracturing in Parker County, Texas. Those claims resulted in EPA enforcement action, which was subsequently withdrawn and the Texas Railroad Commission thoroughly investigated this issue and found that Range's activities had no impact on water quality. And I would like the rest of the letter to be entered into the record without objection.

[The information appears in Appendix II]

Chairman SMITH. At this point I will recognize the Ranking Member, the gentlewoman from Texas, Eddie Bernice Johnson, for her opening statement.

Ms. JOHNSON. Thank you, Mr. Chairman. And thank you to our witnesses for being here this morning.

I am always proud to be in a room full of Texans. As a native Texan, I know well the importance and the impact of oil and natural gas development in this country. Our economy has relied on fossil fuels to power our manufacturing base, our transportation and agricultural sectors, and more. And for the foreseeable future, the country will continue to develop these resources and technologies to achieve our energy, economic, national security, and in some cases, our environmental objectives. However, we must acknowledge that the development of any fossil fuels resource can have significant negative environmental impacts. I am not speaking about the environment in the abstract but about the very oceans we fish, the air we breathe, and the water we drink. These, too, have real economic value.

While few people get rich from clean air and water, everybody benefits. Likewise, nobody should have the right to take these away, regardless of the potential for financial profit. This is why we have EPA and why Congress has acted in the past to protect our air and water through legislation such as the Clean Water Act and the Safe Drinking Water Act with the results being just that, cleaner air and safer drinking water, and that is something that both Democrats and Republicans should be happy about.

Today, we will hear from some Members and witnesses that EPA is acting beyond its authority, that EPA regulations are killing the economy and jobs, and that the industry and the State of Texas do not need the federal government to tell them how to protect public health and the environment. As much as some might wish for a world where environmental issues are addressed voluntarily by industry or through the workings of the free market or through individual state regulations, we all know that from experience it just does not work that way.

Now, more than ever, American people need a strong EPA to protect their right to clean air and water. These are people who, regardless of where they fall in the partisan divide, universally agree clean air and water are important to them and to their children and they know that respiratory diseases—and we have records to show it—heart attacks and premature deaths are not part of the

sacrifice we should have to make for the sake of achieving the American dream.

Mr. Chairman, I have received a number of letters from Texans expressing their concern about the air and water in their communities and their hope that EPA and the state will do more and I ask that these letters be made a part of the record.

Chairman SMITH. Without objection.

[The information appears in Appendix II]

Ms. JOHNSON. Let me be clear. I firmly believe that we have both a strong economy and a safe and healthy environment. In fact, there is much more evidence showing jobs are created and economy expands following the passage of major environmental reforms. For example, between 1970 and 2011 air pollution dropped 60 percent while the Nation's gross domestic product grew by 212 percent and the number of private sector jobs increased by 88 percent.

As someone who worked in public health before I entered politics, I can think of no mission of the federal government that is more important or noble than EPA's mission to protect human health and the environment. I am hopeful that Congress will get past this misguided and disingenuous war on the dedicated scientists and public servants of the EPA and that we can come to advance our economy and a cleaner environment and a healthier public.

Thank you, Mr. Chairman. I yield back.

[The prepared statement of Ms. Johnson follows:]

PREPARED STATEMENT OF RANKING MEMBER EDDIE BERNICE JOHNSON

Thank you, Chairman Smith, and thank you to our witnesses for being here this morning. I am always proud to be in a room full of Texans. As a Texan, I know well the importance and the impact of oil and natural gas development in this country. Our economy has relied on fossil fuels to power our manufacturing base, our transportation and agricultural sectors, and more. And, for the foreseeable future, the country will continue to develop these resources and technologies to achieve our energy, economic, national security, and, in some cases, our environmental objectives.

However, we must acknowledge that the development of any fossil fuel resource can have significant negative environmental impacts. I am not speaking about the environment in the abstract, but about the very oceans we fish, the air we breathe, and the water we drink. These too have real economic value. While few people get rich from clean air and water, everybody benefits. Likewise, nobody should have the right to take those away, regardless of the potential for financial profit. This is why we have an EPA, and why Congress has acted in the past to protect our air and water through legislation such as the Clean Air Act and the Safe Drinking Water Act, with the results being just that—cleaner air and safer drinking water. And that's something that both Democrats and Republicans should be happy about.

Today we will hear from some Members and witnesses that EPA is acting beyond its authority, that EPA regulations are killing the economy and jobs, and that industry and the state of Texas do not need the federal government to tell them how to protect public health and the environment. As much as some might wish for a world where big environmental issues are addressed voluntarily by industry or through the workings of the free market, or through individual state regulations, we all know from experience that it just does not work that way.

Now, more than ever, the American people need a strong EPA to protect their right to clean air and water. These are people who, regardless of where they fall in the partisan divide, universally agree clean air and water are important to them and their children. And they know that respiratory diseases, heart attacks, and premature deaths are not part of the sacrifice we should have to make for the sake of achieving the "American Dream." [Mr. Chairman, I received a number of letters from Texans expressing their concern about the air and water in their communities and their hope that EPA and the state will do more; I'm attaching these letters to my statement as part of the record.]

Let me be clear. I firmly believe we can have both a strong economy and a safe and healthy environment. In fact, there is much more evidence showing jobs are created and the economy expands following the passage of major environmental reforms. For example, between 1970 and 2011, air pollution dropped 68 percent, while the nation's gross domestic product grew by 212 percent and the number of private sector jobs increased by 88 percent.

As someone who worked in public health before I entered politics, I can think of no mission of the federal government that is more important or noble than EPA's mission to "protect human health and the environment." I am hopeful that Congress can get past this misguided and disingenuous war on the dedicated scientists and public servants of the EPA, and that we can come together to advance our economy and a cleaner environment and healthier public.

Thank you and I yield back.

Chairman SMITH. Thank you, Ms. Johnson.

At this point I will introduce our witnesses today. Our first witness is Hon. Bryan Shaw, Chairman of the Texas Commission on Environmental Quality. Dr. Shaw was appointed to the TCEQ by Governor Rick Perry in 2007 and was appointed Chairman in 2009. Dr. Shaw previously served as a member of the U.S. Environmental Protection Agency Science Advisory Board, Committee on Integrated Nitrogen, the Environmental Engineering Committee, and the ad hoc panel for Review of EPA's Risk and Technology Review Assessment Plan. Dr. Shaw received his bachelor's and master's degrees in agricultural engineering from Texas A&M and a Ph.D. in agricultural engineering from the University of Illinois.

Our next witness is Hon. David Porter, Commissioner of the Railroad Commission of Texas. Commissioner Porter was appointed by Governor Perry as the official representative of Texas on the Interstate Oil and Gas Compact Commission and on the Interstate Mining Compact Commission. Before taking office, Commissioner Porter built a successful small business around his CPA practice. He earned his bachelor's degree in accounting from Harding University.

Our third witness today is Dr. Kenneth Dierschke, President of the Texas Farm Bureau. Mr. Dierschke first served on the Tom Green County Farm Bureau Board in 1975 and was elected President. He became State Director for Texas District 6 in 1996. He later became Vice President of Texas Farm Bureau in December 2000 and President in 2002. Dr. Dierschke is a fourth-generation farmer who raises cotton and milo.

Our next witness is Dr. Elena Craft, Health Scientist at the Environmental Defense fund. Dr. Craft has worked on toxic air issues focusing specifically on reducing toxic air chemicals and greenhouse gas emissions from the energy and transportation sectors. Her efforts have led to the creation of clean truck programs in Houston and other ports around the Southeast. Dr. Craft was appointed to serve a two-year term on EPA's Environmental Justice Technical Review Panel. Dr. Craft received her bachelor's degree from the University of North Carolina, her master's in toxicology from North Carolina State University, and her Ph.D. from Duke University.

Our final witness today is Dr. Bernard Weinstein, Associate Director of the Maguire Energy Institute for the Cox School of Business at Southern Methodist University. Dr. Weinstein was previously the Director of the Center for Economic Development and Research at the University of North Texas where he is now an emeritus professor of applied economics. Dr. Weinstein has au-

thored or coauthored numerous books, monographs, and articles on economic development, energy security, public policy, and taxation. He has also previously served as Director of Federal Affairs for the Southern Growth Policies Board and Chairman of the Texas Economic Policy Advisory Council. He received both his master's degree and his Ph.D. from Columbia University.

We welcome you all and appreciate your time and your testimony. And, Dr. Shaw, we will begin with you.

**TESTIMONY OF THE HONORABLE BRYAN SHAW,
CHAIRMAN, TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY**

Hon. SHAW. Good morning. Thank you, Chairman Smith. Thank you, Ranking Member Johnson and Members, for the opportunity to be here today.

I have spoken on many occasions about the overreach that we have perceived in Texas from EPA with regard to environmental regulations, including the Flexible Permits Program, which we have instigated in Texas—implemented in Texas to help us to achieve environmental goals, greenhouse gas, as well as the Cross State Air Pollution Rule.

I want to talk today about some of the challenges that we face from the standpoint of communications and how poor communications have exacerbated the challenges that we have had with regard to EPA overreach and specifically failure to follow the cooperative federalism that seems to make sense and that we in Texas believe leads to the best environmental results while protecting the economy and those who are least available to afford high cost of energy and other goods and services.

It is clear I think at this point that most people agree and certainly the courts have that EPA actions with regard to Texas Flexible Permits Program were an overreach of the federal authority. We had many—numerous attempts to reach out to EPA and to try to explain that indeed our program met the federal requirements. I think the lack of desire by EPA to engage with us and that is best captivated by a statement—or captured by a statement made largely by Dr. Armendariz when he pointed out that EPA didn't want nor like the Flexible Permits Program even though we had illustrated that that program met the federal requirements. That led to numerous hours and failure of opportunity to achieve even greater environmental benefit because we were basically defending a program that was put in place to help us to achieve our environmental goals.

Apparently, the courts agreed with the state's assessment that indeed that was an overreach. They struck down the EPA's determination to disapprove the Flexible Permits Program, and in fact, in a rather scathing comment indicated that EPA even wanted to dictate the sentence structure of the state's program. This failed communication and overreach from EPA resulted obviously in lots of loss and cost that took our eye off the ball of being able to achieve greater environmental benefit.

With regard to the Cross State Air Pollution Rule, among other concerns, EPA failed to allow for adequate notice and comment. Our request for opportunity to meet with EPA to be able to explain

and identify issues that were of importance in their rulemaking were denied, and what that led to, amongst other things, was that EPA made changes to the rule after publication, which was based on the assumption—the faulty assumption that Texas had about 90,000 megawatts of electric generating capacity when in fact we had only 72,000. Had the courts—the D.C. Circuit Court not struck down that rule, that would have led to a great threat to electric reliability in the State of Texas, and so fortunately, that was struck down, although it is being appealed to the Supreme Court at this point. Again, failed communications exacerbated the impact of this federal overreach.

Fortunately, Texas is a case study not only of some of the negative impacts, but we have had some recent positive impacts of communication. We still I think have concerns over federal overreach, but whenever Ron Curry was named as the regional administrator for EPA, I immediately reached out to him and he was very receptive and we have agreed and have had regular communications since. I believe that those regular communications have led to some progress, and in fact, yesterday, EPA signed off—or, excuse me, last Wednesday EPA signed off on approving the Flexible Permits Program, which, while it may be a small victory and that we clearly, as the courts have shown, were in the—in order—in keeping with federal requirements, it is—at least shows that we—demonstrates that we can cooperate and work together.

Furthermore, yesterday, Ron Curry informed me that he signed off a process that was going to help to expedite transfer of greenhouse gas permitting authority to the State of Texas so that while we are waiting for appeals to go before the Supreme Court on greenhouse gases, we can move forward with trying to expedite greenhouse gas permitting in the State of Texas, which will increase our ability to continue to meet the needs of a growing population both from electrical generation and jobs and economic development.

So we need moving forward to have even greater cooperative federalism in practice. Good communication and state flexibility are paramount as EPA develops rules and regulations associated not only with development—regulating new sources of greenhouse gases but also as they are looking in considering how to deal with existing sources. I am concerned that we do need indeed to have great involvement because EPA's actions with regard to new sources whereby a rule that they indicated would have no impact because there would be no coal-fired power plants built, they made the extraordinary determination that carbon capture and sequestration is demonstrated technology even though there are no projects where it has been demonstrated. The only projects under development are those that have received extreme federal support. And so I think that there is great concern that EPA is getting the camel's nose under the tent with that rule and that we need to see how they are planning to move forward with regulating existing sources.

Thank you for the opportunity to present and I would be happy to answer questions at the time that it is appropriate. Thank you.

[The prepared statement of Hon. Shaw follows:]

Major EPA Actions Troubling Texas

Coal-fired Power Plants

Clean Air Act

In the last two years, the EPA has proposed or finalized multiple rules affecting the power generation industry and coal-fired power plants in particular. Although the Cross State Air Pollution Rule (CSAPR) was overturned by the DC Circuit, EPA's promulgation of this rule displayed fundamental philosophical flaws in EPA's interpretation of the Clean Air Act (CAA).

The Mercury and Air Toxics Standards (MATS) will require significant investment of control technology while benefits are questionable at best. The EPA substantially overestimated the installed capacity and the reserve margin in the Electric Reliability Council of Texas (ERCOT) region during the MATS rulemaking, despite comments from both the Texas Commission on Environmental Quality (TCEQ) and the Public Utility Commission (PUC) of Texas informing EPA of the errors. The EPA failed to adequately address or consider reliability effects that would result from both of these rules.

Additionally, in the Carbon Pollution Standard, EPA's recent reproposal would require new coal-fired power plants to install carbon capture and storage in order to meet the carbon dioxide emission standard. The EPA claims that carbon capture and storage technology is feasible for coal-fired power plants to achieve this standard, yet the technology has never been commercially demonstrated full-scale on a power plant. In addition to EPA's reproposal of their Carbon Pollution Standard for new power plants, EPA is starting to develop carbon standards for existing power plants under President Obama's Climate Change Plan announced in June 2013. When taken individually, the regulations are challenging and detrimental to existing power plants, as well as the possibility of future new coal-fired generation. In combination, the effects will make the possibility of any growth of capacity in the coal-fired generation sector highly unlikely.

Clean Water Act

On June 7, 2013, EPA proposed new wastewater effluent limits for toxic metals discharged from power plants. Of particular concern, the proposed limits include "anti-circumvention" provisions that would significantly impact reuse/recycling of waste streams internally within the plant resulting in likely increased use of raw water sources.

EPA Greenhouse Gas (GHG) Regulations

EPA adopted a number of regulations addressing greenhouse gas, including the Endangerment Finding, Timing Rule, Tailpipe Rule, Tailoring Rule, GHG State Implementation Plan (SIP) Call, and EPA's partial Texas SIP disapproval and issuance of a GHG Federal Implementation Plan (FIP) that gives EPA power to issue permits to GHG sources in Texas. The main suite of rules - Endangerment Finding, Tailpipe, Timing and Tailoring Rules - embody the most burdensome, costly, far-reaching program ever adopted by a U.S. regulatory agency - a point the EPA has never contested.

The State of Texas, other states, and industry groups submitted petitions for review challenging each of these actions in federal court. While Texas' legal arguments against EPA's regulation vary depending on the specific rulemaking, a general basis for the challenge is that the EPA's GHG rulemakings exceeded the authority established by Congress, and were arbitrary and capricious and contrary to the CAA.

A 3-judge panel of the U.S. Court of Appeals for the District of Columbia issued its opinion on June 26, 2012. The 3-judge panel unanimously concluded (1) the Endangerment Finding and Tailpipe Rule are neither arbitrary nor capricious; (2) EPA's interpretation of the governing CAA provisions is unambiguously correct; and (3) no petitioner has standing to challenge the Timing and Tailoring Rules, thus those petitions are dismissed for lack of jurisdiction, and the remainder of the petitions are denied. Texas and other state and industry petitioners filed petitions for rehearing en banc soon thereafter. On December 20, 2012, the full Court denied Texas' request for rehearing en banc, though there were two dissenting opinions. On April 19, 2013, States, including Texas, and industry groups filed petitions for Writ of Certiorari with the Supreme Court. On 10/15/2013, The US Supreme Court granted review of six of nine petitions, including Texas'; limited to one question: whether EPA's regulation of motor vehicle emissions triggers new permitting requirements for stationary sources as well. The Court will not consider the Endangerment Finding or Tailpipe Rule. Petitioners' briefs are due 12/9/13, respondents' briefs are due 1/21/14, and reply briefs are due 2/17/14. Oral argument is set for 2/24/14, with a decision no earlier than summer 2014.

Oral arguments for the lawsuits on EPA's GHG SIP Call and partial Texas SIP disapproval and issuance of a GHG FIP were held on May 7, 2013 in the D.C. Circuit. On 7/26/13, the Court dismissed all petitions for review. Requests for rehearing are due 9/9/13; cert petitions are due 10/24/13. On 8/21/13, petitioners filed unopposed motion to extend deadline for rehearing and to stay issuance of mandate pending resolution of the substantive GHG cases.

Under the GHG FIP, EPA implemented a GHG permitting program for major sources. As of December 5, 2013, EPA has received 77 GHG PSD permit applications. Twenty-four permits have been issued with EPA's processing timeframes ranging from 242 days to 655 days, with an average of 430 days. Fifty-five applications remain pending with EPA.

House Bill 788 (83rd Legislature) directed TCEQ to initiate rulemaking to lay the groundwork for Texas to begin permitting of GHG emissions, to the extent required by federal law. Once the rules are completed and approved by EPA, this would allow TCEQ, instead of EPA, to be the issuing authority for GHG permits in Texas. The rules were proposed on October 23, 2013 and are expected to be adopted on March 26, 2014.

Toxicity Factors

EPA is proposing to significantly revise toxicity factors for arsenic, dioxin, and hexavalent chromium. In terms of impact, this means remediation of soil where these compounds are present must be accomplished to a lower, more stringent level. TCEQ and others in the scientific community disagree with the EPA's proposed levels based on a lack of scientific defensibility. EPA has ignored scientific advice from the National Academies of Science and other well-respected scientists.

Once finalized, the more stringent toxicity factor for arsenic could result in soil surface clean up values less than background concentrations. In other words, soil surface clean up would have to make the soil "cleaner" than it would be under natural, uncontaminated conditions. This is highly significant because most, if not all, of the groundwater in Texas would have naturally-occurring arsenic levels EPA would deem unacceptable. The result would be a dramatic increase in the cost of treating groundwater for arsenic contamination. The amount of arsenic waste produced from the treatment of water would also increase, which would further increase the cost of the already expensive disposal of arsenic waste.

EPA's proposed toxicity values for dioxin may result in the reassessment and possible reopening of five federal superfund sites. For chromium, costly speciation analyses may be necessary to distinguish between chromium VI and other forms when the health data do not support this unnecessary expense. For all compounds, the newer, significantly lower cleanup values would

potentially call into question the adequacy of historically addressed sites. These values would also increase the cost of cleanup of these sites and cause needless worry among citizens if sites were reopened.

National Ambient Air Quality Standards

With regard to National Ambient Air Quality Standards (NAAQS), the EPA is obligated to establish a protective level of exposure for six pollutants that are considered hazardous to public health and the environment. In establishing the NAAQS for ozone and particulate matter, EPA relies primarily on ecological epidemiology studies and reports observations that support the policy goal of lowering the NAAQS, while disregarding contradictory evidence.

Epidemiological studies are not designed to determine causal effects, and can only report associations. **These studies should not be used quantitatively, and they are certainly not rigorous enough to set environmental policy.** For particulate matter health effects, EPA relies primarily on two studies when quantifying premature mortality due to fine particle matter (PM_{2.5}) exposure. There are other equally well-conducted studies that do not report such associations. If EPA used any of these other studies or adequately incorporated uncertainty, the resulting analysis would not support a more stringent NAAQS.

Coal Combustion Residuals (CCR)

EPA published a proposal in 2010 to regulate CCR management. CCRs are presently considered nonhazardous industrial solid wastes by EPA under the “Bevill Exclusion.” In line with this, CCRs are not considered to be hazardous waste under Texas regulations and TCEQ does not require a permit for on-site disposal of CCRs.

EPA’s proposal provided two options: Option I (Subtitle C option) proposed to regulate CCRs as hazardous waste and subject CCR surface impoundments and landfills to the hazardous waste regulations under RCRA Subtitle C regulations. Option II (Subtitle D option) proposed to regulate CCRs as nonhazardous waste retaining the current “Bevill Exclusion” and regulate CCR landfills and surface impoundments by establishing national criteria in accordance with the RCRA Subtitle D regulations. Both options are an expansion of regulatory requirements that are unnecessary to protect human health and the environment.

Existing TCEQ requirements are effective and encourage CCR recycling. These materials are currently recycled in a variety of applications, including the manufacturing of cement and cement products, masonry, roofing materials, road base/sub-grade materials, and waste stabilization/solidification materials. The majority of all industrial solid waste generated in Texas in the past decade has been made up of CCRs. The recycling of CCRs preserves landfill space, minimizes the environmental impact associated with disposal, reduces waste management/disposal costs and enhances the economic growth associated with the beneficial use of CCRs. The TCEQ believes that subjecting CCRs to the hazardous waste regulations would negatively impact the legitimate reuse and recycling of these materials.

While it would appear to be more expedient for EPA to make a final determination about the regulation of CCR in the actual CCR proposal, states may attempt to anticipate the outcome of that rulemaking through EPA’s other proposals. In April, 2013, EPA proposed amendments to the effluent limitations guidelines and standards for the Steam Electric Power Generating category (40 CFR Part 423). As part of their rulemaking proposal, EPA is proposing best management practices applicable to surface impoundments that contain CCR. The proposal provides two additional years to comply for regulated entities that opt to dewater, close, and cap all CCR surface impoundments at electric generating facilities. These best management practices seem to indicate that EPA may be leaning toward adopting Option II (Subtitle D).

Jurisdiction under the Clean Water Act (CWA)

Following the U.S. Supreme Court decision in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (SWANCC), 2001 and *United States v. Rapanos*, 2006; there have been different views about jurisdiction under the CWA. In response, the EPA in cooperation with the United States Army Corps of Engineers (Corps) prepared a draft guidance document, *Draft Guidance on Identifying Waters Protected by the Clean Water Act*, which outlined how EPA and Corps will interpret SWANCC and *Rapanos*, focusing on the coverage of intermittent streams and isolated wetlands. EPA and the Corps received significant comments (including comments from TCEQ) on their attempt to expand jurisdiction through guidance.

As a result, the EPA and USACE have developed a proposed rule to re-define the phrase "waters of the United States" for purposes of determining jurisdiction under the CWA. The EPA and the Corps sent the draft proposal to the White House Office of Management and Budget for interagency review. A copy of that rule was leaked the week of 11/22/13. The draft rule would significantly expand the EPA's jurisdiction, asserting CWA jurisdiction over all natural and artificial tributary streams, lakes, ponds and wetlands in floodplains and riparian areas that affect the chemical, physical and biological integrity of larger, downstream navigable waters. The proposed rule also would allow the agencies, on a case-by-case basis, to determine whether geographically isolated wetlands and certain other waters in the uplands have a significant nexus to the chemical, physical and biological integrity of downstream waters and should be considered under CWA jurisdiction.

EPA is also waiting on results of a connectivity study, the stated purpose of which is to inform this rulemaking. The public comment period on that study concluded in November 2013 and the study will go to EPA's Science Advisory Board for review next, then OMB. A proposed rule is expected as soon as the completed study results are incorporated into a draft rule and OMB's review is complete. There is much public criticism over the timing of the rule being completed and sent to OMB in advance of EPA completing the connectivity study that is supposed to inform that rule.

The guidance and the rule both seek to expand the federal government's jurisdiction under the CWA. The TCEQ believes the only appropriate avenue to refine and clarify CWA jurisdiction is through Congressional action.

Corps Reservoir Return Flows

TCEQ submitted comments to the Corps on February 14, 2013 regarding an anticipated Corps rulemaking that would have addressed return flows into Corps reservoirs. TCEQ's comments emphasized that return flows are state water. To date, the Corps has not proposed a rule. However, the senate version of the Water Resources Development Act (WRDA) (S. 601, Section 2014) potentially allows the Corps to adjust reservoir operations in a manner that would impact water rights in Texas. TCEQ's position is that states have absolute jurisdiction over water rights.

Texas Pollutant Discharge Elimination System Program

The Texas Pollutant Discharge Elimination System (TPDES) program administered by TCEQ has come under significant increased oversight and critique by EPA Region 6.

- *TPDES Permits:* EPA has objected to many draft permits, based on loose interpretation of federal and state laws and regulations. Many of EPA's objections directly contradict their own guidance and historical practice in developing NPDES permits. Regulated entities are experiencing significant delays in getting permits issued that prevent new projects from moving forward. As of December 2013, EPA objections are delaying the issuance of 101 TPDES permits.

- *Texas Surface Water Quality Standards (TSWQS)*: EPA has approved and disapproved portions of the 2010 TSWQS. The TSWQS establish explicit goals for the quality of streams, rivers, lakes, and bays throughout the state. The most significant disapprovals are related to nutrient criteria and mercury criterion.
- *Implementation Procedures (IPs)*: EPA denied approval of the 2010 IPs document in a letter dated December 2, 2010, due to concerns regarding reasonable potential determinations for Whole Effluent Toxicity (WET) limits. The IPs outline how TCEQ will implement the TSWQS in TPDES permits.
- *WET Issues*: Whole Effluent Toxicity (WET) refers to a method to measure wastewater's toxic effects to aquatic organisms for all pollutants contained in the wastewater. WET tests are intended to implement the Clean Water Act's prohibition of the discharge of toxic pollutants in toxic amounts. Beginning in 2007, EPA Region 6 began objecting to TCEQ's evaluation of WET in wastewater permits. EPA directed TCEQ to conduct reasonable potential (RP) determinations using a modified version of the statistical approach outlined within EPA's 1991 Technical Support Document (TSD). TCEQ disagrees with the TSD approach - a single failed test could result in inclusion of a WET permit limit, subjecting permittees to unnecessary monitoring, controls, or potential enforcement actions. TCEQ has worked with Texas stakeholders to propose revisions to WET requirements within the IPs to address EPA's concerns regarding implementation of TCEQ's WET program as stated above. The TCEQ continues to engage in negotiations with EPA to resolve these issues and has sought EPA input as to what would be approvable as stand-alone WET procedures.

Oil and Gas New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Review

On August 16, 2012, EPA issued the new NSPS and NESHAP final rule that sets standards for a greater number of oil and gas sources than previously regulated. The new regulations establish requirements for gas well completions, sweetening units, pneumatic controllers, natural gas processing plants, centrifugal and reciprocating compressors, and storage vessels. There are three issues with implementation:

- TCEQ has historically not regulated drilling and well completions.
- The regulations establish new requirements without regard to practical timeframes for industry compliance, making implementation by TCEQ problematic.
- The provisions relating to affirmative defense do not match exactly with TCEQ's current rules and the federal regulations do not contain flexibility for equivalent methods creating issues for enforcement.

On October 15, 2012, the TCEQ and Texas Railroad Commission (RRC) filed a joint Petition for Reconsideration and Administrative Stay with the EPA on the following basis: EPA failed to adequately address Texas' comments on the rule; certain technical issues in the rule cannot be implemented and are not practicable; certain technical issues will require more time to be implemented than the rule allows; EPA underestimated the number of affected facilities and the available resources necessary to meet the requirements; and EPA's approach to responding to industry concerns is flawed and circumvents the rulemaking process. Additionally, on October 15, 2012, the State of Texas, RRC, and TCEQ filed a Petition for Review of the final rule in the District of Columbia Circuit Court. That Petition was withdrawn on January 17, 2013, in favor of filing an amicus brief with the court at the appropriate time.

EPA granted the Petition for Reconsideration and proposed new requirements for storage vessel affected facilities on April 12, 2013, acknowledging their underestimation of the number of

affected facilities and lack of availability of controls necessary to comply with the rules. The proposal includes revised definitions, recordkeeping and reporting requirements, and applicability requirements, some of which are inherently flawed. EPA solicited comments on sixteen issues within the proposal. Furthermore, EPA indicates in the proposal that additional revisions to the rule are forth-coming. TCEQ submitted comments on the April 12, 2013 proposal. The final rule was signed by EPA on August 2, 2013, and published in the *Federal Register* on September 23, 2013.

Near-Road Monitoring

On January 22, 2010, EPA strengthened the health-based NAAQS for nitrogen dioxide (NO₂) to include a new one-hour standard. In addition to the standard, EPA established new ambient air monitoring and reporting requirements for major roads in urban areas with a population of over 500,000 people because peak NO₂ concentrations are expected near roadways. Data from these monitors are expected to be used for determining attainment.

Issues with this rule are fourfold. First, this rule could potentially force states to develop a State Implementation Plan (SIP) for roadway segments for which the only likely source is vehicle exhaust—a source that states are federally precluded from regulating. Second, although the NAAQS are intended to protect public health, public exposure is not one of the major criteria for siting the monitors, nor does the monitoring data represent likely public exposure, particularly for the time periods for which the standards were developed. Third, EPA has not adequately planned funding for the deployment and maintenance of these monitors. EPA has currently only provided funding for the deployment of the first of three phases of monitors. Funding for the second phase has been sequestered, though the deployment deadline has not been delayed. EPA also expects that states continue this extra monitoring beyond the first year with no additional federal funding. The total ongoing annual cost for the near-road monitors is estimated to be between \$146,000 (if operated by TCEQ staff) to \$236,000 (if contracted). Finally, EPA is planning on expanding the near-road monitoring requirements beyond NO₂.

On August 12, 2011, and December 14, 2012, respectively, EPA finalized requirements for near-road carbon monoxide (CO) and PM_{2.5} monitoring in areas with a population of greater than 1 million people. In addition, they are strongly encouraging states to measure and track black carbon, meteorology, air toxics, particulate matter (ultrafine, PM_{2.5}, PM coarse), traffic counters (if not available nearby), carbon dioxide, organic and elemental carbon, and ozone. The resulting effect of this monitoring could be to require additional regulation at the expense of states and stationary sources to address a potential problem that may not impact the general public while attempting to solve a problem that only EPA can legally address.

Clean Air Status and Trends Network (CASTNET) Monitoring

CASTNET is a network of 90 rural monitoring sites managed and operated by EPA's Clean Air Markets Division, the National Parks Service (NPS), and their federal, state, and local partners. The network was established between 1987 and 1991 as a research network to assess trends in acid deposition and site design was intended to identify contributions of nitrogen and sulfur oxides to sensitive ecosystems. The sites also measure ozone to evaluate concentrations in sensitive ecosystems and help define natural background levels where urban influences are minimal. Data from this network are loaded and certified by EPA and NPS. Statements made in an unrelated rulemaking indicate that by 2006, EPA was upgrading sites in order to comply with regulatory siting and data handling requirements so that the data could be used for regulatory purposes.

Texas has three CASTNET monitors: Bravo Big Bend (Big Bend National Park), Palo Duro (Palo Duro Canyon State Park), and Alabama-Coushatta (near Livingston). The ozone monitors are federal equivalent methods and the quality assurance/quality control information available indicates the data are comparable to TCEQ's instrumentation and data handling methods. Annual

average concentrations from the past two years indicate a design value could be in the 70-75 ppb range, depending on 2013 concentrations.

There are two central issues with EPA's conversion of CASTNET ozone monitors to regulatory monitors. First, TCEQ will be placed in the position of expending its resources for indirect activities associated with monitoring at these sites. These activities can include research and evaluation of sources and trends and development of exceptional event demonstrations and SIP revisions. These analyses are complicated by EPA not involving state agencies in the original siting of these monitors. Second, EPA did not adequately notify state agencies of the change. EPA made passing statements about the change from the research to regulatory data usage in eight rulemakings unrelated to CASTNET from 1997-2013. EPA also gave presentations to the National Association of Clean Air Agencies, but did not engage non-member states. EPA did not formally seek public comment and the changes were not a part of their own rulemaking.

The Association of Air Pollution Control Agencies (AAPCA) sent a letter to EPA on August 14, 2013, expressing concerns over EPA's conversion of the CASTNET monitors into regulatory monitors. EPA provided a response on August 27, 2013, rebutting AAPCA's concerns. The matter was discussed by AAPCA states and EPA at the fall 2013 AAPCA member meeting where states' concerns were reiterated. As a result, EPA agreed to expand their outreach efforts on monitoring activities to specifically include AAPCA. AAPCA also plans to continue discussions with EPA on appropriate addressing states' concerns with data quality assurance/control procedures for these monitors. Since the monitors have been upgraded to meet regulatory monitor requirements, the federal Clean Air Act requires they be used as regulatory monitors (irrespective of EPA's lack of adequate public notice).

Economic Impact and Associated Issues of EPA Regulations

EPA's Suite of Regulations Affecting the Electric Utility Industry

- In the last several years, EPA has proposed or finalized significant rules affecting the power generation industry and coal-fired power plants in particular: Cross State Air Pollution Rule or CSAPR (overturned by the DC Circuit Court but on appeal with the U.S. Supreme Court), Mercury and Air Toxics Standards (in effect but on appeal), CO₂ New Source Performance Standards (NSPS) for new power plants under 111(b) (reproposed on Jan. 8, 2014), Coal Combustion Residuals (expected to be finalized in late 2014), Clean Water Act 316(b) Cooling Water Intake rules (expected to be finalized at any time now), and CO₂ Emission Guidelines for existing power plants under Clean Air Act 111(d) (under development).
- Cross State Air Pollution Rule
 - Although CSAPR was overturned by the DC Circuit Court, EPA's promulgation of the rule displayed fundamental philosophical flaws in EPA's interpretation of the Clean Air Act.¹
 - CSAPR did not properly take into account the contribution of a state's emissions that affected other states' compliance with NAAQS. CSAPR overcontrolled emissions from Texas plants above the amount necessary to be reduced.
 - EPA did not provide adequate notice of the rule. There was no significant linkage by Texas for PM_{2.5} to any monitor at rule proposal. With no indication of any specific linkage at proposal, it was not possible for Texas to provide meaningful comment.
 - EPA did not provide the opportunity for states to submit their own State Implementation Plans before EPA issued a Federal Implementation Plan. If the rule wasn't overturned by the courts, it would have significantly affected existing coal-fired power plants in Texas posing a very real threat to the reliability of ERCOT electric grid.
 - A ruling by the Supreme Court in favor of EPA's appeal would not necessarily mean CSAPR would immediately go into effect as the Supreme Court could remand the case back to the DC Circuit Court for reconsideration. However, if CSAPR is ultimately upheld, the EPA could quickly reinstate CSAPR and require companies to comply. If the Supreme Court rules against the EPA and affirms the DC Circuit Court's decision, the EPA has already begun the process for a replacement rule for CSAPR.

¹ On March 29, 2013, the U.S. Solicitor General petitioned the U.S. Supreme Court to review the DC Circuit Court's decision on the Cross State Air Pollution Rule. On June 24, 2013, the Supreme Court granted EPA's petition for review. A ruling is currently pending.

- Mercury and Air Toxics Rule
 - MATS is requiring significant investment in control technology while the benefits are questionable at best.
 - EPA's economic analysis misrepresented the actual costs and benefits of the rule. Benefits should be based on direct health benefits associated with reductions of the Hazardous Air Pollutants rather than including co-benefits associated with emission reductions of non-HAP pollutants. More than 90% of the represented health benefits are based on particulate matter benefits and not the HAPs that are the basis of the rule. Particulate matter is not a HAP and is regulated as a criteria pollutant under the EPA National Ambient Air Quality Standards. If EPA confined its cost benefit analysis only to the specific HAPs that pose a hazard to public health, any health benefits would be insubstantial compared to cost of the regulation.
 - On-going legal challenges are not likely to affect companies' decisions regarding compliance with the MATS rule because the rule is currently in effect. Existing units must comply with the MATS rule by April 16, 2015. Companies may request from the state a one-year extension to April 16, 2016.
- CO₂ New Source Performance Standards (NSPS) for New Power Plants under 111(b)
 - The 111(b) rulemaking would require new coal power plants to meet a CO₂ emissions standard that is not achievable without use of carbon capture and storage (CCS). CCS has not been commercially demonstrated on any existing power plant. CCS substantially increases the cost of constructing and operating a power plant. The only coal-fired power plant projects under construction or planned with CCS have received significant federal aid through DOE grants. Additionally, the parasitic load associated with CCS can be as high as 30%; therefore, constructing a new power plant with CCS requires building a larger capacity unit in order to provide the same net power to the grid as a unit without CCS. This results in cost increases beyond just the cost of the CCS equipment itself. Regardless of the price of natural gas, EPA's rulemaking will most likely result in no new coal-fired power plants being constructed in the foreseeable future.
- CO₂ Emission Guidelines for existing power plants under Clean Air Act 111(d)
 - EPA plans to propose rules under Federal Clean Air Act (FCAA) §111(d) for emission guidelines for CO₂ emissions from existing power plants by June 2014. EPA has engaged states and other stakeholders in this process; however, to date, the EPA has not provided any specific details as to the level of CO₂ control that may be required to meet the emission guideline. EPA Administrator McCarthy has publically stated that CCS is not being considered for existing facilities under this regulation. In joint comments submitted to EPA, the TCEQ and Public Utility Commission of Texas emphasized concerns that states need to have maximum flexibility to craft state plans to meet a performance standard to account for the diverse

nature of each state's power generation mix and market structures. Maintaining electric reliability and minimizing consumer costs as a result of the rulemaking is a necessity. EPA must be clear and transparent about the data and assumptions they make regarding effects on reliability and costs to consumers. There should not be tradeoffs between EPA's desire to reduce CO₂ emissions and the progress states have made in reductions of other air pollutants.

- EPA should not penalize states for demographic and geographic factors that complicate the supply of, and demand for, electricity within and between states. Texas' population is growing faster than any other state. Texas is also the nation's leading producer of oil and gas, refined products, and chemicals. These industries are energy dependent and Texas should not be penalized for the energy used by these industries that provide products to the rest of the nation and the world. According to the U.S. Energy Information Administration (EIA), Texas is also the largest lignite producer and the fifth largest coal producer in the nation.
- Texas produces more electricity than any other state, generating almost twice as much as the next largest generating state. Texas is also the largest electricity consuming state. Unlike other regions where large net interstate electricity deliveries are available, the Texas power grid is largely isolated from the interconnected power systems serving the eastern and western United States. The largest portion of the retail electricity sales in Texas is to the residential sector. One-half of the households in the state use electricity as their primary heating fuel. The residential use of electricity is higher in Texas than in other states, in part because of population size, but also because of high demand for air conditioning during the hot summer months and the widespread use of electricity as the primary energy source for home heating during the generally mild winter months.² Any program developed by EPA under 111(d) that does not take factors such as these into account could result in unequal negative impacts on Texas economy relative to other states.

Impacts to Texas

- Coal mining, coal-fired electricity and related industries provide a significant impact to the Texas economy creating over \$6.2 billion in economic activity in Texas annually. This activity supports 23,130 jobs that pay almost \$1.7 billion in salaries, wages, and benefits. State and local taxing jurisdictions receive \$640 million in annual revenues from coal related activities.³ Any EPA regulation, especially the 111(d) rulemaking that results in coal-fired power plant retirements could have a substantial impact on the Texas economy.

² <http://www.eia.gov/state/analysis.cfm?sid=TX>

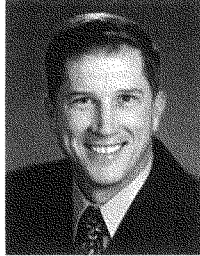
³ Coal Mining and Coal-Fired Power Generation in Texas: Economic and Fiscal Impacts, Terry Clower, Ph.D. and Manuel Reyes, D.E.D., Center for Economic Development and Research, University of North Texas, February 2013

- Fiscal impact of EPA Regulations to TCEQ
 - With the passage of HB 788 by the Texas Legislature in 2013, the TCEQ is now required to establish a permitting program to regulate GHG emissions to the extent that such GHG emissions require authorization under federal law. At the time of passage of the legislation, TCEQ estimated that there could be as many as 1,800 existing sites throughout the state that could trigger the Title V GHG emissions threshold established under EPA's Tailoring Rule and that up to an additional 10 FTEs would be needed by FY 2015 for permitting and compliance monitoring at a cost of about \$900,000. The state will evaluate the need for additional FTEs prior to the 2015 legislative session.
 - If impacts were based on the permitting thresholds in the Clean Air Act rather than EPA's Tailoring Rule, the increase in permit application workload would be enormous. Nationwide, EPA estimated the number of PSD applications would rise from approximately 300 to 40,000 per year, and Title V permit applications would be expected to increase from 15,000 to approximately 6 million. According to the November 2008 report from the Texas Advisory Panel on Federal Environmental Regulations, it was estimated that costs to the TCEQ could run anywhere from \$40 to \$80 million annually.
- Coal Plant Retirements
 - At this time, projections by organizations like the U.S. Department of Energy, Energy Information Administration (EIA) and The Brattle Group do not indicate substantial coal-fired power plant retirements in ERCOT. The EIA 2014 Annual Energy Outlook Early Release Report (released December 2013) indicates approximately 1.7 gigawatts (GW) of coal capacity are expected to retire by 2016 in ERCOT. In a 2012 report, The Brattle Group projected less than 1 GW of coal-capacity would retire by 2016 in ERCOT. However, the final total retirements may not be known until the final compliance dates for the MATS rule (e.g., April 16, 2016) are closer.
 - Factors possibly contributing to Texas having, at present, few announced and projected coal-fired power plant retirements:
 - The Texas coal-fired fleet is relatively young compared to most other states. The average age of the coal-fired power plants in Texas is approximately 30 years. The national average age for coal-fired power plants is approximately 45 years.
 - Regarding retrofits for compliance with the MATS rule for the existing Texas coal-fired fleet:
 - Most, if not all, of the coal-fired power plants in Texas will require controls for mercury under MATS.
 - Some facilities may need to install controls to meet the hydrogen chloride (HCl) emission standard for acid gases under MATS; however, many are expected to already meet the HCl limit or to meet the alternate sulfur dioxide (SO₂)

- surrogate limit if the unit is equipped with flue gas desulfurization control.
 - Most of the coal-fired units in Texas are expected to already meet the particulate matter alternate emission standard for the metal hazardous air pollutants.
 - At this time, there have been announcements of 3 coal-fired power plant unit retirements in Texas.
 - In 2011, City Public Service announced plans to retire both J T Deely Units 1 and 2 in Bexar County by December 31, 2018. While the planned retirement was announced in 2011, City Public Service only recently (October 2013) formally notified ERCOT of the retirement of the Deely units. Note: the J T Deely units are within the ERCOT region.
 - In 2012, American Electric Power announced plans to retire Welsh Unit 2 in Titus County by no later than 2016. This announcement was part of a consent decree agreement associated with the startup of the Turk facility in Arkansas. Note: the Welsh facility is the SPP region, not in the ERCOT region.
 - The effects of EPA's 111(d) rulemaking on the existing coal-powered fleet are unknown at this time.
- Electric Reliability
 - While substantial retirements in the Texas coal-fired fleet are not expected at this time, ERCOT is projecting the reserve margin will fall below the target reserve margin, based on the May 2013 Capacity, Demand, and Reserves (CDR) Report. Additional retirements will exacerbate the reserve margin situation in ERCOT.
 - Note: ERCOT is reevaluating its load forecasting approach and considering changes. Previous load projection estimates included growth estimates between 2 and 3 percent per year, while recent actual growth has been 1.1 percent per year. If ERCOT changes the growth projection estimates, it may improve the reserve margin projections. The Winter 2013 CDR Report is still pending from ERCOT.
 - In addition to retirements, overlapping outages for the installation of pollution control equipment may create reliability challenges. For example, NERC projects that 43.5 GW of SO₂ controls and 30.6 GW for mercury controls are planned between 2013 and 2016 nation-wide (NERC 2013 Long-Term Reliability Assessment Report, December 2013).

Bryan W. Shaw, Ph.D., P.E.

Dr. Bryan W. Shaw of Elgin was appointed to the Texas Commission on Environmental Quality by Gov. Rick Perry on Nov. 1, 2007. The Texas Senate confirmed his appointment on May 5, 2009 and he was appointed chairman on Sept. 10, 2009.



Shaw is an associate professor in the Biological and Agricultural Engineering Department of Texas A&M University (TAMU) with many of his courses focused on air pollution engineering. The majority of his research at TAMU concentrates on air pollution, air pollution abatement, dispersion model development and emission factor development. Shaw was formerly associate director of the Center for Agricultural Air Quality Engineering and Science, and formerly served as Acting Lead Scientist for Air Quality and Special Assistant to the Chief of the U.S. Department of Agriculture Natural Resources Conservation Service.

Shaw served as a member of the U.S. Environmental Protection Agency (EPA) Science Advisory Board (SAB) Committee on Integrated Nitrogen, as well as the EPA SAB Environmental Engineering Committee and the Ad Hoc Panel for review of EPA's Risk and Technology Review Assessment Plan. Additionally, he is a member of the U.S. Department of Agriculture–Agricultural Air Quality Task Force. Since his appointment to the TCEQ, Shaw has served on the Texas Environmental Flows Advisory Group and as chair of the Texas Advisory Panel on Federal Environmental Regulations.

Shaw received a bachelor's and master's degree in agricultural engineering from TAMU and a doctorate degree in agricultural engineering from the University of Illinois at Urbana-Champaign.

Chairman SMITH. Thank you, Dr. Shaw.
Mr. Porter.

**TESTIMONY OF THE HONORABLE DAVID PORTER,
COMMISSIONER, RAILROAD COMMISSION OF TEXAS**

Hon. PORTER. Hello. I am David Porter, Texas Railroad Commissioner. I would like to thank the Committee for holding this important hearing and inviting me to testify.

The Texas Railroad Commission is one of the oldest, most historic state agencies in the country and is world-renowned for its thorough and mature regulatory framework. As our name implies, the Commission was originally established to oversee railroads in 1891. Today, the Railroad Commission of Texas is the state agency with primary regulatory jurisdiction over the oil, gas, propane industries, pipelines, and coal and uranium surface mining operations. Last year alone, the Commission monitored more than 410,000 active wells, issued over 21,000 drilling permits, conducted over 125,000 field inspections, plugged 778 orphan wells, including 30 orphan bay wells in coastal waters. In addition to these functions, the Railroad Commission works diligently to ensure that our rules and regulations keep pace with the technology and practices in the field and remain at the forefront of environmental and public safety policy.

In 2012, Texas led the way as the first state to enact laws requiring the mandatory reporting of fluids used in the hydraulic fracturing process on FracFocus. In 2013, Texas again was a pioneer in passing amendments to our statewide Rule 13 and we now have some of the most stringent rules nationwide on well construction, cementing, and integrity standards. We also amended our water recycling rules to encourage oil and gas operators to enhance water conservation and we are updating our information technology systems in order to improve services and increase transparency. These efforts enhance the Commission's ongoing effectiveness in overseeing the responsible development of Texas' energy resources.

One-size-fits-all regulation from a far-removed inapt federal agency is not the answer. The EPA recently announced plans to increase inspections by 30 percent over the next five years. On the other hand, the Railroad Commission has increased inspections and enforcement to parallel an increase in activity.

However, nothing exemplifies the severe incompetence and blatant disregard for sound science as well as EPA's infamous mishandling of the Range Resources case in Parker County, Texas. In August of 2010, a homeowner in Parker County filed a complaint with the Commission of natural gas in his water well. We immediately opened an investigation and began inspecting and sampling the wells in question. However, the EPA, falsely claiming the Commission had done nothing, decided to step in and conducted their own investigation or what I would term a witchhunt.

In December, the EPA issued a severely premature misguided endangerment order against Range Resources, claiming there was an immediate and substantial risk of explosion or fire. However, the Railroad Commission determined unequivocally that the gas found in the Parker County water wells came from the shallow

strong gas field and was not the result of activities conducted by Range Resources. Moreover, the facts and records indicated virtually zero potential for any fire or explosion. Finally, in March of 2012, the EPA withdrew the endangerment order and dropped the lawsuit against Range Resources. Consequentially, Armendariz resigned and is now working for the Sierra Club.

The EPA conducted the investigation they wanted in order to get the results they wanted and used this complaint to grab national media attention and further their environmental agenda.

We in Texas know best how to achieve a balance of economic vitality and environmental safety as we responsibly and proudly reign as the top oil and gas producing state in the nation.

Thank you very much and be glad to answer any questions at the proper—appropriate time.

[The prepared statement of Hon. Porter follows:]

THE RAILROAD COMMISSION OF TEXAS



U.S. House of Representatives Committee on Science, Space, and Technology

Examining the Science of EPA Overreach: A Case
Study in Texas

Texas Railroad Commissioner David J. Porter

February 5, 2014

Texas has long been the proud leader in oil and gas production. Our state's abundant natural resources, along with the ingenuity to extract and produce oil and gas, put Texas on the map. From the historic gusher at Spindletop in 1901 through the current age of advanced drilling techniques and the discoveries of prolific shale plays, Texas has always been at the forefront of energy production as this industry has gradually developed and evolved. Similarly, the Railroad Commission of Texas has gradually developed and evolved over time and has now proudly served the state and worked diligently for almost a century to regulate this complex and thriving industry.

The Railroad Commission: History and Background

The Texas Railroad Commission is one of the oldest, most historic regulatory state agencies in the country and is world-renowned for its thorough and mature regulatory framework. This framework has been formulated and developed from decades of experience, expertise, and an identifiable need to regulate certain industries at the state level, where individual circumstances and needs of the people are better identified and served. The history of the Commission exemplifies our state government's high level of responsiveness to the needs and wants of Texas citizens, while carefully balancing the opportunities for economic growth and prosperity. While the Railroad Commission was originally created to oversee railways, the experience of regulating a new and rapidly growing rail industry was a precursor to the Commission's understanding of how to regulate a booming and constantly evolving energy industry.

In the early to mid-1800s, railroads began rapidly sprawling across the Texas landscape. Many Texas counties welcomed the arrival of these railways, issuing bonds and grants in an effort to attract development and investment in their communities. As the railroad industry grew, lawmakers soon realized the need to regulate this powerful industry, and in 1853, the Texas Legislature approved "An Act to Regulate Railroad Companies". Its provisions included requirements for annual reports, legislative

regulation of rates (allowing a 12 percent profit), holding directors liable for debts, fixed regulations covering uniforms, crossings, facilities, bells, etc., and allowing the state to purchase railroads. The recognition of the people of Texas that railroads were urgently needed to carry forward the development of the State is reflected in the subsidies, both of land and the use of money from public funds at a low rate of interest, which were granted to the railroad companies.

Although much of the early legislation regulating railroads was adopted to control inherent abuses in a monopolistic form of business enterprise, the administration of the laws left a great deal to be desired. Since there was no agency especially created or charged to administer the provisions of the Act to Regulate Railroad Companies, the railroads generally did not comply with the regulations. As the abuses of the carriers became progressively worse, especially after the Civil War, various citizen groups were organized for the expressed purpose of fostering regulatory measures to which the railroads would be directly responsible. One of these groups was a farmer's organization called the Patrons of Husbandry, more commonly known as the "Grange," organized in 1873 with over 40,000 members. The Grange directed its attack against the "fearful rate of freight," "profligate and greedy management," and "efforts to control legislation, influence courts, or override law and justice." The agitation of the Grange resulted in a resolution calling on the Constitutional Convention of 1875 to prescribe a remedy to eliminate the abuses of the railroads. The character of some of the constitutional provisions points significantly to the nature of some of the abuses practiced by the carriers. More importantly, it indicates the increased ability of the peoples' representatives to cope with the problems of regulating a booming industry.

After much debate, the Office of State (railroad) Engineer was created in 1883, but the office had no power to order or compel obedience of the laws. Its function was to investigate and make reports to the Attorney General. The office was destined for failure, and after two years it was abolished. Bills calling for a railroad commission were passed by the Texas House of Representatives in

1887 and 1889; however, the Senate refused to pass the bills on the ground of constitutionality. This objection was circumvented by the adoption of a constitutional amendment authorizing the creation of a railroad commission. With the last obstacle overcome, the Legislature passed an act creating the Railroad Commission of Texas in 1891.

Within a very short period of time after its creation, the Railroad Commission cut the rates railroads were allowed to charge. Almost immediately, the Commission was taken to court and placed under injunction. It was not until 1894 when the United States Supreme Court ruled that the act creating the Railroad Commission was constitutional that the lower rates were put into effect.

In the meantime, in 1892, the railroads made an unsuccessful run at having the legislature abolish the Commission. In 1893, the Commission was granted statutory authority to regulate issuance of railroad stocks and bonds. The next year, the Texas Constitution was amended to change the office of the three Commissioners from appointive to elective, with six-year staggered terms. The Commission's responsibilities included: administration of laws relating to the railroads of Texas; determination of passenger fares, freight rates, and charges for all classes of common carriers in Texas; holding public hearings; receiving reports, making investigations, and keeping of records regarding fiscal structure, valuation, revenues, and expenses; and train, terminal, and traffic service of Texas railroads. The legal focus of the Commission was on intrastate passenger and freight activities within the borders of Texas. Interstate activity fell under the jurisdiction of the U.S. Interstate Commerce Commission.

When the Commission was founded in 1891, there was some 8,700 miles of railroad track. When the railroads reached their peak in Texas in 1930, there were 17,500 miles. Following World War II, goods increasingly began to travel by truck and people by buses and cars, and the miles of track began to shrink.

Over recent decades, the role of the Railroad Commission in the regulation of railroads has changed, moving initially from economic regulation to safety regulation before being transferred

entirely to the Texas Department of Transportation. The Federal Railroad Safety Act of 1970 vested rail safety responsibilities in the Federal Railroad Administration. In 1983, the Railroad Commission began a cooperative process with the federal government, implementing a rail safety program. The Rail Safety and Planning section of the Transportation/Gas Utilities Division monitored the state's rail lines, inspecting railroad equipment, operations, and track. This section also maintained the state's rail planning program and oversaw the use of federal funds for track rehabilitation projects. Under provisions of the 1980 Federal Staggers Rail Act, the Railroad Commission recognized that it could hold only a passive role in rate setting. In 1984, the Commission ceased its historic role in economic regulation of the Texas rail industry. Effective October 1, 2005, the 79th Legislature, in House Bill 2702, transferred the remainder of railroad safety oversight from the Railroad Commission to the Texas Department of Transportation, leaving the Commission with no regulatory authority related to any aspect of the rail industry.

Elsewhere in Texas, as the railroads were experiencing the height of their success and facing new regulation and oversight, a new kind of success was inconspicuously bubbling out of the ground. In 1894, the beginnings of the Texas age of oil were realized by the first major discovery – Corsicana in the east-central portion of Texas. This initial discovery ushered in an era of newfound prosperity and entrepreneurship in this fledgling industry that is still alive and well today. The first true “boom” came from the 1901 Spindletop gusher of Anthony Lucas. Working with a salt mining company in Louisiana, Lucas had noticed the gentle mounds that raised the surface of the Louisiana and Texas Gulf coast. He recognized these mounds as salt domes– natural traps holding reservoirs of oil. The next cluster of discoveries was in North Central Texas between 1902 and 1920 – Petrolia, Electra, and Burkburnett – and during that same time period, a little further south, there was Breckenridge and Desdemona in 1918.

Throughout these early years, whenever a boomer came in, oil seemed to cover the surrounding lands. The pressure of some of these wells was so great that it was days before the flow could be controlled. In the meantime, oil soaked into the ground or ran off into nearby creeks and gullies, or in some cases it was directed into nearby pits that were hastily constructed. Even after the flow was controlled, pits were used as storage or vast open tanks. The results were inevitable – waste and pollution. While pollution may not have been a motivating factor in those early days (oil was viewed as a sign of wealth and adventure, even if it was in a creek), waste was a top concern for many. Safety concerns were apparent as well, as a fire roaring from one well to the next and engulfing one tank then another, was an all too frequent occurrence.

While the Texas Legislature in the later 1800s and early 1900s had passed several bills relating to the use or conservation of the state's oil and gas, a seemingly familiar thing happened – very little or nothing in the way of observance and compliance. Laws without enforcement, or with enforcement only through the court system, had a tendency to be blatantly ignored, as was the case with the railroad industry before oversight by the Railroad Commission.

Additional obstacles arose in the burgeoning industry, with transportation as one of the prime issues. To have substantive value, the oil had to reach its markets – the refineries. Early on, miles of tank cars were pulled by steam locomotives. Then pipelines became the transportation mode of choice in many regions. However, if a company owned both a pipeline and wells, the tendency was to take from its wells and ignore surrounding wells owned by another company. In 1917, to prevent abuses, the Legislature designated oil pipelines as common carriers and, more importantly, gave jurisdiction to the Railroad Commission, which was already regulating a transportation industry – railroads. By 1919, the Commission was also granted jurisdiction over oil and gas production. It was at that time that the Oil and Gas Division of the Railroad Commission was created.

Regulation did not truly take hold until the 1930s, and it was a struggle all the way. The East Texas Oil Field was discovered in 1930. Unlike many other fields at this stage of industry development, the East Texas Field was taken over by a multitude of small independent operators, each racing to put up a rig. Derrick touched legs with derrick. Each well was produced wide open. The price of oil crashed. More critically, it was felt that the natural water drive of the field was being lost. When the Railroad Commission attempted to step in and cut back production, action began in the courts. At one point, state military forces were called in to regain order. It was several years before the courts and the State Legislature were able to settle on the position that the Commission had the right and authority to prorate production – to conserve the state’s natural resources, to protect correlative rights, and prevent pollution.

Since the 1930s, the Railroad Commission has firmly maintained a leading role in the regulation of oil and gas. Throughout the gradual and organic evolution of the Railroad Commission’s regulatory authority, the Commission has proven its ability to regulate complex, rapidly growing industries, as well as its adaptability to conform to the needs of Texans and the industries that operate within our state.

The Railroad Commission: Current Regulatory Responsibilities and Jurisdiction

Today, the Railroad Commission of Texas is the state agency with regulatory jurisdiction over the oil and natural gas industry, pipeline transporters, natural gas and hazardous liquid pipeline industry, natural gas utilities, and liquefied petroleum gas (LPG)/liquefied natural gas(LNG)/compressed natural gas(CNG) industries, and coal and uranium surface mining operations. In addition, the Texas Legislature has mandated that the Railroad Commission is responsible for research and education to promote the use of LP-gas and natural gas as an alternative fuel in Texas. The Commission exercises its statutory responsibilities under provisions of the Texas Constitution and has statutory responsibilities under state and federal law for regulation and enforcement of the state’s energy industries.

The Commission's main functions are to protect the environment, public safety and correlative rights of mineral interest owners, prevent waste of natural resources, and assure fair and equitable utility rates in natural gas distribution industries. The Commission accomplishes its main functions within the framework of four coordinated goals that: (1) support the development, management, and use of Texas' oil and gas energy resources to protect correlative rights, provide equal and fair energy access to all entities, ensure fair gas utility rates, and promote research and education on use of alternative fuels; (2) advance safety in the delivery and use of Texas petroleum products, including LPG/LNG/CNG, and in the operation of the Texas pipeline system through training, monitoring and enforcement, and promote, educate, and enforce regulations for underground damage prevention; (3) assure that Texas fossil fuel energy production, storage, and delivery is conducted to minimize harmful effects on the state's environment and to preserve natural resources; and (4) strive to maximize electronic government and to minimize paper transactions by developing technological enhancements that promote efficient regulatory programs and preserve and increase access to public information.

While its primary responsibilities are the protection of the environment and public safety, the Commission also takes a balanced approach to maximize the development of the state's important energy resources. In every decision that is made or rule that is adopted, the Commission considers not only how the potential change protects the environment and public safety, but also how the change will affect the development and production of that state's natural energy resources.

Three statewide officials are elected to serve six-year, staggered terms as Commissioners of the Railroad Commission of Texas. Serving at the discretion of the Commissioners is an Executive Director, who implements policies and rules and manages the daily operations of the Railroad Commission. Supporting the Executive Director is a management team comprised of a Chief Financial Officer and Division Directors, who oversee various aspects of the organization. Primary divisions within the Commission include: Oil and Gas; Alternative Energy; Office of General Counsel; Pipeline Safety; Surface

Mining and Reclamation; Gas Services; Information Technology Services; Human Resources; and Administration. The Railroad Commission has approximately 700 employees, with roughly 60 percent of the Commission's staff located in the Austin headquarters and the remaining staff located in 11 field offices statewide. Since many regulatory tasks assigned to the Railroad Commission involve on-site inspection of facilities within the regulated industries, maintenance of the field locations is the most reasonable and cost-effective means of implementing this mandate. Additionally, most field locations are also public information portals for walk-in customers; however, this aspect continues to lessen as the capacity to access information from the Commission's website increases.

While the Commission has responsibility over five basic industry segments (oil and natural gas exploration and production; natural gas, hazardous liquids and CO₂ pipeline operations; natural gas utilities; LPG/LNG/CNG industries; and coal surface mining operations), the majority of the Commission's resources are dedicated to the regulation of oil and natural gas exploration and production that affects almost all areas of the state. In 2001, the Commission monitored approximately 354,600 oil and gas wells. Today, the Railroad Commission monitors more than 410,000 wells across the state, an increase of 15.6 percent. More than 82.5 percent of Texas counties currently report oil production, and 73.6 percent of Texas counties produce natural gas.

It is not by chance or coincidence that the Railroad Commission of Texas has not only withstood the test of time but is also recognized throughout the world as a leader in developing workable regulation for the energy industry. In fact, last year alone the Commission hosted delegations representing 16 countries, including Canada, Germany, Australia, Ukraine, Iraq, Republic of Poland, Austria, Japan, China, Bulgaria and Italy, who met with Commission staff to learn about the Commission's 90-plus years of successful oil and gas regulation.

The Commission's regulatory functions are carried out through various, deliberate activities, including: promulgating rules; registering organizations; maintaining financial assurance of oil and gas

operators and surface mining permit holders; reviewing operator filings; granting permits and licenses; monitoring performance; inspecting facilities; maintaining records and maps; reviewing variance requests; investigating complaints; responding to emergencies; plugging abandoned wells; cleaning up abandoned well sites; educating the public; researching information and providing education on alternative fuels; providing public information; resolving disputes; conducting hearings on disputed matters; and rendering decisions.

To provide a better scope and practical applications of these regulatory functions, the following figures highlight the Commission activities in Fiscal Year 2013 alone. In terms of inspections:

- The Oil and Gas Division field staff conducted over 125,000 field inspections.
- The Gas Services Division, which regulates 32 natural gas distribution utilities and 182 transmission and gathering utilities, conducted 141 utility field audits resulting in the collection of \$21,991 in underpaid gas utility taxes and cited gas utility companies for rate overcharges requiring refunds of \$146,471.
- The LP-Gas Operations program in the Alternative Energy Division conducted more than 13,000 LPG, LNG, and CNG safety inspections. These inspections included schools, health care facilities, commercial and industrial sites, school buses, and mass transit and cargo tank motor vehicles.
- The Surface Mining and Reclamation Division's inspectors conducted 505 inspections on 30 permitted lignite mines and 59 inspections on 14 uranium exploration sites.

Also in FY 2013, as part of the Commission's responsibility to educate the public and to promote the use of alternative fuels, the Commission:

- Hosted 14 statewide oil and gas workshops and three regulatory conferences intended to improve compliance in the field by educating operators on the Commission's rules, procedures, and regulations.
- Participated in more than 50 conferences, workshops, and seminars, in which staff provided information to audiences made up of international dignitaries, college students, industry representatives, and the general public.
- Provided more than 621,000 documents and over 3,000 electronic data sets to customers upon request through the Administration Division's Information Services.
- Trained 3,461 propane technicians and managers – approximately one-third of the certified propane workforce in Texas – at more than 300 code compliance classes.
- Administered a record 4,825 LPG/LNG/CNG qualifying examinations.
- Awarded more than \$1.8 million to 16 Texas school districts, cities, and other public entities to help purchase alternative-fueled vehicles and build or upgrade alternative-fuel stations through grants from the U.S. Department of Energy, administered by the Commission's Alternative Fuels Research and Education program.

Additionally, in FY 2013, the Commission:

- Issued 21,471 drilling permits.
- Oversaw 24,922 oil and gas well completions.
- Processed more than 3,400 stationary installation completion reports and approvals, issued 5,279 licenses, and registered 4,778 transports and special delivery vehicles through LP-Gas Operations.
- Completed 280 clean-up activities, including eight major clean-ups, through Site Remediation.

- Plugged 778 orphaned wells, including 30 orphaned bay wells in the state's coastal waters.
- Implemented and released a new online application for the submittal of Gas and Oil Well Status Reports (forms G-10 and W-10). This system will process approximately 250,000 annual well tests filed by operators with daily updates ensuring accuracy, accelerated processing, and elimination of issues associated with paper filings.

In terms of enforcement activity, the Commission has a stellar record of safety and compliance, accomplished through a wide array of enforcement tools. There are a series of stages and methods of enforcing the Commission's rules and regulations, the first step typically being a notice of violation. If the operator fails to comply with Commission regulations after receiving a notice of violation, the Oil and Gas Division has the authority to issue a severance or a seal order, which essentially orders that production be shut-in at the lease or well level, effectively blocking that operator's ability to sell oil and gas from a lease. For this reason, severances are considered to be highly effective enforcement tools. Before the operator can resume production, it must correct the violation and pay a statutory fee for restoration of the Certificate of Compliance. Over the last 10 years, 94.4 percent of violations managed through this process have been resolved. During this period, 62.2 percent of violations were corrected by the operator promptly upon first notice with no further action needed by the Commission, and another 32.1 percent were resolved following issuance of a severance/seal order. Compliance is verified by lease or well inspections in the case of field violations or by file review in the case of reporting violations. Where the violation remains unresolved, the Commission will pursue the matter through other appropriate enforcement actions. In FY 2013, the Commission reviewed and signed orders disposing of more than 4,200 enforcement cases, including 4,222 Agreed Enforcement dockets, 64 Default Enforcement cases, and five Protested Enforcement dockets.

In addition to these critical functions, the Railroad Commission continues to work diligently to ensure that our rules and regulations are current, keep pace with the rapidly developing technology and practices in the field, and remain at the forefront of environmental protection and public safety policy. Throughout 2013, Commission staff worked with stakeholders, including industry representatives, environmental groups, and the public to review and amend several agency rules.

In March 2013, the Railroad Commission amended its water recycling rules to encourage oil and gas operators to enhance water conservation in the hydraulic fracturing process. The rule amendments were specifically intended to remove regulatory hurdles to oil and gas operator's water recycling efforts. Major changes to the rule included eliminating the need for a Commission recycling permit if operators are recycling fluid on their own leases, or transferring their fluids to another operator's lease for recycling. The changes also more clearly identify recycling permit application requirements and reflect existing standard field conditions for recycling permits. For example, prior to being amended, the rule only contemplated two categories for recycling – mobile and stationary facilities. Commission staff, through experience and firsthand knowledge, realized there was a need to expand these categories, as the recycling practices in the field had evolved and expanded since the rules were originally authored. The rule amendments established five categories of commercial recycling permits to reflect this change: on-lease commercial solid oil and gas waste recycling; off-lease or centralized commercial solid oil and gas waste recycling; stationary commercial solid oil and gas waste recycling; off-lease commercial recycling of fluid; and stationary commercial recycling of fluid. The changes also establish a tiered approach for the reuse of treated fluid, including both authorized reuse of treated fluids in oil and gas operations and provisions for reusing the fluid for other non-oilfield related uses. While hydraulic fracturing accounts for less than one percent of statewide water use, the Commission appreciates the needs of the state and its citizens, and thus understands the importance of reducing water consumption, especially in a time of drought and population growth.

In May 2013, the Commission adopted amendments to Statewide Rule 13, the rule governing well construction requirements. The Commission's objective was to ensure that every oil and gas well drilled in the state follows the best practices already being implemented by the oil and gas industry. After over a year of extensive input, deliberation, and collaboration among Railroad Commission engineers and geologists, oil and gas industry representatives, landowners, and environmentalists, the amended rule successfully meets this objective. The rule now more clearly outlines the requirements for all wells, consolidates the requirements for well control and blow-out preventers, and updates the requirements for drilling, casing, cementing, and fracture stimulation. This rulemaking process is a prime example of a state agency, equipped with unique knowledge and expertise of field conditions and geographic limitations, working with all stakeholders to satisfy one mutual goal: effective energy regulations that ensure resource recovery operations meet or exceed environmental and safety compliance standards.

Amendments to Statewide Rule 13 also require additional safeguards for groundwater protection. It is important to note that these safeguards are just that: precautionary measures. Thanks to the oil and gas industry's best practices and strict regulation and enforcement by the Railroad Commission, there has never been a confirmed case of groundwater contamination due to hydraulic fracturing in Texas.

With the adoption of amendments to Statewide Rule 13, the Railroad Commission paved the way for other states to adopt similar, more stringent regulations on well casing, cementing, and integrity standards, just as it has served as a regulatory model throughout its history. For example, in February 2012, the Commission implemented the Hydraulic Fracturing Disclosure Rule, one of the nation's most comprehensive rules for disclosure of chemical ingredients used in hydraulic fracturing fluids. The rule requires operators to publicly disclose the type and amount of chemicals and water volumes utilized in the hydraulic fracturing process on a national public website, FracFocus (fracfocus.org). FracFocus is a

public Internet chemical registry hosted by the Ground Water Protection Council, a national association of state ground water and underground injection control agencies, and the Interstate Oil and Gas Compact Commission, a national commission of state oil and gas regulators. Texas was the first state in the nation to enact disclosure legislation. Currently, 12 other states have similar disclosure requirements.

In addition to updating and amending rules and regulations, the Commission recently began a major overhaul of its Information Technology (IT) Systems in order to improve services, increase transparency, and enhance regulatory efforts statewide. In 2013, the 83rd Texas Legislature approved a \$24.7 million appropriation for IT modernization to be implemented during fiscal years 2014 and 2015. Highlights to the project include new GIS mapping functionality; developing an integrated compliance, enforcement, and docket system; online filing and payment expansions for operators; and improved accessibility and navigation abilities for website users.

All these rules amendments, as well as IT modernizations, enhance the Commission's ongoing effectiveness in overseeing the responsible development of Texas' domestic energy resources. They also provide oil and gas operators with consistent and clear regulations, which is paramount for the continued success of the energy industry.

Federal Overreach: The U.S. Environmental Protection Agency

Unfortunately, over time, the biggest threat to the continued success of Texas' energy industry has proven not to be from foreign interests, but from the United States federal government, specifically the U.S. Environmental Protection Agency (EPA). In recent years, the EPA has taken increasingly greater liberties regarding its jurisdiction in an attempt to gain control of regulation of the oil and gas industry. The power to regulate this industry, and many others, has always been an expressed right of individual states, as was the intentions of our nation's founding fathers.

States are more acutely aware of the wide range of factors that must be taken into account when forming effective regulations. For example, geology, hydrology, climate, topography, historical development of the field or shale, state and federal laws, population density, and local economies all must be considered. Frankly, it is impossible to craft “one-size-fits-all” regulations that effectively govern every oilfield or shale play across the United States.

The geology of each formation within Texas varies greatly, and equally, the geology of shale plays within Texas differs greatly from those in other energy producing states in the country. To compare formations is to compare apples to oranges, and doing so will result in incomprehensible, imprecise and erroneous regulations that are virtually impossible to operate under or enforce. For example, the approximate depth of the Eagle Ford Shale formation in South Texas ranges from 4,000 to 12,000 feet deep, with the shale being located in predominately rural areas with low population densities. The Barnett Shale is located between 6,500 and 8,500 feet below the surface and underlies suburban Fort Worth, where the population is almost 750,000 citizens. The notable differences in depth and population are major factors that need to be given credence when formulating policy. Now, compare the depths of these two Texas formations with the Antrim Shale in Michigan and Illinois’ New Albany play. Both of these plays have depths ranging from only a few hundred feet to about 2,000 feet below the ground. Different regulations and safeguards must be applied to these different regions, and that is overtly apparent after examining only one of the many significant features of these complex formations.

Not only are “one-size-fits-all” regulations practically impossible to comply with or enforce, the source from which these regulations would come is truly the most troubling aspect of federal control of the energy industry. The EPA recently announced plans to conduct fewer inspections and to initiate fewer cases against industrial polluters in the next five years in its most recent Draft Strategic Plan. According to the plan, the federal agency will decrease the number of federal inspections and

evaluations from 20,000 in 2012 to 14,000 per year between 2014 and 2018. The agency also plans to initiate just over 2,000 civil judicial and administrative enforcement cases against violators, compared to 3,900 in 2009 and 3,000 in 2012. In terms of responsible regulation and oversight, the pinnacle of one of the largest oil booms in our country's history is an interesting time to cut down significantly on inspections and enforcement. In Texas, the Railroad Commission has increased inspections and enforcement to parallel an increase in activity.

Not only are EPA's resources far too limited to effectively regulate a diverse, expansive energy industry, the federal agency has shown egregious errors in judgment, to say the least. The EPA has proved to be a sensational, unscientific, and politically motivated bureaucracy, tasked with furthering the current administration's anti-fossil fuel agenda. Nothing exemplifies the severe incompetency and blatant disregard for sound science as well as EPA's infamous mishandling of the Range Resources case in Parker County, Texas in 2011.

Federal Overreach: EPA vs. Range Resources

On August 6, 2010, a homeowner in Parker County, Steve Lipsky, filed a complaint with the Railroad Commission claiming there was natural gas in his domestic water well. In response to the complaint, Commission district staff in the Abilene field office immediately initiated an investigation that included testing the domestic water well for presence of oil field contamination and inspecting the two nearby Range Resources gas production wells, known as the Butler Unit 1H and the Teal Unit 1H.

However, within a matter of days, Mr. Lipsky also contacted the U.S. Environmental Protection Agency with the same complaint regarding natural gas contamination in his drinking water. According to the EPA,

In a phone call to Region 6, the homeowner stated that the well pump malfunctioned because high levels of natural gas in the water caused the pump to lose suction. He reported that his drinking water was effervescing inside the home, indicating high levels

of gas in the water. The homeowner indicated that he could set his drinking water on fire to illustrate high levels of natural gas in the water at the wellhead. He indicated that he had contacted state officials at the [Railroad Commission], the state arm responsible for investigating contamination of drinking water wells, but they had not been able to resolve his issues.

Not only were these original accusations later proven in court to be completely fraudulent stunts, which I will discuss in detail later, Mr. Lipsky had given the Railroad Commission little or no time to fully “resolve” this issue. In fact, by the time EPA notified the Commission of its receipt of Mr. Lipsky’s complaint, the Railroad Commission had already been to Mr. Lipsky’s property twice to conduct inspections on and collect water samples from the water well in question.

On August 6, the day Mr. Lipsky filed the complaint with the Railroad Commission, Commission field inspectors conducted a water well survey on Mr. Lipsky’s well. On August 10, the Commission inspected the two nearby Range Resources Production wells, Teal Unit 1H and Butler Unit 1H. The following day, Commission staff again visited Mr. Lipsky’s residence to collect water samples, along with representatives of the Texas Commission on Environmental Quality, the Parker County Fire Marshall and Wolf Eagle Environmental, an environmental consulting company working with Mr. Lipsky.

On August 17, 2010, the EPA’s Water Enforcement Branch first contacted the Railroad Commission’s Abilene district office regarding Mr. Lipsky’s complaint, at which time Commission staff agreed to carbon copy the EPA on all complaint correspondence. On August 26, 2010, the Railroad Commission sampled Mr. Lipsky’s well for natural gas and collected two gas samples from the water wellhead.

In October, EPA technical staff contacted the Commission’s Abilene district office staff requesting to discuss plans to collect gas samples from the Lipsky water well and the Range Butler Unit gas well. EPA staff informed Commission district office staff that the EPA was considering issuing an endangerment order; however, EPA did not issue formal communication at this point to the Abilene office or Railroad Commission staff in the Austin headquarters.

Later that month, on October 26, EPA staff collected several samples from the Range Resources production site in Parker County, including gas samples and produced water samples, in the presence of Railroad Commission staff. Range Resources also collected samples of gas, including bradenhead gas. During discussion among the parties present about previous environmental investigations, Commission staff was informed that air monitors had been placed at various locations in the Lipsky home. However, no specific date of placement was noted.

According to the EPA, at that time it “conducted sampling and testing of the air and the well water at two residential wells to verify the existence and nature of the contamination.” The EPA also noted that during this initial visit, it “identified a nearby gas production well as a potential source and collected gas samples for isotopic and compositional analysis from both the gas well, operated by Range Resources, and the drinking water wells.” Based on this information, and the agency’s proceeding actions, it is not hard to speculate that the EPA had already determined, in their minds, the cause of the potential contamination, without proof that contamination had even occurred. Instead of basing its investigation on sound science and facts, and without exploring any other potential causes, the EPA targeted its investigation solely on proving that Range Resources was the culprit.

On November 16, 2010, EPA received the results of the October air and water samples. According to the EPA, “The testing results prompted the EPA to advise the residents at both homes to discontinue use of the well water.” The EPA claims that the results indicated a high level of methane and benzene levels above EPA standards. The EPA concluded, based on its isotopic analysis, that the gas production well owned by Range Resources caused or contributed to groundwater contamination. However, the EPA did not share these results with the Railroad Commission until a week later.

On November 23, a full week after receiving the results, EPA staff emailed the analytical results of its testing to the Railroad Commission and invited Commission staff to participate in a meeting between the EPA and Range Resources scheduled for the following week on December 2, 2010.

On December 1, EPA contacted the Commission to discuss the sampling results. Additionally, EPA informed the Commission that the meeting with Range Resources scheduled for the following day would not be taking place. At that time, EPA notified the Commission of its intent to issue a finding of "endangerment." The following day, Commission technical staff and EPA technical staff discussed the endangerment order via phone. EPA staff read a statement from the draft order stating that the "Railroad Commission has not taken action to date." Railroad Commission staff disagreed with that statement and suggested the following alternate statement: "Although the Railroad Commission is investigating the complaint, the Commission has not taken enforcement action to date." To claim that the Commission has not taken action was a blatantly false statement, and EPA was very aware of this inaccuracy. But apparently truth and fact are not exactly the agency's forte.

The Commission also informed the EPA of a letter received by Range Resources, in which the company agreed to take additional actions, including thorough plans on testing the production wells and ongoing collection of environmental data. Unfortunately, at that point EPA had long passed the point of reason, and the agency had already begun preparing to execute its attack.

On December 7, 2010, the EPA issued a severely misguided emergency order against Range Resources, alleging the company's shale drilling and exploration activities had contaminated the pair of drinking wells in Parker County, Texas. Al Armendariz, EPA Region 6 Administrator, recklessly claimed there was "an imminent and substantial risk of explosion or fire" and contended there were "two people whose houses could explode."

The next day, the Commission scheduled a public hearing to be held in January as part of the ongoing investigation regarding this complaint. During a two-day hearing held at the Railroad Commission in Austin on January 19 and January 20, 2011, Commission staff heard sworn testimony from numerous expert witnesses and entered into the record all evidence presented. Interestingly, EPA and Mr. Lipsky declined to participate in or even attend the hearing.

On March 22, 2011, the Railroad Commissioners signed a Final Order, which stated that, based on the evidence presented at the hearing and months of sampling and inspections, the Commission officially concluded that natural gas in the Parker County water wells was from the Strawn Formation, which is in direct communication with the Cretaceous aquifer in which the water wells were completed, and not due to any drilling or production activities by Range Resources.

At the Railroad Commission's two-day hearing in January, Charles Kreidler, Ph.D, an independent hydrologist, presented evidence that strongly pointed to the Strawn Formation as the origin of the gas. He testified that the intersection of the Cretaceous formation and the gas-bearing Strawn formation represents an "angular unconformity" in which 150 million years of deposition have been lost to erosion, allowing the younger Cretaceous to abut the older Strawn directly and create a regional interconnection. Because the Strawn dips more steeply and in a different direction, the Strawn has the opportunity to communicate with the Cretaceous, thus allowing Strawn natural gas to enter the Cretaceous fresh water aquifer.

Additionally, it has been well documented and is commonly known among many in the state that natural gas, especially methane, is naturally occurring in the Trinity Aquifer in that portion of North Texas. There are other documented cases in the direct vicinity in which natural gas was found in shallow water wells. Approximately a mile east of Mr. Lipsky's property, the Lake Country Acres public water supply reports test results as far back as 1995 that show the presence of natural gas in the water. Range Resources notes that the Butler Unit 1H and the Teal Unit 1H were not drilled until 2009. However, the EPA failed to take any of the local geography into account and did not have the colloquial knowledge that a resident of Texas would have on these issues.

Furthermore, the Railroad Commission's findings indicate that the appropriate geochemical parameters for fingerprinting to distinguish Strawn gas of Pennsylvania age from Barnett Shale gas of Mississippian age are nitrogen and carbon dioxide, not carbon. Gas from Pennsylvanian age rock,

including Strawn, has higher nitrogen concentration and lower carbon dioxide concentration than Barnett Shale gas. Gas found in the Parker County water wells did not match the nitrogen fingerprint of Barnett Shale gas. However, the gas found in the water wells does match Pennsylvanian gas. Additionally, bradenhead gas samples from both water wells did not match Barnett Shale gas, confirming that gas is not migrating up the wellbores and that the Barnett Shale producing interval in the wells is properly isolated. Microseismic data available for more than 320 fracture stimulations in Parker County indicated a maximum fracture height of approximately 400 feet, meaning that almost one mile of rock exists between the highest fracture and the shallow groundwater aquifer.

In comparison, the EPA relied solely on a comparison of isotopic data from Barnett Shale production gas to natural gas that occurred in Mr. Lipsky's water well.

The EPA's investigation and actions in this case flagrantly disregard sound science and were negligent, at best. Instead of considering all the evidence or investigating other potential sources of contamination, the federal agency immediately jumped to conclusions and used this complaint to grab national media attention and further its environmental agenda.

On March 30, 2012, well over a year after the EPA made headlines, EPA quietly vacated the Imminent and Substantial Endangerment order against Range Resources. The agency explained that the two parties reached an agreement whereby Range Resources agreed to test 20 water wells every three months for a year to provide information about the presence of more widespread contamination. According to the EPA, the sampling completed to date has shown no widespread contamination. But safety, compliance, and continued monitoring were never the goals of the agency in this case. Statements captured on film, which came to light shortly after EPA withdrew its case against Range Resources, confirm that the charge was being enthusiastically led by the now discredited EPA Region 6 Administrator, Al Armendariz.

If there was ever any question of Mr. Armendariz's extreme bias and personal agenda, his comments to a group in North Texas in 2010, just as the EPA was preparing to take action against Range Resources, confirmed his radical, unconventional enforcement methods. Mr. Armendariz explained to the audience that he had offered the following analogy to his Region 6 staff about his "philosophy of enforcement":

The Romans used to conquer little villages in the Mediterranean. They'd go into a little Turkish town somewhere, they'd find the first five guys they saw and they would crucify them. And then you know that town was really easy to manage for the next few years. And so you make examples out of people who are in this case not compliant with the law. Find people who are not compliant with the law, and you hit them as hard as you can and you make examples out of them, and there is a deterrent effect there. And, companies that are smart see that, they don't want to play that game, and they decide at that point that it's time to clean up. And, that won't happen unless you have somebody out there making examples of people. So you go out, you look at an industry, you find people violating the law, you go aggressively after them. And we do have some pretty effective enforcement tools. Compliance can get very high, very, very quickly. That's what these companies respond to is both their public image but also financial pressure. So you put some financial pressure on a company, you get other people in that industry to clean up very quickly.

Al Armendariz and the EPA set out to crucify and make an example of Range Resources. There is no doubt of that. Consequently, Mr. Armendariz resigned and is now employed by the Sierra Club, a widely known environmental activist group. However, his cozy relationship with environmental activists did not begin after he left the EPA.

There is documented evidence that Mr. Armendariz had been in contact with radical, anti-fracking groups before the EPA had officially issued its order against Range Resources. In emails dated December 7, 2010, the day the imminent and substantial endangerment (ISE) was issued, the Region 6 Administrator told groups, such as Earthworks and Downwinders at Risk, "We're about to make a lot of news." He went on to write, "There will be an official press release in a few minutes," proving that these emails were sent prior to the official issuance of the order.

However, in a follow up inquiry on the EPA's handling of this case, the EPA's Inspector General (IG) claimed the EPA's interactions with local activists "were appropriate." Furthermore, the IG concluded that Mr. Armendariz had simply "informed environmental and citizen groups of the order and the associated press release after the region issued the two documents." The report continues, stating, "A review of the evidence showed that this communication occurred after the region issued its press release." This conclusion is in direct contradiction to Mr. Armendariz's own words in the email he wrote.

Crucial facts such as this, along with many more, are noticeably absent or completely glossed over in the official report issued on December 24, 2013 by the EPA's Office of Inspector General in response to a congressional inquiry regarding the EPA's emergency order to the Range Resources Gas Drilling Company. The report essentially exonerates the EPA of any wrongdoing by ignoring facts or hiding behind vaguely worded agency guidelines.

The report explains under Section 1431 of the Safe Drinking Water Act, the EPA can take immediate action to protect public health when any source of drinking water is or will be contaminated if two basic conditions exist: "First, the EPA has information that a contaminant is in or likely to enter a public water system or underground drinking water supply and may present an imminent and substantial endangerment (ISE) to public health." Please note the vague language, such as "likely to" and "may present." The report goes on to clarify, "The preventative nature of Section 1431 means that for the EPA to take and enforce a Section 1431 emergency order, it needs neither proof that contamination has already occurred nor proof that the recipient of the order is responsible for the contamination." That's right. The EPA needs no proof.

The second condition that must be met for the EPA to issue an ISE states, "state and local authorities have not acted to protect public health from the ISE." In no uncertain terms was this condition satisfied. As detailed in great length above, the Commission was actively investigating the complaint and had already performed an inspection and collected samples before the EPA even became involved. Several

pages further into the report, under the heading “State and Local Authorities Did Not Plan to Act Immediately”, the IG states, “The EPA asked the [Railroad Commission] if they planned to take action, and the [Railroad Commission] said they were not prepared to do so.” Based on detailed logs and accounts of the interactions between the EPA and the Commission regarding this case, that comment was either fabricated or completely taken out of context, but apparently the EPA needs very little evidence to support its claims or actions.

Also absent from the EPA’s Inspector General Report is any mention of objections by expert scientists working with the EPA regarding its decision to move forward based on the data available. However, Dr. Doug Beak, an environmental chemist with the EPA, questioned the hasty decision, noting, “There is not conclusive evidence because of the limited data set... The only way now to compare the data would be to make assumptions to fill in data gaps and I don’t believe we have enough experience at this site or data to do this at this time.” An outside EPA expert consultant, Dennis Coleman of Isotech, advised the EPA that before making a determination, it needed to “evaluate the potential for other sources that would be thermogenic and the geology or structures that would store or transmit the gas from origin to aquifer to be certain.” However, both these words of wisdom from known experts fell on deaf ears, and the EPA proceeded to conduct the investigation it wanted to in order to get the results it wanted.

Finally, I would like to call attention to the initial claims Mr. Lipsky made to the EPA, specifically his claim that “indicated that he could set his drinking water on fire to illustrate high levels of natural gas in the water at the wellhead.”

In February 2012, Judge Trey Loftin, 43rd District Court in Parker County, concluded that Mr. Lipsky had purposely created a “deceptive video” in which Mr. Lipsky ignited gas from a hose he portrayed as being connected to his water well.

The judge concluded that Mr. Lipsky had colluded with Alisa Rich, his environmental consultant at Wolf Eagle Environmental, who was also present at several Railroad Commission visits to Mr. Lipsky's residence and had been "advising" Mr. Lipsky from the beginning. In his ruling, Judge Loftin noted that "under the direction or advisement" from Ms. Rich, Mr. Lipsky knowingly and deceptively attached a water hose to the water well's gas vent, and not to the well's water line, and lit the gas from the hose's nozzle. Judge Loftin stated, "This demonstration was not done for scientific study but to provide local and national news media a deceptive video, calculated to alarm the public into believing the water was burning."

Judge Loftin continued, stating:

There is further evidence that Rich knew the regional EPA administration and provided or assisted in providing additional misleading information (including the garden hose video) to alarm the EPA. Moreover, the emails in question which refer to this deceptive garden hose demonstration as a 'strategy' appear to support that a 'meeting of the minds' took place and that a reasonable trier of fact could believe, together with other evidence, that the elements of a conspiracy to defame Range existed between the Lipsky's and Ms. Rich.

Unfortunately, the story does not end there. Within the last six months, there have been nine new complaints filed from residents in Mr. Lipsky's neighborhood, including Mr. Lipsky. These new complaints remain active, the most recent being filed on January 27, 2014. Railroad Commission staff will continue to investigate all new allegations of natural gas contamination. The Commission's recent activities include sampling four water wells from three properties, evaluating dissolved methane data and geochemical data obtained from the recent and past sampling events, evaluating bradenhead pressure in the former Range Resources well, as well as evaluating the local geology based on water well drillers' logs. Railroad Commission staff also continue to share information with the EPA and staff expects to conclude the investigation in late February.

Federal Overreach: EPA in Dimock and Pavillion

The EPA's over-zealous, fear-mongering tactics used in the Range Resources case was not an isolated incident. The federal agency appears to be developing a habit of capturing the public's attention with sensational accusations only to later discreetly back-pedal on its claims, as the Range Resources case in Texas has a fact pattern strikingly similar to cases in Dimock, Pennsylvania and Pavillion, Wyoming.

After several months of public speculation to the contrary, the EPA finally issued a press release on July 25, 2012, concluding that water supplies in Dimock had not been contaminated by drilling activities in the area.

In late 2011, after the town's residents expressed concern over the quality of their drinking water, the EPA visited Dimock to conduct surveys regarding their private wells and review drinking water data supplied by the Pennsylvania Department of Environmental Protection, Cabot Oil and Gas Exploration, and the residents.

The EPA thought it had found the perfect headline to further its political agenda, and Dimock became a poster child for anti-fracking campaigns. The town was even featured in the 2010 documentary, "Gasland," which infamously showed residents igniting water coming from their kitchen faucets and pointed to hydraulic fracturing as the cause.

However, in April 2012, the agency released preliminary test results from Dimock that "did not show levels of contaminants that would give EPA reason to take immediate action." After sampling private drinking water wells serving 64 homes between January and June of 2012, the EPA eventually admitted in late July that chemical substances found during its testing were naturally occurring and not the result of hydraulic fracturing.

The EPA also jumped the gun in Pavillion, Wyoming, when it released a draft report in December 2011 indicating that hydraulic fracturing was responsible for water contamination in private drinking water wells before thoroughly vetting the report. The agency bypassed the scientific process of

independent peer review and publicly made claims that were not yet fully substantiated. Only after receiving backlash for the hasty allegations did the EPA agree to back down and retest its samples. In June 2013, the agency announced it would not move forward with plans to have independent scientists review its findings, but instead, would allow the state to continue any ongoing investigations.

The Interstate Oil and Gas Compact Commission: Putting States First

For nearly as long as Texas has been producing oil, it has been battling the federal government to retain control of the oil and gas industry. But as you can see, this fight is not exclusive to Texas, and other energy producing states have long felt the overreaching arm of the federal government as well. I am proud to serve as the official representative for Texas on the Interstate Oil and Gas Compact Commission (IOGCC), a multistate government agency that works to ensure our nation's oil and gas resources are conserved and maximized while protecting health, safety, and the environment. It was formed over 70 years ago when several states joined together to resolve common issues in the industry without federal regulation.

In 1935, six states took advantage of the constitutional right to "compact", or agree to work together, to resolve mutual issues they were experiencing with the oil and gas industry. Faced with unregulated petroleum overproduction and the resulting waste, the states endorsed and Congress ratified a compact to take control of the issues. Since then, IOGCC member states have established effective regulation of the oil and gas industry through a variety of programs designed to gather and share information, technologies, and regulatory methods. One such program is the most recent initiative, States First, which is a joint venture between the IOGCC and the Ground Water Protection Council.

States First is an innovative and exciting state-led effort to continue individual states' leadership as the laboratories of effective regulatory development. The IOGCC understands that the states' ability

to design effective regulations that reflect state-specific needs is a vital element in the resurgence of our nation's oil and natural gas industry. The initiative includes the formation of the State Oil and Gas Regulatory Exchange, a unique network of experts who will be available to help meet emerging regulatory challenges and solve unique problems across all oil and gas producing states. The exchange will bring state policy and technical staff together on a routine and coordinated schedule to share the way they do business, review internal operations, and open up opportunities for extrapolating effective practices from one state to another.

Also as part of the States First initiative, the IOGCC has created a Field Inspectors Education and Certification Program, through which it will develop technical training opportunities for oil and gas inspectors and others associated with oilfield operations. The goal of this program is to provide a formal certification process for experienced field inspectors who desire an in-depth understanding of new and emerging technical practices, as well as for persons new to the field who need in-depth basic training. Additionally, a new, more searchable version of FracFocus, designed to be more user-friendly, was launched and contains information on over 45,000 individual fracturing jobs. A Science and Technology Transfer will also provide opportunities for researchers to communicate with states on how the application of their work might improve environmental protection and regulatory oversight.

This effort, combined with the Railroad Commission of Texas' ongoing work, should send a strong message to the federal government that states are better equipped and more than capable of regulating our own industries. We must enforce policies that leave primacy of regulation at the state level, where local dynamics are recognized and considered, so that the regulatory climate remains fair, steady, and predictable.

Conclusion: Let States Regulate Oil and Gas Industry

As Texas Railroad Commissioner, I believe allowing the federal government to regulate the oil and gas industry would cripple energy production and devastate the most robust sector of our economy.

The surge in unconventional oil and gas drilling has considerably bolstered the national economy, attracting more than \$120 billion in U.S.-based investments and contributing \$284 billion to the gross domestic product in 2012. By 2025, total contributions to the GDP are estimated to exceed \$530 billion. Additionally, studies project that the U.S. trade deficit will fall by more than \$164 billion in 2020 – the equivalent of one-third of the current trade deficit. Unconventional oil and gas activity supported 2.1 million jobs in 2012 and is also expected to bring in approximately \$1.6 trillion in government revenues from 2012 through 2025.

Texas plays a huge role in American energy production, accounting for nearly 40 percent of U.S. crude oil and almost 30 percent of our country's natural gas. In 2013, Texas' statewide production increased for the sixth consecutive year, with estimated production reaching over 850 million barrels of oil, a 21.2 percent year-over-year increase. Almost half of all drilling rigs in the country, and nearly a quarter of the rigs in the world, are located in Texas. On average, each drilling rig operating in Texas results in \$1.5 to \$2 million of additional sales taxes paid on an annual basis.

Oil and gas activity in our state has anchored Texas' economy during a nationwide recession and allowed us to recover at a much faster pace than the rest of the country. Texas has regained more than twice the number of jobs lost during the recession, with almost a third of this rebound attributed to investment in oil and gas. Last year, oil and gas industry employment increased 6.4 percent compared to 2012, employing just under 300,000 workers. In 2013, state severance tax collections – which is based on the value of oil and gas production – set an all-time high at just under \$4.5 billion, accounting for almost 10 percent of all state tax collections.

The Commission has a long history of wisely enforcing state regulations and protecting the health and safety of Texas citizens. That tradition continues as we embark on a new era of oil and gas

recovery through hydraulic fracturing and as our country takes a significant step toward energy independence. We in Texas know best how to achieve a balance of economic vitality and environmental safety – as we responsibly and proudly reign as the top producer in the country.

Blue font indicates entries made since the chronology was submitted as a hearing exhibit.

DATE	RRC ACTION	EPA ACTION	LIPSKY ACTION	NOTES
March 30, 2012				
June 23, 2011	RRC district office issued complaint status report indicating no further reports will be issued. Complaint closed.	EPA vacates its order against Range		
March 22, 2011	March 22, 2011 Commissioners Accept Proposal For Decision (Docket No. 7B-0268629) Range Production Company, Hood County. The commissioners found during their bi-weekly conference on March 22, 2011, that the Butler Unit No. 1H and the Teal Unit Well No. 1H wells are not causing or contributing to contamination of any Parker County domestic water wells.			
March 9, 2011		EPA submits request to Range Resources for information relating to SDWA 1431 Emergency Order issued to Range Resources Corporation on December 7, 2010		
March 7, 2011	RRC hearings examiner issues Proposal for Decision (PFD) for Range Hearing. Posted as agenda item for March 22, 2011, conference.			
March 7, 2011	RRC staff receives three volume set of reports in response to staff's December 16, 2010 letter. The reports contain information and data presented by Range during the January 19, 2010, hearing.			
February 22, 2011		EPA staff sends via email (to RRC staff) analytical reports for gas samples collected on Dec 21, 2010, from the Hurst, Lipky, and Davis water wells.		
February 16, 2011	RRC staff receives analytical reports for gas samples collected January 4, 2011, by Range from Teal and Butler wells.			
January 31, 2011	RRC staff contacts Range to request submittal of laboratory reports of isotope data presented during the hearing. Range replies that they will get the reports.			
January 28, 2011	RRC forwards Hurst water well sample data to Range resources and asks if EPA had shared any other data with Range recently. RRC staff also asks if the Hurst gas sample reveals anything inconsistent with what was presented in the hearing. Range replies that they are not aware of another sample. The sample results are consistent with the other Hurst well sample collected by Range.			

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DATE	RRC ACTION	EPA ACTION	LIPSKY ACTION	NOTES
January 27, 2011		EPA emails a lab report for Hurst water well gas sample to RRC staff.		
January 25, 2011		EPA deposition. EPA staff reportedly collected a gas sample from the Hurst well on December 21, 2010.		
January 19 & 20, 2011	Commission called hearing is held to consider whether Range's wells caused or contributed to contamination in Lipsky water well. Record held open to allow for EPA deposition scheduled for January 25, 2011.			
January 14, 2011	RRC staff meet with Range Resources. Range presents preliminary findings of well testing (Teal well), water well sampling and soil gas sampling.			
January 10, 2011	The RRC hearing re Range Resources, previously rescheduled for January 18, 2011, is rescheduled for January 19 to accommodate Ms. Rich's deposition.			
January 6, 2011	RRC staff witness soil gas survey and water well sampling performed on Lipsky property. District personnel noted that the PVC line from the Lipsky well is not connected to the home's water supply tank.			
January 5, 2011	Commission held hearing regarding motion to compel EPA staff, Mr. Lipsky and Ms. Rich to comply with discovery. The hearings examiner granted the motion that Mr. Lipsky and Ms. Rich give their depositions consistent with the terms proposed by their attorney, and Lipsky must provide access to his property. The Jan 10 hearing was continued to Jan 18th.			
January 4, 2011	RRC staff contacts Range to request status update. Range reports that their consultants have completed all of the ground water and headspace samples at all of the water wells they targeted except for these exceptions: they were not granted access to the Lipsky well and the well that was identified as well #5 (persons at this location stated there was no water well and that they were served by the public water supply system.) The last samples were taken today. Range also has collected samples of the production gas off the Butler Unit #1-H and Teal Unit #1-H and braudhead gas off the Butler Unit #1-H.			

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DATE	RRC ACTION	EPA ACTION	LIPSKY ACTION	NOTES
December 30, 2010	RRC receives notice of Range's planned spiral segmented cement bond log on the Teal Unit #1-H, scheduled for December 31. RRC staff witness is scheduled.			
December 30, 2010	Soil gas survey, previously underway, is delayed due to weather. Range notifies RRC that work will resume January 3, 2011.			
December 28, 2010	RRC receives via email Range's workplan for bradenhead sampling and water well sampling. RRC witnesses Ranges MIT of the Teal Unit #1-H			
December 24, 2010	RRC receives via email Range's workplan for bradenhead sampling and water well sampling.			
December 22, 2010	RRC receives via email Range's procedure for MIT of the Teal Unit #1-H.			
December 17, 2010	Phone call with Range discussing water well sampling and soil gas survey. Will submit workplan as soon as possible.			
December 16, 2010	RRC staff sends a letter to Range requesting a workplan on or before December 31, 2010.			
December 15, 2010		EPA and Range meeting.		
December 14, 2010	RRC meets with Range to discuss action items. Range delivers a notebook of information about Butler and Teal wells, and information regarding water wells and occurrence of natural gas in the area. Range reports that gas meters have been installed at the two homes, and water supply has been offered to both homes but not accepted.			
December 10, 2010	RRC contacts Range to confirm installation of gas monitors. Monitors installed at Lipsky. Monitors will be installed at Haley on Saturday. Range contacts RRC staff to request a meeting on Tuesday, Dec 14.		Lipsky's attorney notifies RRC that RRC is not allowed access to the property.	
December 9, 2010	RRC contacts Range and Lipsky to assure that gas monitoring meters are being installed at Lipsky and Haley properties and that water supply has been offered. Range installed meter at Lipsky property.			
December 8, 2010	RRC staff Recommendation For Hearing. Hearing set for January 10, 2011.			
December 7, 2010		EPA issues Emergency Administrative Order		

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DATE	RRC ACTION	EPA ACTION	LIPSKY ACTION	NOTES
December 7, 2010	RRC sends letter acknowledging receipt of Range's letter and establishing contacts and timetable for agreed actions. RRC staff forwards copies of water well complaints to EPA staff via email. RRC staff answers EPA's Dec 6 question. The RRC has an ongoing investigation and is gathering information about the occurrence of gas in other water wells in the area.			
December 6, 2010		EPA sends an email to RRC staff asking if the Railroad Commission of Texas has plans to sample other water wells in the area.		
December 3, 2010	Range sends letter to RRC agreeing to take additional actions. Letter outlines plans to test production well and collect environmental data. RRC staff begins gathering information on other water well complaints, per EPA request. RRC staff notifies EPA staff of the Dec. 3 letter from Range and email PDF of the letter.	EPA calls RRC staff to ask about other occurrences of gas in shallow sands. RRC returns call and advises of two other complaints in area. EPA requests copies of the files.		
December 1, 2010	RRC staff in Austin calls EPA to discuss sample results. During the call, EPA notifies RRC staff of intent to issue a finding of "endangerment".	EPA staff contacts RRC Abilene District Office and asks to discuss the sample results. Notifies the District that the December 2, 2010, meeting will not happen because Range declined the request.		
November 30, 2010	RRC staff in Austin meet to discuss next steps and agree that RRC staff should conference call into the EPA/Range meeting.			
November 23, 2010		EPA sends via email the results of water and gas samples to the RRC. EPA notifies RRC that they asked to meet with Range on December 2, 2010, to discuss the sample results and they invited RRC staff to attend.		
October 26, 2010	At the request of the RRC, Range Production Co. collected gas samples from tubing, injection gas, bradthead gas from Butler Unit. Also production gas from Teal Unit.	EPA collects water samples from Lipsky and Haley wells, gas from Lipsky well, and gas from Butler Unit, and water from Butler Unit.	Mr. Lipsky meets with RRC inspectors, EPA reps, Range consultant at site. General discussion about environmental investigations and testing of water and air inside residence.	District Office Cleanup Coordinator (DOCC) for Abilene reports that during the discussion of previous environmental testing he was informed that air monitors had been placed inside the house in various rooms/bathrooms. RRC inspectors did not enter the house to verify, no date of placement nor location was noted on the RRC DForms. See 8/10/10 entry.
October 25, 2010	RRC District Office requests Range to collect additional gas samples.			

Blue font indicates entries made since the chronology was submitted as a hearing exhibit.

DATE	RRC ACTION	EPA ACTION	LIPSKY ACTION	NOTES
October 21, 2010	2:00 PM - RRC staff in Austin calls EPA staff at their request to discuss sampling objectives.	10:06 AM - EPA contacts RRC staff in Austin by email and requests phone call to discuss plans to sample the Lipsky water well and Range Butler Unit well.		
October 14, 2010	At the request of RRC staff, Range Production Co. Pressure tests the Butler Unit 1H well production casing from 4837 feet to surface that was witnessed by the district personnel. Well held 845 psi.			
October 13, 2010	District Office sends email to Austin requesting technical assistance with review of data.			
October 13, 2010	10:14 AM Steve Lipsky called to get RRC staff's email address to forward water analysis taken by his environmental company for comparison. He gave me Rick Hailey's phone number, has adjacent property and water well that has had some problems, suggested I call Mr. Hailey, 175 Old Ranch Court. EPA is coming later in Oct to test Mr. Lipsky's water well with some new technology to determine source of his gas. Mr. Lipsky stated he discovered heavy 'mud sediment' in the bottom of the water storage tank and was having it analyzed.			
October 13, 2010	11:00 AM Phone conversation with Jack Watts, Watts Water Well Service, (817) 991-9589, regarding occurrences of gas in water wells drilled in the area. Requested Mr. Watts document specific occurrences and problem wells and forward to the Dist office.			
September 21, 2010	03:01 PM Call from Mr. Lipsky. He asked if I had drawn any conclusions and I advised him that I was compiling data and would send him the summary asap. Advised him that his request for information had been processed this morning and he should receive it soon.			
September 20, 2010	Range Prod. Co. samples Butler Unit 1H Brodenhead Gas and production Gas for chemical analysis.			
September 16, 2010	Called Mary Patton, Range Resources to request gas samples be collected from the Butler Unit production tubing and brodenhead for analysis. Requested the Butler Unit production casing be pressure tested.			
September 15, 2010	11:46 AM Mr. Lipsky called to advise he would meet with Range Resources at his home to inspect the well on Thurs 9/23/10.			

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DATE	RRC ACTION	EPA ACTION	LIPSKY ACTION	NOTES
September 13, 2010	15:46 Mr. Lipsky called to advise he had moved his family out of the residence to Graham, Tx. Mr. Lipsky advised he had retained legal counsel.			
September 7, 2010	Call to Larry Peck, Peck's Water Well Service (817) 594-8177, to obtain water well completion and information for the Lipsky water well. Discussed occurrence of gas in water wells drilled in area. Mr. Peck filed complaint No. 7B-5642, Job No. 10-10397, Carrizo O&G, Mand-Lipscomb "A" Unit Lease (221660), for well leaking gas and a fresh water supply well adjacent to the gas well leaking gas. No gas leaks were found and the complaint was closed. This well is ¾ mile west of the Lipsky water well, west of the Brazos River.			
September 2, 2010	Range Prod. Co. samples Butler Unit 1H Bradenhead Gas for chemical analysis			
August 27, 2010	Advised Bubba Jonas to inspect well of concern Mr. Lipsky had inquired about. Per Bubba's inspections, 1 active well near the highway, no other active wells in the Silverado subdivision. Records searched indicate Devon Energy, Durant East Unit Lease (224569) Well No. 1H was P&A 1/831/07.			
August 27, 2010	Call to Paul Martinez (325)206-1722 and Mary Patton (817)869-4140, Range Production to discuss procedure to address Bradenhead pressure.			
August 26, 2010	Call from Mr. Lipsky inquiring about a problem well behind the Silverado Horse Barn on a gravel road directly behind the arena. His concern was the well was used for a year and a half and personnel from Malone Well Service advised Mr. Lipsky that the well had a bad frac job, they had lost control and had to plug the well.			
August 26, 2010	RRC sampled Lipsky well with two tedar bag gas samples. Site visit by Alisa Rich of Wolf Eagle Env., Bryn Meredith and David Ritter of Taylor Olsen Law Firm		Mr. Lipsky Env. Consultant Wolf Eagle Env., including Taylor and Olson Law firm witness RRC collected gas samples from water wellhead. Mr. Lipsky states that he will discontinue use of the well for house use. The 5000 gallon holding tank will be flushed and filled with potable water.	

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DATE	RRC ACTION	EPA ACTION	LIPSKY ACTION	NOTES
August 19, 2010	Contacted Anacon, Melissa Knight for instructions to collect gas samples from a water well. Ms. Knight advised she would verify the procedure and forward information to the District office.			
August 19, 2010	Call from Mr. Peck, Peck Water Well Service, RRC requested a well configuration of the Lipsky water well. Mr. Peck indicated he would fax a copy to the Dist office			
August 18, 2010	11:45 AM Called Pecks Water Well Service to inquire about Lipsky well configuration and completion. Left message to call back.			
August 18, 2010	13:00 called Anacon to check on the status of the 2 nd samples sent, received in good condition.			
August 17, 2010	RRC contacted Mr. Lipsky at his residence and obtained water samples. Samples brought to Abilene and forwarded to Anacon			
August 17, 2010		RRC District 7B office contacted by Ron Van Wyk, (214)655-6459, Water Enforcement Branch, EPA, 1445 Ross Avenue, Dallas, TX 75202, regarding Lipsky complaint. Sent green sheet notice to Field Operations. Will add EPA to cc: on complaint letters.	Mr. Lipsky locates/spotted underground 1000 gallon propane tank, septic tanks and septic drain field for RRC inspector.	
August 16, 2010	Called and left voice mail messages for Mr. Lipsky to arrange to resample water well. 11:20, 14:20, 16:45, no answer.			
August 13, 2010	Anacon email stating the samples were above the required temperature, advised samples would be retaken and submitted			
August 13, 2010	16:55 PM Mr. Lipsky called stating his environmental company called to advise him that the concentration of gas in his water was very concentrated and to stay away from the well. Mark Wiley, Parker County Judge had been to Mr. Lipsky's residence to survey the well situation. Mr. Lipsky stated that the water from the well acted like alkali-seizer.			
August 12, 2010	Water sample sent to Anacon via FedEx			

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DATE	RRC ACTION	EPA ACTION	LIPSKY ACTION	NOTES
August 11, 2010	RRC Field inspection to collect water samples, Bubba Jonas Dan Long (817)558-5859, Ryan Albert, TCEQ/Alicia Rich, Wolf Eagle Environmental/Shawn Scott, Parker County Fire Marshall		Mr. Lipsky informs RRC that his Env. Consultant (Wolf Eagle Env), Parker County Fire Marshall Shawn Scott, TCEQ personnel Ryan Albert would be at his house at 2:30 pm. Mr. Lipsky informs RRC that Wolf Eagle Env detected natural gas inside his house. Wolf Eagle collected samples of unknown type.	
August 10, 2010	Telephone call from Sid Slocum, Water Section Mgr (817)388-5901, 2309 Gravel Drive, Fort Worth, TX 76118, TCEQ re: Complaint No. 7B-9601		Mr. Lipsky informs RRC that he is having the water tested for natural gas, including the air inside his house and the building that houses a 5000 gallon storage tank.	
August 10, 2010	RRC inspects Range Production, Teal Unit 1H. RRC inspects Range Production Butler Unit 1H.			
August 6, 2010	RRC field inspection, water well survey, Randy Hobbs. 0 mg/L Chloride, gas smell			
August 6, 2010	Steve Lipsky complaint of natural gas in domestic water well. Complaint No. 7B-9601			

David J. Porter was elected to serve a six-year term as Texas Railroad Commissioner in November 2010.

Since taking office, Commissioner Porter has been appointed to the Interstate Oil and Gas Compact Commission as the Official Representative of Texas by Texas Governor Rick Perry. He has also been appointed as Governor Perry's official representative on the Interstate Mining Compact Commission and currently serves as an advisory board member for the Texas Journal of Oil, Gas, and Energy Law.

Porter created the Eagle Ford Shale Task Force, the first of its kind at the Texas Railroad Commission, to establish a forum that will bring the community together and foster a dialogue regarding drilling activities in the Eagle Ford Shale. The Task Force is comprised of local community leaders, elected officials, industry representatives, environmental groups, and landowners. The goal of the group is to open the lines of communication between all parties involved, establish recommendations for developing the Eagle Ford Shale, and promote economic benefits locally and statewide. In recognition of his foresight and leadership, Porter was named "Man of the Year" by the industry publication, The Oil & Gas Year, Eagle Ford, Texas 2013.

Before taking office, Porter built a successful small business around his CPA practice in Midland Texas, providing accounting and tax services to oil and gas producers, royalty owners, oil field service companies, and other small businesses and individuals.

Porter was born in Fort Lewis, Washington in 1956 while his father was serving in the US Army. He graduated magna cum laude from Harding University in May of 1977 with a bachelor's degree in accounting. He passed the CPA exam on his first attempt in November of 1977 and became a Texas CPA in September 1981, the same year he moved to Midland.

David met his wife, Cheryl, while attending Harding University, and they were married in 1979. They are the proud parents of one daughter and are also the proud grandparents of a four-year old granddaughter.

Chairman SMITH. Thank you, Mr. Porter.
Mr. Dierschke.

**TESTIMONY OF MR. KENNETH DIERSCHKE,
PRESIDENT, TEXAS FARM BUREAU**

Mr. DIERSCHKE. Mr. Chairman, I am Kenneth Dierschke, and I am a President of Texas Farm Bureau and a cotton farmer from Tom Green County, and I thank you for the promotion to doctor but it is Mr. Dierschke.

In full disclosure, I am a former constituent of Chairman Lamar Smith under the previous composition of District 21. I appreciate the opportunity to appear before the Committee. We thank the Chairman and members of it for the important role you perform overseeing the EPA regulatory activities.

Effective environmental policies balance scientific, economic, social, environmental outcomes. Such policies create opportunity for farmers to improve net farm income, enhance the Nation's economic opportunities, and preserve property rights while enabling farmers and ranchers to produce an abundant and affordable supply of food, fiber, and energy.

Farmers and ranchers, like Americans in all walks of life, support sound environmental policy. We believe such policies depend on sound science. Just as the productivity of American agriculture is dependent on sound science to feed and clothe the Nation, sound science—not politicized science—must be the foundation of the Nation's environmental policy. We appreciate the oversight role of the Committee, and we support your efforts to ensure that sound science is used in the regulatory process.

Texas farmers and ranchers are increasingly concerned about the intrusion into their daily operations by the Environmental Protection Agency and its proposed rulemaking process in an expansion of the Clean Water Act regulatory authority. The reputation of the Environmental Protection Agency among farmers and ranchers may be at its lowest ebb in history. We believe there is good reason.

In September of 2013, EPA and U.S. Army Corps of Engineers sent a draft proposed rule defining the waters they intend to regulate under the Clean Water Act to the Office of Management and Budget for interagency review. We believe the draft rule fails to comply with important regulatory safeguards and is based on a scientific report that has not had sufficient peer review. It is troubling that EPA's "scientific" report implies that, because nearly all water is in some way connected, EPA's authority under the CWA is virtually limitless. Thus the report, currently being reviewed by the Science Advisory Board, disguises what is nothing more than a policy preference as a claim that is justified by science and the law.

The impact of this broad interpretation, if rolled into federal regulation, will mean more permits, additional permit requirements, and government and environmental group scrutiny of the things we do in agriculture, and the threat of additional litigation against farmers and ranchers. CWA jurisdiction also triggers other federal requirements, such as enforcement under the Endangered Species Act, National Environmental Policy Act, and National Historic

Preservation Act. This draft proposal, by itself, has created much outrage in farm country toward the EPA.

The Clean Water Act was enacted in 1972 and limited federal jurisdiction to navigable waters of the United States. Congress at that time explicitly left a role for state regulation of certain waters by stating, "It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of states to prevent, reduce, and eliminate pollution." In 2001 and in 2006, the U.S. Supreme Court reaffirmed those limits on federal authority. It appears that the EPA now seeks to extend its authority beyond the limits approved by Congress and reaffirmed by the U.S. Supreme Court.

The Supreme Court decisions reaffirmed that the term "navigable waters" under the CWA does not extend to all waters. It is important to note that, shortly after those court decisions, legislation was introduced to overturn them. Despite aggressive lobbying campaigns, bills in both the House and the Senate failed to even reach a Floor vote. That happened primarily for two reasons. First, leaders from both parties continue to strongly support the structure and goals of the CWA and do not want to see the EPA intrude on traditional state prerogatives relating to land use planning and economic growth. Second, the legislation would have allowed EPA to use the CWA to regulate activities even on dry land and even when those activities are not connected to interstate commerce. Such an overreach goes well beyond anything contemplated by the framers of the 1972 law.

We are also troubled that EPA seems to routinely ignore the requirement that SAB panels be fairly balanced. The Agency routinely selects scientists who are EPA grantees to serve on SAB panels, and EPA grantees are by definition financially dependent on EPA and couldn't possibly serve as independent advisory panelists. According to the Congressional Research Service, nearly 60 percent of the members of EPA's chartered SAB panels have received EPA research grants that total nearly 140 million taxpayer dollars.

On the other hand, private sector expertise on SAB panels is typically minimal, and in many cases entirely excluded, despite statutory requirements that membership "be fairly balanced in terms of the points of view represented." It is also evident that SAB panel members are not afraid to take strong policy preferences on issues in which they are being asked to provide impartial scientific reviews.

Mr. Chairman, we applaud your efforts to ensure an open, transparent, and fair scientific SAB investigation process and we appreciate your efforts to get EPA to answer these and other important scientific questions.

And I will be happy to answer any questions at this time. Thank you.

[The prepared statement of Mr. Dierschke follows:]

Kenneth Dierschke, President

Texas Farm Bureau

February 5, 2014

Subject: "Examining the Science of EPA Overreach: A Case Study in Texas"

THE TEXAS FARM BUREAU
TO THE
HOUSE SCIENCE, SPACE, AND TECHNOLOGY COMMITTEE
REGARDING
THE ENVIRONMENTAL PROTECTION AGENCY'S
REGULATORY IMPACT ON TEXAS FARMERS

Mr. Chairman, I am Kenneth Dierschke, President of the Texas Farm Bureau, and a cotton farmer from Tom Green County, Texas. In full disclosure, I am a former constituent of Chairman Lamar Smith, under a previous composition of the 21st District. I appreciate the opportunity to appear before the Committee. We thank the Chairman and Members for the important role you perform overseeing EPA regulatory activities.

Effective environmental policies balance scientific, economic, social, and environmental outcomes. Such policies create opportunity for farmers to improve net farm income, enhance the nation's economic opportunities, and preserve property rights while enabling farmers and ranchers to produce an abundant and affordable supply of food, fiber, and energy.

Farmers and ranchers – like Americans in all walks of life – support sound environmental policy. We believe such policies depend on sound science. Just as the productivity of American agriculture is dependent on sound science to feed and clothe the nation, sound science – not politicized science – must be the foundation of the nation's environmental policy. We appreciate the oversight role of the Committee, and we support your efforts to ensure that sound science is used in the regulatory process.

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In September 2013, the EPA and U.S. Army Corps of Engineers sent a draft proposed rule defining the waters they intend to regulate under the Clean Water Act (CWA) to the Office of Management and Budget for interagency review. We believe the draft rule fails to comply with important regulatory safeguards and is based on a scientific report that has not had sufficient peer review. It is troubling that EPA's "scientific" report implies that, because nearly all water is in some way connected, EPA's authority under the CWA is virtually limitless. Thus the report, currently being reviewed by the Science Advisory Board (SAB), disguises what is nothing more than a policy preference as a claim that is justified by science and the law. The impact of this broad interpretation, if rolled into federal regulation, will mean more permits, additional permit requirements, and government and environmental group scrutiny of the things we do in agriculture, and the threat of additional litigation against farmers and ranchers. CWA jurisdiction also triggers other federal requirements, such as enforcement under the Endangered Species Act, National Environmental Policy Act, and National Historic Preservation Act. This draft proposal, by itself, has created much outrage in farm country toward the EPA.

EPA Effectively Removes "Navigable" from CWA Regulations

The CWA was enacted in 1972 and limited federal jurisdiction to "navigable" waters of the United States. Congress at that time explicitly left a role for state regulation of certain waters by stating: "It is

the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution.” In 2001 and in 2006, the U.S. Supreme Court reaffirmed those limits on Federal authority. It appears EPA now seeks to expand its authority beyond the limits approved by Congress and reaffirmed by the U.S. Supreme Court.

The Supreme Court decisions reaffirmed that the term “navigable waters” under the CWA does not extend to all waters. It is important to note that, shortly after those Court decisions, legislation was introduced to overturn them. Despite aggressive lobbying campaigns, bills in both the House and Senate failed to even reach a floor vote. That happened primarily for two reasons. First, leaders from both parties continue to strongly support the structure and goals of the CWA and do not want to see EPA intrude on traditional state prerogatives relating to land use planning and economic growth. Second, the legislation would have allowed EPA to use the CWA to regulate activities even on dry land and even when those activities are not connected to interstate commerce. Such an over-reach goes well beyond anything contemplated by the framers of the 1972 law.

SAB Panels Lack Transparency and Balance

We are also troubled that EPA seems to routinely ignore the requirement that SAB panels be “fairly balanced.” The agency routinely selects scientists who are EPA grantees to serve on SAB panels. EPA grantees are by definition financially dependent on EPA and couldn’t possibly serve as “independent” advisory panelists. According to the Congressional Research Service, nearly 60 percent of the members of EPA’s chartered SAB panels have received EPA research grants that total nearly 140 million taxpayer dollars. On the other hand, private sector expertise on SAB panels is typically minimal, and in many cases entirely excluded, despite statutory requirements that membership “be fairly balanced in terms of the points of view represented.” It is also evident that SAB panel members are not afraid to take strong policy preferences on issues of which they are being asked to provide impartial scientific reviews.

Mr. Chairman, we applaud your efforts to ensure an open, transparent and fair scientific SAB investigation process. And we appreciate your effort to get EPA to answer these and other important scientific questions. I will be happy to answer any questions at this time.

KENNETH DIERSCHKE
President
Texas Farm Bureau

Kenneth Dierschke of San Angelo became president of the Texas Farm Bureau and its affiliated companies in December 2002. He was elected to the TFB Board of Directors in December 1996, and became vice president in 2000. In January 2003, he was elected to the American Farm Bureau Federation Board of Directors. He also serves on the Boards of Directors of Southern Farm Bureau Life Insurance Company and Farm Bureau Bank, and is a member of the Executive Committee of the Farm Bureau Bank.

Dierschke is a member of the United States Trade Representatives Advisory Council. Since 1998, Dierschke has served as agricultural representative on the Region F Water Planning Group created by Senate Bill 1. In 2004 and 2005, he served on the Conservation Task Force for the Texas Water Development Board. He serves on the Cotton Board, served on its executive committee, and is a director of the Southern Rolling Plains Cotton Growers Association. He also serves as a member of the USDA Trade Representative Advisory Committee and has served on the American Farm Bureau Trade Advisory Committee.

Dierschke served on the Tom Green County Farm Bureau Board of Directors from 1975 until his election to the TFB Board in 1996, and he served for two terms as Tom Green County Farm Bureau president. He has also served on TFB's Blue Ribbon Goals Committee, State Resolutions Committee, and Cotton Advisory Committee.

Dierschke has also been honored with the Area Chapter Farmer Award from the Wall FFA and was selected as the Concho Soil & Water District Farmer of the Year.

Dierschke is a fourth generation farmer who raises cotton and milo. He graduated from Wall High School and attended San Angelo College (now Angelo State University).

Dierschke and his wife, Binnie, are members of Holy Angels Catholic Church, where he has served on the parish council, including a term as president, and is a member of the Knights of Columbus. They were honored as Holy Angels Catholic Church "Family of the Year" in 1990. They have two sons and a daughter, and are the proud grandparents of seven grandchildren.

Chairman SMITH. Thank you, Mr. Dierschke.
Dr. Craft.

**TESTIMONY OF DR. ELENA CRAFT,
HEALTH SCIENTIST,
ENVIRONMENTAL DEFENSE FUND**

Dr. CRAFT. Chairman Smith, Ranking Member Johnson, and members of the committee, it is an honor to have the opportunity to testify today about the scientific justification of environmental protections in the State of Texas. Thank you.

My name is Elena Craft. I serve as a Health Scientist with Environmental Defense Fund, a national nonpartisan, nonprofit, science-based environmental organization. I earned my graduate degrees in North Carolina and got to Texas as quickly as I could. After that, I met my husband, who is a computer engineer, and we have a native Texan on the way who is also happy to be here.

So I hold an adjunct assistant professorship at the University of Texas School of Public Health and I work on a range of regional and national issues primarily with regard to air quality. Texans have a lot to gain from reductions in emissions of pollutants such as ozone, mercury, and other air toxics and greenhouse gases. We can have a cleaner environment as well as a vibrant economy, but right now, Texas is lagging behind other states, and the costs of the state's inaction are being charged to the taxpayers in terms of health. This issue is exacerbated by the high rates of those uninsured in our state. Texas has the highest rate of uninsured adults, 33 percent, the highest rate of uninsured children in the country at 17 percent.

Texas has not taken advantage of ample opportunities to go ahead and get ahead of federal policy by developing its own laws and regulations to reduce pollution and now we are behind. Right now, almost 15 million Texans breathe air that does not meet federal health-based standards for ozone that were set back in 2008. Perhaps what is most concerning about ozone in Texas is that, since 2009, ozone design values have either increased or remained relatively stagnant in the three largest metropolitan areas. Hundreds of doctors and scientists across the country are concerned about the impact that ozone is having on public health and have been aggressively advocating for even more protective standards.

Mercury is another pollutant of health concern across the country but especially within Texas. Mercury is a neurotoxin that jeopardizes brain development of infants and children. Texas is home to 6 of the 10 highest-emitting coal plants for Mercury in the United States. EPA rules are justified, achievable, and cost-effective. Many Texas businesses are well-positioned to adopt the new standards, and initial cost estimates for compliance have proven to be overstated.

With regard to the cross state air pollution, in Texas specifically, reducing pollution will save up to 1,700 lives per year in the state and provide approximately 14 billion in benefits to Texas each year. Independent analysts have assessed the potential for the State of Texas to comply with the Cross State Rule without costly upgrades or plant closures.

The Mercury and Air Toxics Standards are the first nationwide limits on power sector emissions of mercury and are expected to have a net positive impact on overall employment as well as economic benefits that outweigh costs by up to 9 to 1. States across the nation have been preparing for these standards for years. Plants in Illinois, New Hampshire, Wisconsin, Maryland have all taken steps to reduce mercury, and recent statements from utility companies on the standards suggest that implementation is going smoothly and that compliance costs will be less than originally expected.

With regard to greenhouse gases, since January 2011, large power plants and industrial facilities that are newly constructed have been obligated to use the most efficient and best-available technologies, taking into account costs and technical feasibility. Whereas almost all states have revised their Clean Air Act regulations to incorporate these new requirements, Texas unfortunately has refused to implement this program.

Others have found that implementing efficiency and best-available control technologies for greenhouse gases is a cost-effective and reasonable process. One of our Nation's largest utilities, Calpine Corporation, recently submitted a brief in the Supreme Court supporting the application of these requirements for greenhouse gas regulations and noting that obtaining the permits did not delay or add significant costs. Nationwide, over 100 greenhouse gas permits have been issued as of September 2013 in at least a dozen major industrial sectors.

Texas' legal action has jeopardized the ability of facilities and the state to conduct business. While other states have been planning for new pollution controls, Texas has stood in the way. Mercury emissions from Texas' electric utilities have remained relatively consistent since 2001 even though 17 other states have taken measures to reduce mercury from their power plants. Texas is the only state that didn't work with EPA to ensure smooth greenhouse gas permitting, though other states, even ones that disagreed with EPA on greenhouse gas permitting, had plans in place so that business would not be disrupted.

The science on air pollution is clear. It is a killer and we are paying the price on pollution whether we admit it or not. And if we don't take aggressive action now, then we are jeopardizing the future of all Texans.

Thank you.

[The prepared statement of Dr. Craft follows:]

**Before the United States House Committee on Science, Space, and
Technology**

**“The Lack of Scientific Justification in the EPA’s Overreach: A Case Study in
Texas”**

**Testimony of Elena Craft, PhD
Health Scientist
Environmental Defense Fund
February 5, 2014**

Chairman Smith, Ranking Member Johnson, and members of the committee, thank you for the opportunity to testify about the scientific justification of environmental protections in the state of Texas.

My name is Elena Craft. I serve as a health scientist at Environmental Defense Fund, a national non-partisan, non-profit environmental organization. I have a masters of science in toxicology as well as a doctorate in molecular toxicology. In addition, I hold an adjunct assistant professorship at the University of Texas School of Public Health in the Division of Epidemiology, Human Genetics, & Environmental Sciences.

I. Introduction

Texans have much to gain from further reductions in emissions of criteria pollutants such as ozone, mercury and other air toxics, and greenhouse gases. The evidence shows that the health benefits of reduced pollution far outweigh the cost. The evidence also highlights that the economy can grow as pollution is cut. Texas has not taken advantage of ample opportunities to get ahead of federal policy by developing its own laws and regulations to reduce criteria pollutants, air toxics, and greenhouse gases. Now, the state lags behind. At a bare minimum, all Texans deserve leadership that supports life-saving federal protections rather than stands in the way.

II. The Challenge and Opportunity for Air Quality in Texas

A. Ozone

Right now, over half of all Texans, almost 15 million people, breathe air that does not meet current federal health based air quality standards for ozone that were set back in 2008 (Figure 1). Exposure to ozone can lead to a variety of severe health issues – asthma attacks, cardiac arrests, reduced lung function, and even death.

Region	2012 population estimate ¹
HGB non-attainment region	6,148,417
DFW non-attainment region	6,553,270
San Antonio monitored non-attainment area ²	2,084,299
Total population in Texas	26,060,796
% of Texans breathing air that does <u>not</u> meet federal air quality standards	57%

Figure 1: Estimate of population in Texas who do not breathe air that meets federal health based standards.

Hundreds of doctors and scientists across the country are concerned about the impact that ozone is having on public health and have been aggressive in advocating for even more protective standards, including:

American Thoracic Society

With more than 18,000 members, the American Thoracic Society is a leading medical association dedicated to advancing lung, critical care and sleep medicine. The Thoracic Society has participated extensively in the review of the draft Criteria Document and Staff Paper for ozone. In July 2007, the American Thoracic Society published an editorial in its peer-reviewed journal, the American Journal of Respiratory and Critical Care Medicine, **endorsing an 8-hour average ozone standard of 60 ppb, based upon concerns about both child and adult health.**³

American Academy of Pediatrics

The American Academy of Pediatrics (AAP) is an organization of 60,000 pediatricians committed to the attainment of optimum health for infants, children, adolescents and young adults. In late 2004, the American Academy of Pediatrics (AAP) published a major review of ambient air pollution and health hazards to children. The review concluded that the 1997 National Ambient Air Quality Standards (NAAQS) for ozone may not adequately protect the health of infants and children and **recommended a minimum standard of 70 ppb.** The paper cites studies showing declines in lung function, hospitalizations for respiratory tract illness in young children, emergency department visits for asthma, and asthma exacerbations at ozone concentrations at or below the current standards. In addition, cumulative childhood exposure to ozone may affect lung function when exposed children reach young adulthood.

American Medical Association, American College of Chest Physicians, American College of Preventive Medicine, American College of Occupational and Environmental Medicine, American Association of Cardiovascular and Pulmonary

¹ <http://www.census.gov/popest/data/index.html>

² The 3 year design value for San Antonio exceeds the federal health based standard of 75ppb.

³ Pinkerton KE, Balmes JR, Fanucchi MV, Rom WN. Editorial: Ozone, A Malady for All Ages. Am J Res Crit Care Med 2007; 176: 107-108. Available at: <http://ajrccm.atsjournals.org/cgi/content/full/176/2/107>

Rehabilitation and National Association for the Medical Direction of Respiratory Care

- The American Medical Association is the nation's largest professional medical society.
- The American College of Chest Physicians is a not-for-profit medical society representing 16,500 members in over 100 countries. Members include specialist physicians, allied health professionals, and PhDs focusing on diseases of the chest.
- The American College of Preventive Medicine (ACPM) is the national professional society for physicians committed to disease prevention and health promotion. ACPM has 2,000 members engaged in preventive medicine practice, teaching and research.
- The American College of Occupational and Environmental Medicine (ACOEM) represents more than 5,000 physicians and other health care professionals specializing in the field of occupational and environmental medicine. ACOEM is the nation's largest medical society dedicated to promoting the health of workers through preventive medicine, clinical care, research, and education.
- The National Association for Medical Direction of Respiratory Care is a national organization of pulmonologists and other physicians who provide clinical and management leadership in respiratory and critical care in nearly 2,000 hospitals nationwide.
- The American Association of Cardiovascular and Pulmonary Rehabilitation is the premier professional organization dedicated to the development of its members who are involved in the profession of cardiovascular and pulmonary rehabilitation.

In a letter to Administrator Johnson, dated October 9, 2007, the above mentioned medical societies recommended EPA adopt a much stronger NAAQS for ozone, as noted below:

"The undersigned medical professional societies recommend the EPA adopt the following NAAQS for ozone:

- **The level of the primary standard should be no higher than 0.060 ppm;**
- **The degree of precision for the standard should be expressed at the thousandth ppm;**
- **The form of the standard should be constructed as a three-year average of the annual third highest daily maximum 8-hour average ozone concentration.⁴**

World Health Organization

In October 2006, the World Health Organization (WHO) revised its international air quality guidelines for ozone.⁵ The prior guideline for 8-hour average ozone concentrations of 120 µg/m³ (61 ppb) was reduced to 100 µg/m³ (51 ppb).

⁴ Letter from the American Thoracic Society, American Medical Association, American College of Chest Physicians, American College of Preventive Medicine, American College of Occupational and Environmental Medicine, American Association of Cardiovascular and Pulmonary Rehabilitation and National Association for the Medical Direction of Respiratory Care to Stephen L. Johnson, Administrator, Environmental Protection Agency, October 9, 2007. Submitted as comments to EPA-HQ-OAR-2005-0172.

Perhaps what is most concerning with regard to ozone in Texas is that since 2009, ozone design values have either increased or remained relatively stagnant in the three largest metropolitan areas (Figure 2).

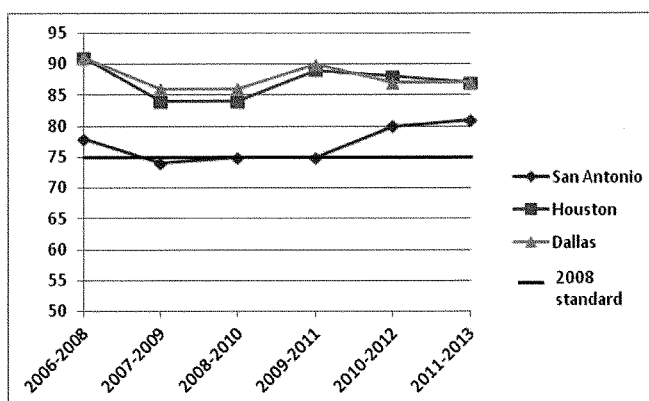


Figure 2. Ozone design values in Texas as reported by TCEQ. Data for graph accessed via http://www.tceq.state.tx.us/cgi-bin/compliance/monops/8hr_attainment.pl

Concerned about ozone concentrations in the Dallas area, the Dallas Medical Association petitioned the state environmental agency to address pollution from some of the nation's top polluters. The petition requested that the Texas Commission on Environmental Quality (TCEQ) adopt rules to reduce the pollution from three old coal-fired power plants that contribute disproportionately to high ozone levels in Dallas-Fort Worth and East Texas.⁶

B. Mercury

Mercury is another pollutant of health concern across the country, but especially within the state of Texas. Mercury is a bioaccumulative neurotoxin that jeopardizes the brain development of infants and children. Coal- and oil-fired power plants are the nation's single largest manmade source of major toxic air contaminants, and are responsible for approximately 50 percent of mercury pollution. Texas was home to six of the top ten highest emitting coal plants for mercury and mercury compounds in the United States in 2012 and mercury emissions from Texas electric utilities have remained relatively consistent since 2001,⁷ even though seventeen other states have taken measures to reduce mercury from their power plants. Maryland, for example, passed the Healthy Air Act back in 2007, curbing mercury pollution by 80%.⁸

⁵ World Health Organization. WHO Air quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide. Global update 2005. Summary of risk assessment. Available at: <http://www.who.int/phe/air/aqg2006execsum.pdf>

⁶ http://www.dallas-cms.org/news/dcms_petitionTCEQ_final.pdf

⁷ http://iaspub.epa.gov/triexplorer/tri_release.facility

⁸ http://www.mde.md.gov/programs/Air/ProgramsHome/Pages/air/md_haa.aspx

Mercury vented into ambient air returns to Earth in precipitation or attached to particles, and through runoff or deposition can end up in lakes, rivers and the ocean. Toxic methylmercury results from the transformation of mercury by microorganisms in the sediments of water bodies. The methylated mercury readily accumulates in the aquatic food chain with the concentrations increasing at each level in the food chain.

Humans are exposed to methylmercury predominantly through the "[c]onsumption of contaminated fish."⁹ As of 2010, all states, including Texas, have mercury fish consumption advisories. Currently, there are fish consumption advisories in approximately one of every five counties in Texas (Figure 3).¹⁰

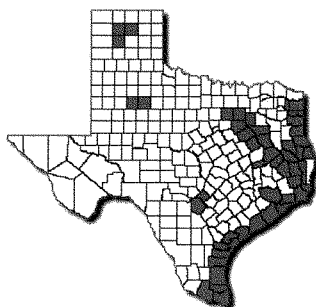


Figure 3: Counties with current fish consumption advisories in the state of Texas.

In a recent letter to President Obama, leading mercury scientists explained the biochemical mechanism associated with mercury's toxicity: "Mercury is such a potent toxin because it bonds very strongly to functionally important parts of proteins including enzymes, antibodies and nerve growth cones that keep cells alive, 'intelligent' and safe. Target enzymes, organs, or metabolic pathways vulnerable to mercury poisoning may change from cell to cell, person to person and in the same individual over time. Regardless, minimizing all mercury exposure is essential to improving human, wildlife and ecosystem health because exposure to mercury in any form places a heavy burden on the biochemical machinery within cells of all living organisms."¹¹

C. Other Air Toxics

In addition to unhealthy concentrations of ozone in the largest cities in Texas, there are specific areas around the state that have been identified by the Texas Commission on Environmental Quality (TCEQ) where the concentration of a specific air toxic has exceeded the state's screening

⁹ Leonardo Trasande, Philip J. Landrigan, and Clyde Schechter, Public Health and Economic Consequences of Methyl Mercury Toxicity to the Developing Brain, *Environmental Health Perspectives*, Vol. 113, No. 5 (May 2005).

¹⁰ <http://www.dshs.state.tx.us/seafood/survey.shtm#advisory>

¹¹ Letter of 23 leading mercury scientists and physicians to President Barack Obama, Dec. 13, 2011 (http://grist.files.wordpress.com/2011/12/mercury_scientists_in_support_of_the_mats.pdf)

level guidelines for over a decade (Figure 4). These areas are known as air pollution watch list areas (APWLs). Acute or chronic exposures to pollutants such as those listed on the APWL can lead to cancer, birth defects, and even death.

City	County	Pollutant(s)	Number of years on list
Dallas	Dallas	Nickel	10
N/A ¹²	Bowie and Cass	Hydrogen Sulfide	15
El Paso	El Paso	Hydrogen Sulfide	10
Evadale	Jasper	Hydrogen Sulfide	11
Beaumont	Jefferson	Sulfur Dioxide	11
Port Arthur	Jefferson	Benzene	13
Freeport	Brazoria	Arsenic, Cobalt, Nickel, and Vanadium	9
Texas City ¹³	Galveston	Propionaldehyde, Benzene, and Hydrogen Sulfide	13, 11, 10 years, respectively
Lynchburg Ferry Area	Harris	Styrene	12
Galena Park	Harris	Benzene	14

Figure 4: Chart of APWL areas adopted from “Report on the Air Pollutant Watch List Areas in Texas Prepared by the Texas Commission on Environmental Quality Chief Engineer’s Office February 2012”

D. Other air pollutants of concern

Other peer-reviewed reports from Texas-based researchers have indicated additional health threats from a number of other pollutants. In a 2007 peer reviewed paper published by Sexton et al. (2007), eleven pollutants in addition to ozone and particulate matter were classified as definitive risks to human health in the greater Houston area.¹⁴

¹² The company that the TCEQ identified as the primary contributor to the hydrogen sulfide concentrations in APWL 0501 is located in Cass County near Queen City and Domino. The APWL boundary encompasses an area over Bowie and Cass counties.

¹³ While TCEQ proposed removal of TX City from the APWL, the agency has failed to respond to public comments demonstrating that the concentration of benzene in communities in TX City still exceeds the state’s screening level guidelines.

¹⁴ Sexton et al. (2007). Comparative Assessment of Air Pollution–Related Health Risks in Houston. Environ Health Perspect 115:1388–1393 (2007). doi:10.1289/ehp.10043 available via <http://dx.doi.org/>

Table 1. Basis and data source for classifying air pollutants in “definite risks” category in Greater Houston.^a

Air pollutant	Basis			Data source				
				AQS 2004 ^b			NATA 1999 ^c	
	Cancer risk	Chronic risk	NAAQS criteria exceedance	No. of monitors Cancer risk	Chronic risk	Days in exceedance	No. of census tracts Cancer risk	Chronic risk
Ozone			X		20	46		
PM _{2.5}			X			0		
Diesel PM	X	X		6 ^d			895	43
1,3-Butadiene	X	X		7	1		9	1
Chromium VI	X			2 ^e			433	
Benzene	X			2			66	
Ethylene dibromide	X			1				
Acrylonitrile	X						6	
Formaldehyde		X			2			143
Acrolein		X			3			889
Chlorine		X						31
1,6-Hexamethylene		X						6
Diisocyanate								

Abbreviations: AQS, Air Quality System; X denotes the basis for risk classification.

^aGreater Houston consists of the 10-county, Houston–Sugar Land–Baytown metropolitan statistical area defined by the U.S. Census Bureau (2003). ^bData from U.S. EPA (2006b). ^cData from U.S. EPA (2006a). ^dDiesel estimated using measured ambient elemental carbon concentrations. ^eChromium VI estimated using measured ambient chromium PM_{2.5} concentrations; see Supplemental Material, Appendix 3 (available online at <http://www.ehponline.org/docs/2007/10043/suppl.pdf>).

Figure 5: Classification of definite risks from air pollution in Greater Houston as reported in Sexton et al (2007)

III. EPA Rules Protect Public Health, are Achievable, and Cost Effective

EPA Standards are estimated to be cost effective and to generate significant health benefits. Many Texas businesses are well-positioned to adopt new standards and initial cost estimates for compliance have proven to be overstated. For instance:

A. Ozone

National Ambient Air Quality Standard (NAAQS)

In 2009, the Houston region reached attainment with the 1997 ozone NAAQS. According to an economic analysis completed by the TCEQ, the Houston area exhibited the highest economic activity of any three-year period on record during the 2007 through 2009 time period. The analysis further describes that over the last two decades, ozone concentrations and economic growth have rarely been correlated in the Houston area, and that many of the years that saw robust economic growth coincided with declines in the eight-hour and one-hour ozone design values (Figure 6).

According to TCEQ’s analysis, “reducing ozone concentrations in the presence of continuing economic growth through the development of state implementation plans and implementing control strategies for emission reduction is possible. Expansion of emitting activities during

phases of economic growth certainly makes the task of attaining clean air standards more challenging, but it should not prevent, and has not prevented, the HGB area, among many others, from making substantial progress in improving air quality.¹⁵

Table B-2: Maximum Annual One-Hour and Eight-Hour Ozone Design Values in the HGB Area and the Annual Average Federal Reserve Bank of Dallas Annual Business Cycle Index* for the HSB MSA**

	<u>Maximum HGB Ozone Design Value</u>		<u>HSB** Federal Reserve Bank of Dallas Business Cycle Index*</u>	
	<u>8-hour Design Value</u>	<u>Change</u>	<u>annual average</u>	<u>year-over- year change</u>
	<u>ppm</u>	<u>%</u>	<u>index</u>	<u>%</u>
1991	119		130.1	
1992	116	-2.5	132.0	1.5
1993	104	-10.3	136.8	3.6
1994	110	5.8	143.1	4.6
1995	114	3.6	150.7	5.3
1996	116	1.8	157.6	4.6
1997	117	0.9	168.1	6.7
1998	116	-0.9	181.0	7.6
1999	118	1.7	187.4	3.5
2000	112	-5.1	195.7	4.5
2001	110	-1.8	202.8	3.6
2002	107	-2.7	205.4	1.3
2003	102	-4.7	207.2	0.9
2004	101	-1.0	212.3	2.5
2005	103	2.0	222.4	4.7
2006	103	0.0	237.1	6.6
2007	96	-6.8	252.2	6.4
2008	91	-5.2	262.8	4.2
2009***	84	-7.7	260.1	-1.0

Sources: Texas Commission on Environmental Quality (www.tceq.state.tx.us/comm_data/comm_data_public/pubs/pubs/pd02010-02/hgb-air-2009) and Federal Reserve Bank of Dallas (dallasfed.org/data/dm/hsbmsr9.tdb.htm).
October 1990 = 100.

*The United States Department of Commerce defines the HGB area as the "Houston-Sugarland-Baytown" Metropolitan Statistical Area (MSA), which includes the eight-county ozone non-attainment area plus Austin County and San Jacinto County.
***Through November 2009.

Figure 6: Taken from TCEQ's Executive Summary: Request for Determination Regarding Termination of the One-Hour Ozone Section 185 Fee Obligation.¹⁶

Cross State Air Pollution Rule (CSAPR)

The health and economic benefits of the Cross-State Air Pollution Rule include extensive health protections enabling millions of Americans to live healthier, longer lives. Nationally, the rule is projected to:

- Save up to 34,000 lives per year
- Prevent 400,000 asthma attacks per year
- Avoid 1.8 million sick days per year
- Provide benefits of \$120 to \$280 billion per year¹⁷

¹⁵ <http://www.tceq.texas.gov/assets/public/implementation/air/ie/pseiforms/hgbTDrequest.pdf>

¹⁶ <http://www.tceq.texas.gov/assets/public/implementation/air/ie/pseiforms/hgbTDrequest.pdf>

¹⁷ <http://www.epa.gov/crossstaterule/pdfs/FinalRIA.pdf>

In Texas specifically, reducing pollution from both out of state and in-state is estimated to:

- save up to 1,704 lives per year¹⁸
- prevent 712 heart attacks, 414 hospitalizations, and 665 ER visits per year
- prevent 113,128 lost work days
- provide approximately \$14 billion in benefits to Texas each year¹⁹

In 2011, the Bernstein Research Group analyzed the potential for the state of Texas to comply with CSAPR without costly upgrades or plant closures. Their findings indicate that "if Texas utilities were simply to run their existing scrubbers continuously, and switch unscrubbed units to lower sulfur coal, Texas could likely comply with its SO₂ budget under CSAPR in 2012."²⁰

The Lower Colorado River Authority in Texas says it is "well-positioned" to comply with the new EPA rules. "The investments made in Fayette [plant] will be one of the ways to continue to offer low-cost generation and be competitive in the Texas market," McCluskey, manager of generation resource development at the LCRA, said.²¹

There are a few companies with operations in Texas that have claimed that compliance costs will be overly burdensome to the industry. However, compliance cost estimates from several power companies have proven to be unreliable and not what the industry would actually spend in compliance. American Electric Power (AEP) and Southern Company, both of which are involved in the litigation seeking to block these clean air protections, have slashed estimated compliance costs by 30 to 50 percent.^{22,23}

B. Mercury

Mercury Air Toxics Standard (MATS)

The Mercury and Air Toxics Standards (MATS) are the first nation-wide limits on power sector emissions of mercury and other toxic air pollutants including arsenic, cadmium, other heavy metals, and acid gases. These standards were issued after years of exhaustive studies of the impacts of power sector emissions of air toxics on public health, which Congress first requested in the Clean Air Act Amendments of 1990.

¹⁸ U.S. Environmental Protection Agency (EPA). --Regulatory Impact Analysis for the Federal Implementation Plans to Reduce Interstate Transport of Fine Particulate Matter and Ozone in 27 States; Correction of SIP Approvals for 22 States, June 2011 and Supplemental Information.
<http://www.epa.gov/airtransport/pdfs/FinalRIA.pdf>

¹⁹ U.S. Environmental Protection Agency (EPA). Estimate in 2007 dollars. See excel spreadsheet at:
<http://www.epa.gov/airtransport/benefitsmap.html>

²⁰ <http://blogs.edf.org/texascleanairmatters/files/2011/07/CSAPR-Texas.pdf>

²¹ <http://www.statesman.com/news/news/local/lcra-adds-scrubbers-to-clean-sulfur-dioxide-from-i/nRc8M/>

²² <http://seekingalpha.com/article/736561-american-electric-power-management-discusses-q2-2012-results-earnings-call-transcript>

²³ <http://seekingalpha.com/article/749651-southern-management-discusses-q2-2012-results-earnings-call-transcript>

MATS is projected to prevent 130,000 childhood asthma attacks, 5,700 hospital visits, and up to 11,000 premature deaths annually. An Economic Policy Institute analysis indicates that the Air Toxics rule will have a net positive impact on overall employment, creating 28,000 to 158,000 jobs in the three years following implementation.²⁴ Total economic benefits of the rule are expected to outweigh the costs by up to 9 to 1.

MATS standards are based on well-known technologies that have been used in the power sector for years to cut emissions of mercury, sulfur dioxide and particulates. Furthermore, MATS builds in flexibility for facilities to achieve the standards by using existing emission controls, upgrading controls, switching fuels, and averaging emissions.

Recent statements from utility companies on the standards suggest that implementation is going smoothly and that compliance costs will be less than originally expected:

- Dynegy has stated that Illinois' Hennepin and Havana plants are expected to remain operating and in compliance – indeed, most of the upgrades have already been done in order to comply with Illinois' already "stringent" regulations, with which they have been complying since 2009. Kay Sullivan, Dynegy director of public relations, explained, "We anticipated the changes and saw the need to make an investment there. We're where we need to be."²⁵
- Public Service of New Hampshire's mercury pollution controls at its coal-fired Merrimack Station power plant puts the state's largest utility in good stead to meet new federal pollution rules. PSNH said, "The really good news for New Hampshire is the mercury reduction law that the Legislature passed in 2006 put us on a path of compliance that synchs up very well with this new federal standard."²⁶
- Kansas City Power & Light has already made extensive investments to control pollution of toxic metals, and as a result has said that it is "relatively well positioned to meet the compliance deadlines of these new rules."²⁷
- Midwest Generation, headquartered in Illinois, has been developing and installing mercury emission controls at its plants since 2008, nearly all of the company's generating units are already reducing mercury emissions by more than 90 percent and already comply with the USEPA's regulation of mercury emissions.²⁸

²⁴ <http://si.epi.org/files/temp2011/BriefingPaper312%20%282%29.pdf>

²⁵ Jeff Dankert, "Hennepin coal plant expects to comply with EPA regulation," News Tribune, December 23, 2011. <http://www.newstrib.com/articles/news/nci/default.asp?article=31437&aname=Hennepin+coal+plant+expe>

²⁶ Denis Paiste, "PSNH Says Bow scrubber already meeting standards," New Hampshire Union Leader, December 23, 2011. <http://www.unionleader.com/article/20111223/NEWS02/712239971>

²⁷ William Seay, "KCP&L Responds to New EPA Power Plant Standards," The St. Joe Channel, December 23, 2011. http://stjoechannel.com/fulltext/?nxd_id=246487

²⁸ Business Wire, "Midwest Generation completes installation of additional pollution controls," December

- Dairyland Power Cooperative in Wisconsin says it is prepared to comply with the new rules. Dairyland has already implemented about half of its \$400 million plan to install pollution controls on coal-fired plants in Genoa and Alma. "We have anticipated a rule like this," said spokeswoman Katie Thompson. "We're well prepared to be in compliance with it."²⁹
- Xcel Energy, a utility supplier of electric power and natural gas service in Colorado, Kansas, Michigan, Minnesota, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wisconsin said, "we are well positioned to comply with a number of new environmental standards and regulations, like this one, thanks to early actions we have taken to modernize our generation and mitigate future environmental compliance costs."³⁰
- PSEG's Vice President of policy and environment, Eric Svenson, said the MATS rules were "overdue" and praised the EPA for adopting a pragmatic approach. Mr. Svenson noted that, despite the outcry from some interest groups, much of the industry was already compliant with the new standards. PSEG, based in New Jersey and one of the ten largest utilities in the country, has already spent about \$1.6 billion on upgrading three of its power plants.³¹

Further, some companies, such as American Electric Power, have significantly lowered their estimated costs of compliance since the standards were finalized. In a February 2012 meeting with investors, AEP announced it had "cut its estimate for complying with EPA's mercury rule in Ohio to \$400 million from last summer's estimate of \$1.1 billion."³²

C. Greenhouse Gas Standards

Since January 2011, large power plants and industrial facilities that are newly constructed or undergoing modifications have been obligated to obtain pre-construction permits requiring "best available control technology" for greenhouse gases – just as the Clean Air Act has required for other regulated pollutants since the 1970s. These Prevention of Significant Deterioration (PSD) permits are an important way to ensure that new facilities incorporate the most efficient and up-to-date technologies available, taking account of costs and technical feasibility. Whereas

22, 2011. <http://www.businesswire.com/news/home/20111222005573/en/Midwest-Generation-Completes-Installation-Additional-Pollution-Controls>

²⁹ Chris Hubbuch, "Dairyland, Xcel prepared for mercury rules," LaCrosse Tribune, December 22, 2011. [http://lacrosetribune.com/dairyland-xcel-prepared-for-mercury-rules/article_b612f370-2c50-11e1-aac7-](http://lacrosetribune.com/dairyland-xcel-prepared-for-mercury-rules/article_b612f370-2c50-11e1-aac7-0019bb2963f4.html#ixzz1hGiD0i58)

[0019bb2963f4.html#ixzz1hGiD0i58](http://lacrosetribune.com/dairyland-xcel-prepared-for-mercury-rules/article_b612f370-2c50-11e1-aac7-0019bb2963f4.html#ixzz1hGiD0i58)

³⁰ Chris Hubbuch, "Dairyland, Xcel prepared for mercury rules," LaCrosse Tribune, December 22, 2011. [http://lacrosetribune.com/dairyland-xcel-prepared-for-mercury-rules/article_b612f370-2c50-11e1-aac7-](http://lacrosetribune.com/dairyland-xcel-prepared-for-mercury-rules/article_b612f370-2c50-11e1-aac7-0019bb2963f4.html#ixzz1hGiD0i58)

[0019bb2963f4.html#ixzz1hGiD0i58](http://lacrosetribune.com/dairyland-xcel-prepared-for-mercury-rules/article_b612f370-2c50-11e1-aac7-0019bb2963f4.html#ixzz1hGiD0i58)

³¹ Jeremy Lemer, "EPA toughens rules on US power emissions," Financial Times, December 21, 2011. Available online: <http://www.ft.com/intl/cms/s/0/93e363ae-2c17-11e1-98bc-00144feabdc0.html#axzz1p7zFrFOI> (accessed March 14, 2012)

³² Martinson, Erica. "AEP: Costs of meeting power plant rule decline," Politico, February 24, 2012.

almost all states have revised their Clean Air Act regulations to incorporate these new requirements, Texas unfortunately has refused to implement this program and has litigated EPA's authority to do so in the D.C. Circuit and the Supreme Court.

Despite Texas' protests, states and utilities that are implementing the PSD program for greenhouse gases have found that it is a cost-effective and reasonable process. One of the nation's largest utilities, Calpine Corporation, recently submitted a brief in the Supreme Court *supporting* the application of PSD requirements to greenhouse gas emissions. Calpine's brief noted that the company has recently invested billions of dollars in efficient new natural gas combined cycle (NGCC) facilities, and that it has successfully completed PSD permitting for greenhouse gases for six projects (two of which are located in Texas, and received PSD permits directly from EPA). Calpine noted that obtaining these permits did not delay its projects or add significant costs, and resulted in the adoption of energy efficient technologies with important environmental and economic benefits.³³ Nationwide, over 100 PSD permits with greenhouse gas limits had been issued as of September 2013, in at least a dozen major industrial sectors including electric power generation, chemical production, and oil and gas production and processing.³⁴

D. Oil and Gas Standards

In 2012, EPA issued long-overdue revisions to emission standards for equipment used in oil and natural gas production, processing, and transmission. These standards are based on proven and extremely cost-effective technologies that were already required in Colorado and Wyoming, and had been implemented by some leading companies around the country. EPA's standards will lead to direct and significant reductions in emissions of volatile organic compounds (VOCs) that contribute to unhealthy ozone and particulate levels, and will also reduce emissions of carcinogenic air toxics such as benzene.

When fully implemented in 2015, these standards are expected to prevent approximately 190,000 tons of VOC emissions and 11,000 tons of hazardous air pollutant emissions. As an important side benefit, these standards will also reduce emissions of methane – a potent greenhouse gas – by approximately 1,000,000 tons per year.³⁵ But one of the most striking things about this regulation is that it is expected to achieve these benefits at no net cost to industry.³⁶ That's because many of the emission reduction measures included in these standards result in recovery of natural gas that would otherwise be lost to the atmosphere, directly benefiting the bottom lines of producers.

³³ *Utility Air Regulatory Group v. EPA*, No. 12-1146 et al., Brief of Calpine Corporation as Amicus Curiae in Support of Respondent (S.Ct. Jan. 28, 2014)

³⁴ Greenhouse Gas Permitting Update, EPA Office of Air Quality Planning and Standards, National Association of Clean Air Agencies Meeting at 39 (Sept. 2013), available at <http://www.westar.org/Docs/Business%20Meetings/Fall13/06.2%20NACAA%20fall%202013.PPT>

³⁵ See EPA, Regulatory Impact Analysis, Final New Source Performance Standards and Amendments to the National Emission Standards for Hazardous Air Pollutants for the Oil and Natural Gas Industry 4-1 (Apr. 2012).

³⁶ *Id.* at 1-4 (noting the annual cost of the NSPS is expected to be negative \$15 million, assuming a conservatively low natural gas price of \$4/Mcf).

To be sure, the NSPS is only a first step towards minimizing the significant emissions of harmful pollutants that result from uncontrolled oil and gas facilities. Nevertheless, the NSPS stands as a good example of common-sense Clean Air Act regulations that benefit public health, conserve natural resources, and yield economic dividends.

E. Clean Air Act

In the 1990 Clean Air Act Amendments, Congress directed EPA to periodically evaluate the benefits and costs of Clean Air Act programs. EPA's most recent peer-reviewed report was issued in 2011. It confirmed that the health and economic benefits of Clean Air Act measures to reduce harmful particulates, ozone and other air pollutants are immense - and vastly exceed any economic costs under any reasonable combination of assumptions or alternative methods.³⁷

Among the study's findings:

- In 2010, Clean Air Act programs to reduce particulate pollution prevented over 160,000 premature deaths, relative to what would have occurred under the pre-1990 Clean Air Act. By 2020, the annual estimate of lives saved will exceed 230,000.
- In 2010, Clean Air Act programs avoided nearly 200,000 cases of chronic and acute bronchitis; 130,000 heart attacks; 86,000 hospital admissions and emergency room visits; and 1.7 million cases of exacerbated asthma. By 2020, these health benefits are expected to increase by approximately 50% over 2010 levels.³⁸
- Premature deaths, hospitalizations, and other impacts from air pollution have enormous economic and societal costs. EPA found that the direct benefits of the Clean Air Act in reducing mortality and pollution-related problems were \$1.3 trillion in 2010 and would be nearly \$2 trillion in 2020 (about 25 to 30 times the direct costs).³⁹ Moreover, EPA found that reduced sick days and medical costs due to improved air quality would enhance overall economic growth and welfare for Americans.

IV. Texas Failure to Act Costs Texas Taxpayers Money, Jeopardizes Jobs, and Leads to Regulatory Uncertainty

The Texas attorney general Greg Abbott has filed or been a party to 27 lawsuits against the federal government since 2009, costing Texas taxpayers more than \$2.8 million.⁴⁰

Texas' legal actions have jeopardized the ability of facilities in the state to conduct business. A recent article in the Texas Tribune titled "Anti-Regulation Politics May Have Hurt Energy Industry," highlights the burden that a dual permitting authority has placed on businesses operating in Texas that are trying to obtain greenhouse gas permits.⁴¹ The Texas Pipeline

³⁷ EPA, *The Benefits and Costs of the Clean Air Act From 1990 to 2020* (Apr. 2011).

³⁸ *Id.* at 5-25 to 5-26.

³⁹ *Id.* at 7-9.

⁴⁰ <http://houston.cbslocal.com/2012/09/09/texas-has-spent-over-2-5m-suing-feds-since-obama-took-office/>

⁴¹ <http://www.texastribune.org/2014/02/02/anti-regulation-politics-may-have-hurt-energy-indu/>

Association estimates that “more than 50 planned projects since early 2011 have been significantly delayed by the [Texas] permitting process, putting 48,000 jobs at risk.”

V. Conclusion

This hearing is held under the auspices of the House Committee on Science, Space, and Technology. With that in mind, it is science that informs us that so many health benefits are available to the people of Texas. Technologies exist that makes those benefits achievable and cost-effective. We need leadership and cooperation from our representatives and public officials in employing common sense solutions to ensure that Texas has a vibrant economy and a healthy environment.

Dr. Elena Craft is a Health Scientist at Environmental Defense Fund, a non-profit, non-governmental, and non-partisan environmental organization. Dr. Craft's background is in molecular toxicology; she holds a M.S. degree in toxicology from NC State University, and a PhD from Duke University. She also holds an adjunct assistant professorship at the University of Texas School of Public Health in the Division of Epidemiology, Human Genetics, & Environmental Sciences. Her research experience includes work at both the US EPA and the National Institute of Environmental Health Sciences, where she studied the health effects resulting from exposure to environmental pollutants such as PCBs, dioxins, and metals. Over the last 7 years, she has worked to identify, monitor, and mitigate risk from environmental pollution in highly industrial areas, most specifically around port areas and petrochemical facilities. The citizens who live and work near this massive petrochemical complex are exposed to a disproportionate burden of health risks, as many of the areas surrounding these facilities are pollution "hotspots," where the concentrations of specific pollutants in the areas exceed health-based guidelines.

In the course of her work, Dr. Craft has served in a variety of capacities to advise local, regional, and national planning organizations on a diverse set of environmental and environmental justice issues, including serving as the current chair for the Houston Regional Air Quality Planning Committee, advisor to the Clean Air Task Force of Central Texas, and advisor to the Texas state environmental agency in developing a remediation program for pollution hotspot areas around the state. In addition, Dr. Craft has participated in research endeavors regarding the health effects associated with living in areas where the concentrations of certain pollutants exceed state-adopted health-based screening guidelines, most recently presenting her efforts at the Society of Toxicology Annual meeting on incorporating risk assessment methods as a practical tool for assessing health risks from environmental exposures. Dr. Craft has testified at a number of national hearings, given lectures at a number of universities, and has been interviewed by local, national, and international media on environmental issues, presenting scientific information from a health-based perspective. She is also a member of the Society of Toxicology and Society of Environmental Toxicology and Chemistry and has authored several peer-reviewed papers.

Chairman SMITH. Thank you, Dr. Craft.
Dr. Weinstein.

**TESTIMONY OF DR. BERNARD WEINSTEIN,
ASSOCIATE DIRECTOR OF THE MAGUIRE ENERGY INSTITUTE,
COX SCHOOL OF BUSINESS,
SOUTHERN METHODIST UNIVERSITY**

Dr. WEINSTEIN. Thank you, Mr. Chairman, Ms. Vice Chairman, and members of the committee, for the invitation to be here. I am Bud Weinstein with the Maguire Energy Institute at Southern Methodist University.

Let me talk for a minute first about the economy of Texas. We have heard from other speakers that the economy is in pretty good shape. We added 252,000 jobs last year. That was—we were number one in the Nation. In fact, we were number one for the fourth consecutive year in job creation. In percentage terms, we were second to North Dakota. There were more people living on my block in Manhattan than the entire State of North Dakota, so it is easy to see a big percentage gain in that state.

But what is happening in North Dakota is similar to what is happening in Texas. In fact, Texas has accounted for about 50 percent of all the jobs created in the Nation since 2000. And we weren't immune from the Great Recession. We lost lots of jobs just like the rest of the country, but today, we are 600,000 jobs ahead of where we were in 2008, while most states haven't recovered the job losses from the Great Recession, nor has the United States as a whole.

What is going on in Texas? Well, obviously, part of it is the energy boom, the so-called shale revolution. Texas accounts for 25 percent of the Nation's oil and gas production. It has been on a tear in recent years. If we were an independent country, we would be the 15th-largest oil and gas producing state—country in the world. But the energy boom in Texas and North Dakota and Pennsylvania isn't just benefiting those states; it is benefiting the entire country. It is benefiting households and businesses as a result of lower costs for heating and for electricity. It is helping our exports. It has been a boon to the petrochemical industry. It is improving the competitiveness of U.S. manufacturing, and that is one of the reasons that our trade deficit is shrinking.

But Texas is also thriving because we have what I call a positive business climate and cost-effective, sensible regulation of energy and other sectors of our economy. And contrary to what we have heard from Dr. Craft, Texas is not a toxic wasteland. I mean we care very much about the quality of our air, the quality of our water, the quality of our land, but we try to ensure that regulation is cost-effective and it isn't burdensome to the point of discouraging investment.

Is the EPA overreaching? We have heard a number of examples. I am not going to repeat what we have heard from other witnesses. I do have some comments in my written testimony about the Cross State Air Pollution Rule and the Utility MACT and what some independent assessments conclude would be the costs or will be the costs of implementing regulations, particularly the impact on the coal industry and how that in turn can affect the cost of electricity

and not only in Texas but throughout the country. And it is pretty significant.

But I want to talk for a couple of minutes about these greenhouse gas regulations. The fact is that we have got about 35 percent of our power generation in Texas coming from coal. There is no existing coal plant in our state or in the nation probably that could meet the standards that have been proposed for new power plants, and we have yet to see what is coming down the pike for existing power plants.

You know, Texas—you know, not only do we generate coal, we have got a dozen coalmines in our state; the coal industry both on the production side and the power generation side represents a lot of jobs. We are also concerned in Texas about the potentially onerous carbon regulations in terms of how they may affect our refineries. We have 25 percent of the Nation's refining capacity. There is some good news, as we heard from the Chairman of TCEQ about this new agreement with EPA on flexible permitting. But all of these regulations have implications for grid reliability and not just in Texas but across the United States. And—but it comes down to this: if we kill coal, if coal goes offline too rapidly, it is not clear that we have alternatives that can substitute for that lost coal in short order. It is going to take time to change the power mix in the United States.

Finally, some comments on fracking. The notion of the EPA getting into the business of hydraulic fracturing is very much in vogue. EPA is champing at the bit. I like to liken it to a party to which the EPA wasn't invited and isn't needed, and I say that because EPA oversight of hydraulic fracturing is just going to be another overlay that is going to push up the costs of regulation and could stymie the shale revolution. And furthermore, not all shales are created equally. I mean if we have one national standard, that is going to cause all kinds of problems because the Eagle Ford in Texas is different from the Marcellus in Pennsylvania. So why have another cost—another layer of regulatory oversight when there is absolutely no evidence that Texas and other states are doing a poor job of overseeing hydraulic fracturing?

And we need to keep in mind that regulation is not cost-free. I did a study for the Joint Economic Committee 30 years ago on the cost of regulation, and that study really laid the groundwork for a lot of the regulatory reform that we saw in the 1980s and '90s. And one of the things we found in that study is that you have got to be real careful when you do cost-benefit analysis, and that is particularly true of the EPA. And I think it is fair to say that the EPA hasn't been especially transparent. Let me just give you one example. EPA is assuming a cost of carbon of \$30 a ton. Do you know what carbon is trading for in Europe? \$5 a ton. So this is just one example of the EPA's assumptions maybe being out of whack with reality.

Now, look, careful—you know, careful oversight of the energy industry is necessary. I am certainly not opposed to that, but what does concern me is what I perceive to be overreach by EPA and other federal regulatory agencies that could derail the energy revolution that has been a real game-changer for the United States.

A colleague and I authored this book about—we call it “The Energy Logjam: Removing Regulatory Obstacles to Fuel the Economy.” There is a link to it in my testimony. If any of you would like a hard copy, I would be happy to supply you with one.

Thank you.

[The prepared statement of Dr. Weinstein follows:]

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Cox School of Business
Southern Methodist University, Dallas, Texas
Before the House Committee on Science, Space and Technology
Hearing to Examine the Science of EPA Overreach: A Case Study in Texas
February 5, 2014

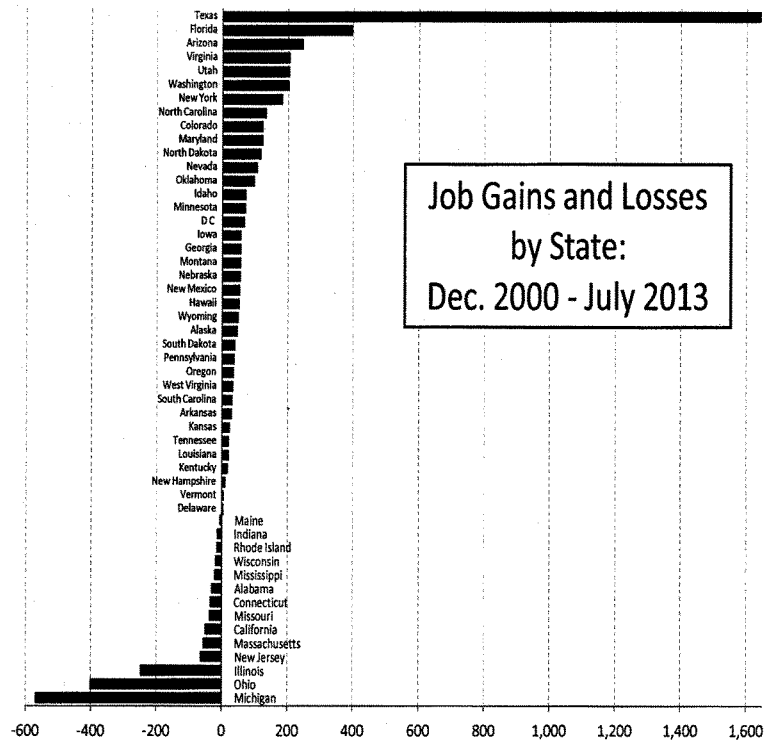
Mr. Chairman and Members of the Committee, my name is Bernard Weinstein and I am the Associate Director of the Maguire Energy Institute at Southern Methodist University (SMU) and an adjunct professor of business economics at SMU's Cox School of Business. Thank you for this opportunity to speak to you today.

As a general proposition, the state of Texas has seen relatively robust job creation in recent years largely due to the production and availability of affordable and reliable fossil fuels and energy. Federal regulation recently promulgated or under consideration by the US Environmental Protection Agency and other federal agencies carries with it the potential to short circuit this power house of economic recovery, raising energy prices in a manner that may dampen growth across the country. If regulatory development is appropriately flexible and pragmatic, however, such impacts could be minimized.

First, a word on current economic conditions in Texas

Last week, the U.S. Bureau of Labor Statistics released its 2013 employment growth numbers for each of the 50 states, and for the fourth straight year Texas led the nation by adding 252,400 workers to payrolls. Texas also added the most jobs of any state during the month of December. California came in second with 235,700 new jobs, but the Golden State's population is 50 percent larger than Texas. More incredibly, Texas has accounted for more than half the nation's job growth since 2000 (see Figure 1).

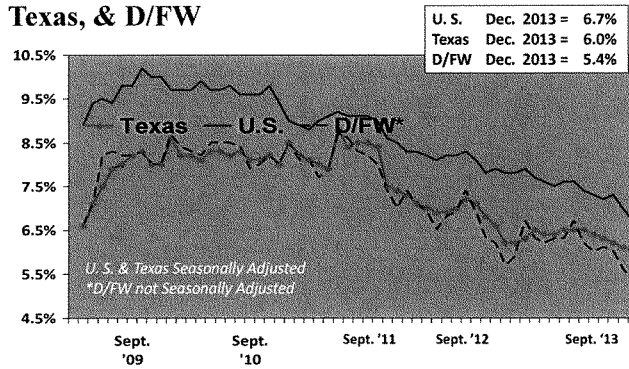
FIGURE 1



Texas is not immune from the ups and down of the business cycle, as can be seen in the following graphic. But since the Great Recession hit the U.S. economy six years ago, Texas' unemployment rate has remained well below the national average (see Figure 2). The state has not only recovered all the jobs lost during the economic downturn, it has added about 600,000 from the previous peak in 2008.

FIGURE 2

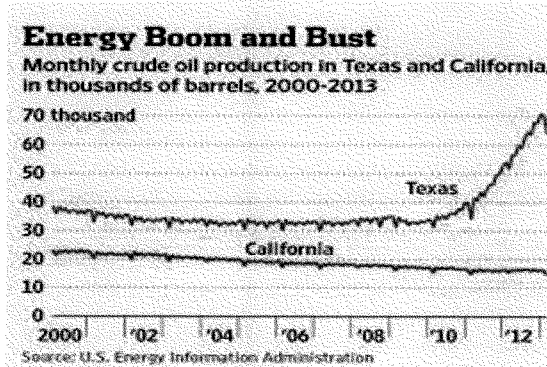
Unemployment Rate, U. S., Texas, & D/FW



Source: Texas Workforce Commission

Without question, the tremendous growth in oil and gas production resulting from the “shale revolution” has accounted for much of Texas’ superior economic performance (see Figure 3). The state now accounts for 25 percent of America’s oil and gas and would rank as the 15th-largest producer in the world if we were a separate nation.

FIGURE 3



(As an aside, if California had been more supportive of energy development, especially in the huge Monterey Shale, their oil production would be increasing rather than declining, and that state's unemployment rate wouldn't be almost two and one-half points higher than Texas.)

But it's also important to note that the energy boom in Texas, North Dakota, Pennsylvania, Colorado and other states has benefitted the entire nation by reviving our industrial base, boosting our exports, and reducing our trade deficit while creating hundreds of thousands of new high-wage jobs and holding down electricity and heating costs for American households and businesses. For example, in just a few years America has shifted from being a net importer of petrochemicals to a net exporter, and last year Honda exported more vehicles from the U.S. than it imported.

Texas' economic fortunes can also be attributed to a positive business climate and sensible, cost-effective regulation of energy and other sectors of the state's economy. Contrary to assertions by some environmental activists, Texas is not a toxic wasteland. We care greatly about the quality of our air, water and land. But we make sure our regulatory environment is predictable and effective so that the costs of compliance aren't burdensome to the point of discouraging new investment.

A tsunami of federal regulation

America is currently being hit by a tidal wave of new federal regulations with more than 4,000 currently out for implementation or comment. Among the potentially most onerous are new, proposed and forthcoming regulations that will affect oil and gas production and electric power generation. Naturally, as the nation's largest energy producing and consuming state, Texas is concerned about Federal "regulatory overreach."

For example, both the Bureau of Land Management (BLM) and the Environmental Protection Agency (EPA) appear to be champing at the bit to get into the business of overseeing hydraulic fracturing, the drilling process that is responsible for America's shale revolution. The BLM recently issued numerous new environmental and safety rules pursuant to hydraulic fracturing for natural gas and oil on Federal and Indian lands. Though only 25 percent to 30 percent of fractured wells are on federal lands, 90 percent of these wells use hydraulic fracturing, and the proposed rules may become the template for federal oversight of fracking on private leases as well. The alleged justification for these new regulations is to ensure that fracking doesn't contaminate groundwater or cause earthquakes.

Specifically, the BLM is requiring that drilling companies (a) disclose the names of all chemicals contained in fracking fluids, (b) set tighter standards for well-bore integrity to verify that fluids used during operations are not contaminating groundwater, and (c) develop water management plans for handling fluids that flow back to the surface. At the same time, the EPA is "studying" the potential impact of hydraulic fracturing on drinking water and is currently receiving comments on proposed rules for reducing methane emissions and volatile organic compounds (VOCs) from hydraulically-fracked wells.

These are examples of federal regulators arriving late to a party to which they weren't invited and aren't needed. For more than 40 years, the individual states have had exclusive regulatory oversight of natural gas drilling, and hydraulic fracturing has been used in more than one million wells across the U.S. But the BLM and EPA rules have the potential to create a "one-size-fits-all" federal regulatory regime on top of specifically crafted state programs.

What's more, careful studies by the EPA and the Ground Water Protection Council haven't revealed a single case of ground water contamination from shale drilling. That's because the fracturing occurs far below the location of drinking water, and the wells are encased in steel and concrete to ensure isolation from ground water. All but one percent of the fracturing mixture is made up of water and sand, so the small amount of chemicals and additives is well diluted. Furthermore, most states already require disclosure of chemicals used in drilling fluids.

As for earthquakes, the U.S. Geological Survey recently completed a study that concluded fracturing does not cause them. The study did find an increase in "seismic activity" near some well sites but attributes that to injections of well wastewater and not fracking itself. The study also notes there are more than 140,000 disposal wells in the U.S. with only a handful potentially linked to seismic activity. Importantly, the U.S. Geological Survey found that the "earthquakes" were fairly small and rarely caused damage.

According to a recent analysis prepared by the Western Energy Alliance and the Independent Petroleum Association of America, the annual cost of complying with the proposed BLM rules would exceed \$345 million, or \$97,000 per well, in the western states alone. What's more, the bureau's rules come on the

heels of 588 pages of new EPA regulations to control alleged air pollution from natural gas wells. Not only are these new directives from the BLM and EPA duplicative of state regulations, complying with them will impose unnecessary additional costs on drilling companies and likely slow the pace of permitting on federal lands.

To avoid these duplicative costs, Congress should enact HR 2728, a bill that would allow state regulations regarding hydraulic fracturing to supersede any forthcoming federal standards. In states without their own regulations, the federal regulations would apply.

Other examples of EPA overreach abound. Within the past few years, the agency has proposed two new air quality rules that could prove extremely costly to Texas' and America's utilities and manufacturers: (1) the Cross-State Air Pollution Rule (CSAPR) that would cap key emissions crossing state lines and (2) the Utility Maximum Achievable Control Technology Rule (MACT) that would set absolute limits on mercury and other chemical emissions. The CSAPR was overturned by the D.C. Circuit Court of Appeals and is now under review by the US Supreme Court.

The Utility MACT may prove to be the most expensive direct rule in EPA history. Indeed, EPA itself has estimated it will impose costs of about \$11 billion a year on the US economy, though third-party estimates of compliance costs are considerably higher.¹ For example, an analysis by National Economic Research Associates (NERA) finds that complying with the proposed standards will cost power companies close to \$18 billion per year for the next twenty years.² Some coal-fired plants will be so expensive to retrofit to comply with the standard that they will simply be shut down.

The NERA study projects that about 48 gigawatts of coal generation may be retired by 2016, representing a 13 percent decline. New natural gas generators would be the most likely substitutes for these shuttered facilities, and the increased demand for gas is estimated by NERA to push up gas prices by about 17 percent by 2016. Higher prices, in turn, will increase natural gas expenditures by the residential, commercial, and industrial sectors of the economy by \$85 billion (present value over 2011-2030 in 2010\$) or \$8.2 billion per year. Average retail electricity prices could jump by about 12 percent with some parts of the country recording increases as high as 24 percent.

With a dozen active and producing mines³, coal-powered generation is of particular significance to Texas. One recent study found that, "Electric power generation fueled by Texas-produced lignite coal and Wyoming coal is a major source of economic activity in Texas. This industry creates \$4.2 billion in statewide economic activity supporting over 13,600 direct and indirect jobs, and boosting labor income by \$1.1 billion. Tax revenues for state and local jurisdictions total almost \$500 million each year from coal fueled power generation in Texas."⁴

¹ US Environmental Protection Agency, *Regulatory Impact Analysis of the Proposed Toxics Rule: Final Report*, March 2011.

² National Economic Research Associates, *Proposed CATR + MACT*, May 2011.

³ National Mining Association, *US Coal Reserves by State and Type*, updated December 2013 (data source to US Department of Energy and the Energy Information Administration)

⁴ Terry L. Clower and Manuel Reyes, Center for Economic Development and Research, University of North Texas, *Coal Mining and Coal-Fired Power Generation in Texas: Economic and Fiscal Impacts*, February 2013.

In addition to CSAPR, Utility MACT, and new greenhouse gas (GHG) regulations for new power plants, EPA has promulgated several other rules that will affect the utility sector. These include air quality standards for sulfur dioxide, nitrous oxide, and fine particulate matter as well as new standards for ash and other residuals from coal combustion. Taken together, these regulations will impact about 400,000 megawatts (MW) of oil and coal-fired power generation, almost 40 percent of currently available US capacity. Should all of the proposed implementation deadlines remain unchanged, the reliability of the entire US power grid could be compromised.

The utility industry is already laboring to comply with these and a myriad of other EPA mandates. The result could well be a reduction in reserve margins, making less power available during periods of peak demand or plant outages. Imagine what would have happened in Texas and other southern states that rely heavily on coal-fired generation during the record summer heat wave of 2011 and this year's "Polar Vortex" if adequate reserve power had not been available? Not only would many energy-intensive industries have been forced to shut down, but rolling blackouts could have put the public's health at risk in the face of 100 degree-plus or sub-freezing temperatures week after week.

This prospect was highlighted by the Electric Reliability Council of Texas, which operates the state grid, who stated that likely production cuts to comply with the proposed CSAPR rules alone would have threatened the state's ability to keep the lights on.⁵ American Electric Power Company has stated it will retire nearly 6,000 MW of generating capacity if the CSAPR rule is reinstated while Duke Energy will shutter 862 MW and Georgia Power another 871 MW.⁶

Should the EPA promulgate costly GHG emissions reductions for existing coal-fired plants, even more generating capacity is likely to go offline, further weakening the integrity of the power grids in Texas and elsewhere. And ERCOT has stated that it expects consumption in its power region to increase by 39.4 percent from 2007 through 2025, at the very time compliance with these and other regulations may force plant retirements.

The bottom line is that federal regulation does not stimulate the economy of Texas or the nation. No serious economist would stand before this Committee and defend that proposition. Indeed, the most recent data show that, "Regulation's overall effect on output's growth rate is negative and substantial. Federal regulations added over the past fifty years have reduced real output growth by about two percentage points on average [annually] over the period 1949-2005. That reduction in the growth rate has led to an accumulated reduction in GDP of about \$38.8 trillion as of the end of 2011."⁷ Put another way, if regulation had remained steady, GDP in 2011 would have been \$53.9 trillion instead of \$15.1 trillion, meaning "the average American household receives about \$277,000 less annually than it would have gotten in the absence of six decades of accumulated regulation."⁸ With EPA and others placing

⁵ "Energy Future Holdings envisions cutting power production to comply with EPA rules," *Dallas Morning News*, July 30, 2011. See also, Office of the Texas Comptroller of Public Accounts, Texas in Focus: A Statewide View of Opportunities, available at <http://www.window.state.tx.us/specialrpt/tif/energy.html>

⁶ "Dozens of coal factories forced to shut down in response to strict EPA regulation," *Business Insider*, August 9, 2011.

⁷ John W. Dawson and John J. Seater, "Federal Regulation and Aggregate Economic Growth," *The Journal of Economic Growth*, January 2013.

⁸ Ronald Bailey, "Federal Regulations Have Made You 75 Percent Poorer," *Reason*, June 21, 2013 (commenting on Dawson and Seater's study).

regulatory targets on power generation and fossil fuel development of particular significance to Texas, policy makers that state would do well to take notice.

The likely impact of EPA greenhouse gas (GHG) regulations on Texas' and America's power sector

On January 8th of this year, the EPA proposed the first uniform national limits on the amount of greenhouse gas emissions for new fossil-fueled power plants. These standards are so restrictive they will likely block the construction of new coal-fired power plants in Texas and elsewhere unless they utilize novel and expensive technology to capture carbon. In fact, the newest and most advanced coal-fired generators in Texas, and the rest of the world for that matter, can't meet the proposed emissions limit of 1,100 pounds of CO₂ per megawatt hour for new power plants. Beyond these proposed carbon regulations lay regulations for the existing fleet of fossil fuel power plants in Texas and beyond.

Further down the road, EPA plans onerous carbon regulations for petroleum refineries. As the Texas Comptroller of Public Accounts has reported, "Texas has 25 oil refineries that have a refining capacity of 4.7 million barrels of oil per day, approximately one quarter of all U.S. refining capacity." See <http://www.window.state.tx.us/specialrpt/tif/energy.html>

The Energy Information Administration is already predicting a 15 percent decline in coal-fired electricity generation by 2016. The proposed GHG limits for new coal plants, and the forthcoming EPA regulations for GHG emissions from existing power plants, will likely accelerate this trend. As discussed above, Texas' primary grid operator predicts significant growth in demand over the same period.

Some have suggested that the benefits of carbon reduction outweigh its regulatory costs. However, unilateral carbon regulations in the US will do little to affect global warming which is, as the name implies, a global phenomenon. What's more, greenhouse gas emissions in the United States are lower today than they were 20 years ago, even with an economy that's more than 50 percent larger. As the EPA has noted, "climate change presents a problem that the United States alone cannot solve. Even if the United States were to reduce its greenhouse gas emission to zero, that step would be far from enough to avoid substantial climate change."⁹

Assuming no pushback from Congress and industry, in theory the EPA could move us toward the carbon-free economy that is the ultimate goal of the environmental community. But at what cost in terms of lost jobs, higher energy prices, and limited consumer choice?

The EPA is not the best way to attack climate change. Though federal law requires agencies like the EPA to calculate the costs and benefits of its proposed rules, politics often trumps economics when preparing these studies. For example, the purported "social costs" of carbon may be included in cost-benefit calculations to either support new EPA restrictions on power plant emissions or to make the case against a project like Keystone XL. Given the Administration's recent move to quietly increase the so-called social cost of carbon from \$21 to \$35 per metric ton, we can expect future regulations to be more costly since the estimated benefits will be artificially higher.

⁹ US EPA, Technical Support Document, Social Cost of Carbon for Regulatory Impact Analysis (February, 2010) at 10.

The only effective way to significantly reduce global GHG emissions is through a coordinated strategy involving all of the planet's major economies. Otherwise, any marginal reductions in America as a result of the president's proposals will be more than offset by rising emissions in China, India, Brazil, and other fast-growing economies around the world. Indeed, if US industry migrates to other potentially less energy-efficient nations as a result of carbon regulatory burdens at home, carbon emissions may even increase as goods travel back to the US market.

Still, there is much we can do at home. In particular, investing in natural gas and nuclear power can be much more effective approaches for diversifying our base-load portfolios and thereby reducing CO₂ emissions than the regulatory regime proposed by the President and by the NRDC. As a result of market economics, clean natural gas now accounts for 30 percent of America's electricity supply compared with 20 percent five years ago. In Texas, natural gas accounts for more than half of the state's power generation. With supplies projected to remain abundant and prices competitive for the foreseeable future, natural gas may eventually surpass coal as the nation's primary fuel for utilities and manufacturers.

Here's another way to reduce GHGs globally with no cost to taxpayers—accelerate American exports of liquefied natural gas. The world is hungry for clean natural gas, especially for use in electric power generation. With gas prices averaging \$12 in Europe and \$15 in Asia, US gas at \$4 is a bargain, even when processing and transportation costs are included. Two liquefaction plants and export terminals are currently under construction, one in Freeport, Texas. Two other facilities have been approved. The Department of Energy should expedite the approval of more than a dozen other export permit applications currently pending. To the extent countries like China, India and Indonesia use our gas instead of their coal to generate electricity, American exports are helping to fight climate change.

We also need to encourage a nuclear revival in America. Though the US has 104 nuclear plants operating in 31 states, no new facilities have been ordered since the 1970s. Still, those plants currently generate about one-fifth of the nation's electricity while emitting no greenhouse gases. Investing in new nuclear power plants will be good for the economy, good for the environment, and good for energy security.

Conclusion

In a difficult economic period of recession and a sluggish recovery, energy has been a bright spot. Nationwide, total employment remains below its 2008 peak. But the number of jobs in oil and gas extraction has jumped more than 25 percent. States like Texas, North Dakota, Louisiana, Pennsylvania and Colorado that have been supportive of energy development have fared much better than states like California and New York that are richly endowed with oil and/or natural gas but have imposed serious obstacles to the use of hydraulic fracturing.

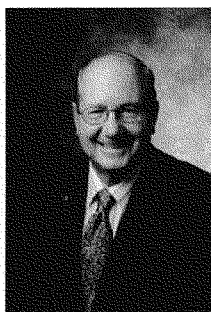
America is a country of multiple jurisdictions: local, state, and federal. Historically, the regulation of energy production has been the purview of the individual states, and it should remain that way. Only states know their own unique regulatory needs. For example, fracking in North Dakota is different from fracking in Pennsylvania.

Growing federal intrusion into energy regulation by the EPA, the BLM and other federal agencies runs the risk of stymieing America's energy boom while driving up the costs of producing oil, gas and electricity that, in turn, will be borne by the country's business and households. Careful oversight of the

energy industry is necessary. But over-regulation will have a chilling effect on the willingness of investors to continue developing America's abundant energy resources, with all the attendant jobs and tax revenues that entails.

(For further documentation of EPA overreach, see:
<http://www.bushcenter.org/sites/default/files/TheEnergyLogjam.pdf>)

Bernard Weinstein, Associate Director, Maguire Energy Institute



Bernard L. Weinstein is Associate Director of the Maguire Energy Institute and an Adjunct Professor of Business Economics in the Cox School of Business at Southern Methodist University in Dallas. From 1989 to 2009 he was Director of the Center for Economic Development and Research at the University of North Texas, where he is now an Emeritus Professor of Applied Economics.

Dr. Weinstein studied public administration at Dartmouth College and received his A.B. in 1963. After a year of study at the London School of Economics and Political Science, he began graduate work in economics at Columbia University, receiving an M.A. in 1966 and a Ph.D. in 1973.

He has taught at Rensselaer Polytechnic Institute, the State University of New York, the University of Texas at Dallas, and the University of North Texas.

He has been a research associate with the Tax Foundation in Washington, D.C. and the Gray Institute in Beaumont, Texas. He has worked for several U.S. government agencies including the President's Commission on School Finance, the Internal Revenue Service and the Federal Trade Commission.

Dr. Weinstein has authored or co-authored numerous books, monographs and articles on the subjects of economic development, energy security, public policy and taxation, and his work has appeared in professional journals such as *Land Economics*, *Challenge*, *Society*, *Policy Review*, *Economic Development Quarterly*, *Policy Studies Journal*, and *Annals of Regional Science*. His op-eds have been published in *The New York Times*, *The Wall Street Journal*, *The Washington Times*, *Investor's Business Daily*, *The Financial Times*, *The Los Angeles Times* and a number of regional newspapers and magazines. He is also a regular contributor to the *National Journal's* Energy and Environment blog and *The Hill*.

Dr. Weinstein has been a consultant to many companies, non-profit organizations and government agencies, and he testifies frequently before legislative, regulatory and judicial bodies. His clients have included AT&T, Texas Instruments, Reliant, Entergy, Devon Energy, Energy Futures Holdings, the Nuclear Energy Institute, the American Petroleum Institute, the U.S. Conference of Mayors, the Western and Southern Governors Associations, the Cities of Dallas and San Antonio, and the Joint Economic Committee of the U.S. Congress.

Dr. Weinstein was director of federal affairs for the Southern Growth Policies Board from 1978 to 1980 and served as director of the Task Force on the Southern Economy of the 1980 Commission on the Future of the South. From 1984 to 1987 he was chairman of the Texas Economic Policy Advisory Council and from 1987 to 1988 served as visiting scholar with the Sunbelt Institute in Washington, D.C. He is currently a panelist with the Western Blue Chip Economic Forecast. Dr. Weinstein is a member of the Dallas-Fort Worth Association for Business Economics and serves on the boards of directors of Beal Bank Texas and Beal Bank USA. Since 2012 he has been an Associate of the John Goodwin Tower Center for Political Studies at SMU and a Fellow with the George W. Bush Institute.

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Chairman SMITH. Thank you, Dr. Weinstein.

I will recognize myself for questions and would like to address the first one to Dr. Shaw. Dr. Shaw, the EPA says that its power plant regulations apply only to coal but isn't it a fact that the so-called coal-powered plant regulations could also apply to natural gas power plants or manufacturers or even refineries?

Hon. SHAW. Thank you, Chairman. I think it is not only likely that it could but I think it would be clearly appropriate to assume that it will. I think that if you look at a number of examples we have seen where, especially with regard to greenhouse gas, it seems that the approach is to, as I like to say, get the camel's nose under the tent and at that point you can no longer get the camel out very easily. I will give you an example very quickly is I think that is similar to what we see from the standpoint of EPA's action to include carbon capture and sequestration in their new source rule that they proposed. If there—as they said, there is no coal-fired plants going to be built, there is no benefit, no cost to the rule, why would they make that extraordinary effort to suggest that that is achievable unless at some point they are looking at that, making it more easy to require such technologies to existing sources?

Chairman SMITH. Okay. Thank you, Dr. Shaw.

Mr. Porter, in regard to fracking, particularly fracking at Eagle Ford in South Texas, what is the Railroad Commission doing to protect the groundwater from being contaminated?

Hon. PORTER. One of the most important things to do as far as protecting groundwater from being contaminated whether you are talking about hydraulic fracturing or conventional well drilling is what we addressed when we redid our Rule 13 as far as making sure that wellbore integrity is there, that the concrete jobs or cement jobs are well done, that type of rulemaking and that is what we—that is the reason we redid that and that is what we are working on.

Chairman SMITH. Okay. Thank you, Mr. Porter.

Mr. Dierschke, EPA says it is clarifying its Clean Water Act rulemaking. Why does that make you nervous and why do you think they are going beyond just clarification? If you could—yeah, make sure your mic is on. Okay.

Mr. DIERSCHKE. I am from West Texas and if you are familiar with West Texas which I think you are is that our rainfall out there—and I think you heard in some of my testimony I was concerned about the dryland, some of the activities——

Chairman SMITH. Right.

Mr. DIERSCHKE. —that they are working on dryland, but in our area we get a good rain about every eight years whether we need it or not.

Chairman SMITH. Whether you need it or not, yes.

Mr. DIERSCHKE. Yes, so I am really concerned that they are going after some of the streams and dry riverbeds that would cause us as ranchers and farmers and private property owners in our part of the state or in Texas real concerns about what will happen if they get control of all the water in Texas. We think that that will be a real problem. It will be a problem with keeping up with all the regulations that will be implied.

And we are good stewards of the land. Farmers and ranchers and private property owners and all the citizens of Texas have been pretty good stewards of the land, we think, and using our resources very, very efficiently. And we also have the NRCS that is out there that we work through. It does a very good job. It writes the current time on soil erosion and those kind of problems that——

Chairman SMITH. Okay.

Mr. DIERSCHKE. —supposedly are out there.

Chairman SMITH. Okay. Thank you, Mr. Dierschke. I appreciate that.

Dr. Weinstein, you talked about Texas' economy and you talked about indirectly the United States' economy. What is the cumulative impact of the EPA's regulations on particularly energy production throughout the United States and subsequently the economy?

Dr. WEINSTEIN. Well, it is not just EPA. There are a host of regulatory agencies that are intruding into the energy sector, and I am not saying that all that intrusion is harmful. Some of it is necessary. But, you know, one could cite not only, you know, EPA regulations for greenhouse gas emissions, the Bureau of Land Management regulations on hydraulic fracturing on federal lands. Most federal lands are off-limits to drilling. Virtually all of our offshore fields are off-limits to drilling right now. Much of Alaska is off-limits. There—we just have a host of regulatory restrictions and legal restrictions that impede our ability to develop our energy resource to their fullest.

And I realize this isn't a hearing on energy exports but, you know, I think it is time to at least start talking about exporting oil, which is currently prohibited. We do have four permits approved for natural gas facilities to export liquefied natural gas. There are another dozen applications pending. If I had my way, I would be expediting those permits. The—you know, the world is hungry for gas and we have got the largest gas supply in the world so why don't we export it? So I mean I could go on and on but there are just many, many areas where federal policy is impeding the development of our energy resources.

Chairman SMITH. Okay. Thank you, Dr. Weinstein.

That concludes my questions and the Ranking Member, Ms. Johnson, is recognized for hers.

Ms. JOHNSON. Thank you, Mr. Chairman.

Dr. Craft, in your testimony you state that an estimated 6.5 million people in the Dallas-Fort Worth area are breathing air that does not meet the federal health standards for ozone. You also indicate that, due to concerns over high levels of ozone, the Dallas Medical Association petitioned the Texas Commission on Environmental Quality to reduce pollution from three coal-fired power plants that contribute to high ozone level in Dallas. Is the current EPA ozone standard adequate to protect public health or can you tell us more about the health effects from exposure to ozone?

Dr. CRAFT. Yes, thank you. So currently, the EPA ozone standard is not adequate to protect public health, as has been mentioned and supported by hundreds of scientists and doctors around the country.

I want to be clear about one specific item. EPA is not trying to set some de minimis risk level where we won't have any exposure effects from ozone. The estimate in the slope factor for the risk is in the range where we see exposures right now. And what that means is that because we are in the range where the risk is occurring, EPA is simply trying to reduce that risk by lowering the standard. The degree to which that standard is lowered is informed by volumes of evidence ranging from mechanistic studies, epidemiological studies and human exposure studies. We are not getting rid of all of the risk just because we happen to lower the standard.

With regard to the health implications of ozone, ozone at concentrations below the current standard is linked to impaired breathing and increased use of medicine for children with asthma and to increased visits to hospitals and emergency rooms for lung diseases. We also know that ozone is linked to cardiovascular events and premature death, as well as new research linking ozone to low birth weight in newborns.

I wanted to just clarify one point, too, that was made by Chairman Shaw regarding the flexible permits. The flexible permits issue was not something that came up recently. That issue has been going on for two decades back when Ann Richards was Governor of Texas. And so, you know, we—I am really happy to hear that the state is working well with EPA. The fact is is that most of the facilities that had flexible permits, which is around 140 facilities in the state, had already transitioned out of those permits, so just a quick point of clarification there. Thank you.

Ms. JOHNSON. Industry groups in states complained that the background ozone levels are a major obstacle for communities in meeting current ozone standards. Has EPA created any flexibility in its compliance for programs for states with these challenges?

Dr. CRAFT. So EPA's newest review, which was released I guess earlier this week, does use advances in modeling techniques to estimate contributions of different sources of ozone in the atmosphere. What we know is that it doesn't matter where the ozone comes from. The health affect is there. And so when EPA sets the standard, by law it must base that decision solely on what it takes to protect public health with an adequate margin of safety. In other words, the only legitimate concern is the impact on human health. So thank you very much.

Ms. JOHNSON. Thank you. It is critical that we begin to take steps towards curbing our carbon emissions to address climate change, and I support the EPA's pursuit of sound scientifically-based greenhouse gas rules that will spur a new generation of clean electricity-generating facilities and curb harmful carbon emissions in some of our Nation's oldest coal- and natural gas-fired plants.

I find some of the arguments by my colleagues across the aisle that are addressing climate change as too costly to be the height of irresponsibility given that we already know that our planet is growing increasingly warm as a direct result of human activities. And let me hasten so I can give you this question. What are the environmental and public health risks if unchecked carbon pollution at coal and natural gas plants is allowed to continue, Dr. Craft?

Dr. CRAFT. Thank you. So in September of 2013, an Intergovernmental Panel on Climate Change report was released with seven key findings. It is virtually certain that the planet has warmed since the mid-20th century. Scientists are 95 percent certain that humans are the principal cause. Further warming is imminent and short-term records do not reflect long-term climate trends. The surface could warm anywhere from 2.7 to 7.2 degrees. The melting pace of land ice is accelerating in the Arctic and Antarctica. The IPCC's estimates of temperature and sea level rise are conservative and weather extremes are expected to change from human influence.

Now, with regard to the health publications of all of these impacts, in 2010 the National Institute of Environmental Health Sciences, which is the premier environmental health organization in the world, NRTP published a report on the human health consequences from climate change. The report found 11 human health impacts as a result of climate change, including increases in asthma, respiratory allergies, and airway diseases; increases in cancer; increases in cardiovascular disease and stroke; increases in foodborne diseases and nutrition; increases in heat-related morbidity and mortality; human developmental effects; mental health and stress-related disorders; neurological diseases and disorders; vector-borne and zoonotic diseases; water-borne diseases; and weather-related morbidity and mortality. Thank you.

Ms. JOHNSON. My time is expired. Thank you.

Chairman SMITH. Thank you, Ms. Johnson.

The Chairman Emeritus, the gentleman from Texas, Mr. Hall, is recognized for his questions.

Mr. HALL. I thank you, Mr. Chairman, and I thank you for holding this important committee and hearing and I thank the witnesses, at least most of them, for their testimony.

And ahead of this hearing, though, the Committee received a letter from the Texas Association of Business. You know, that is the bipartisan organization representing thousands of Texas companies and small businesses. The letter outlines a variety of concerns with the scientific basis of many EPA regulations pointing out that "many of these actions are not based on valid scientific evidence." The Association further argues that "EPA regulations that increase energy costs and reduce employment force individuals to make economic choices that could negatively impact their health and welfare."

Mr. Chairman, this letter has been shared with the minority and I would ask unanimous consent that it be placed in the record.

Chairman SMITH. Without objection.

[The information appears in Appendix II]

Mr. HALL. And, Mr. Chairman, I will go ahead with my questions if I might.

Our committee has played a very important role, I think, in providing effective oversight of the EPA for several years. And I was here when we wrote the Clean Air Act and the Clean Water Act, and I am embarrassed that we gave the EPA—we built them into some role of authority because I thought even the energy people that I support day in and day out needed some oversight and they also needed some help from our government. The State of Texas is

a case study of the EPA's overreach and I appreciate the expert witnesses who are appearing here today and thank you for your testimony.

We have had several hearings that have focused on the faulty science behind EPA's proposed regulations under the Clean Air Act and other hearings about the EPA's faulty conclusions about the safety of hydraulic fracturing. Today, we have heard testimony from Mr. Dierschke, President of the Texas Farm Bureau concerning a draft proposed rule by the EPA and the U.S. Army Corps of Engineers that would expand the EPA's regulatory authority under the Clean Water Act, a proposal that would have very serious implications for our nation's farmers and ranchers. Mr. Dierschke, you stated in your testimony that you believe "the draft rule fails to comply with the important regulatory safeguards and is based on a scientific report that had not been sufficiently peer-reviewed." Would you like to elaborate on that on the regulatory safeguards that have been ignored and the lack of sufficient peer review? A lot of them have testified here. I was Chairman of this committee for two years and on occasion from the EPA I would want to remind them that they were under oath. And of course you all are under oath when you come here, and sometimes I think they have stretched the importance or lack of scientific background that they testified to. I think that is a dangerous thing for them to be doing. Would you like to give me an answer on my question?

Mr. DIERSCHKE. We have questions also about the SAB and their appointees about whether they are acting in response to some of the things they are supposed to be doing. But we—the biggest concern we have is that the EPA doesn't support maybe some of the recommendations of the SAB.

Mr. HALL. Mr. Dierschke, you also noted that it is troubling that EPA's report implies that because nearly all water is in some way connected, EPA's authority under the Clean Water Act is virtually limitless. Can you—do you want to describe the term "playa lakes" and their existence in the South Plains of Texas and describe farming practices in and around such?

Mr. DIERSCHKE. I will try that. Mr. Neugebauer, Congressman Neugebauer probably knows more about playa lakes than I do, but historically, they are—

Mr. HALL. Yeah, but you are under oath and I can't get him under oath.

Mr. DIERSCHKE. You can't get him? Maybe you should try that sometime. Anyway, it is my knowledge that playa lakes were—once upon a time were buffalo when they were roaming the plains.

Mr. HALL. I remember that.

Mr. DIERSCHKE. You remember that? Well, I was chasing those buffaloes also. But when buffaloes came to watering holes and they stood there and that is kind of where those developed, and they are mostly south of Lubbock and on the South Plains. They have no connections to each other, so when you talk about navigable waters, I don't know how you can have a playa lake considered to where one would be going into the—one would be overflowing into the other. I have never seen that in my lifetime but it could possibly have happened. But anyway, that is my explanation of the playa lakes.

Mr. HALL. Well, my time is almost up but let me just close and ask you what would be the impact of an EPA determination that creeks and streams on your place are “navigable waters?” You have got time to answer me.

Mr. DIERSCHKE. Okay. I think that—me personally, I have several ranches and I have some farmland and I think it would be—more regulations, we would be under and we would have to—forms that we would have to fill out, it would just be economically not a disaster but it would be a real problem to fill these forms out. I have gone into the NRSC to talk about some water quality issues, and when you go in there and talk—start talking about dry streambeds where they may not run for 15 or 20 years, they are wanting us to put fences around them to keep livestock out of them and those kind of things. So there would be a lot of more expense, so our expensive—our inexpensive farm and agricultural sector I think will be carrying a lot of burden.

Mr. HALL. And I thank you. My time is up.

Chairman SMITH. Thank you, Mr. Hall.

The gentlewoman from Oregon, Ms. Bonamici, is recognized for her questions.

Ms. BONAMICI. Thank you very much, Mr. Chairman.

Dr. Craft, we continue to hear concerns about the possibility of water contamination and other problems like earthquakes in connection with natural gas development. For example, Mr. Steve Lipsky and his wife from Parker County, Texas, who I understand are in the audience today, have been in a dispute with the EPA, the Texas Railroad Commission, and the owners and operators of a gas field near their home. Now, some of our witnesses today have suggested that the EPA does not have a role in ensuring that families such as the Lipskys have safe drinking water. So do you agree with that premise, especially when the homeowners have drinking water that is effervescing and can be set on fire? Thank you.

Dr. CRAFT. Thank you. So there have been 42 cases of confirmed groundwater contamination under the jurisdiction of the Railroad Commission’s oil and gas division in 2012. Whether they were related to fracking or other elements of the drilling process have not necessarily been determined, but I think it speaks to the fact that groundwater contamination is an issue with regard to drilling and we do need to have some interaction between the states and the federal government to ensure that groundwater is protected. I can think of no better example than what just happened in West Virginia with regard to the leaking storage vessel. You know, that was a situation where we need to make sure that we have an understanding of all of the risks associated with the processes.

Ms. BONAMICI. Thank you. And, as I understand, the EPA is currently carrying out a detailed study to determine whether there is a link between hydraulic fracturing activities and groundwater contamination. Is such a study important and why? And I have a couple more questions so briefly—

Dr. CRAFT. Sure. Sure. Yes, that is important. I mean, in order to be able to understand the health implications, we need to understand that risk. So any information that we have to collect that risk and to understand it is definitely needed.

Ms. BONAMICI. Thank you. And, Dr. Craft, some claim that the EPA's regulation of carbon pollution from future coal plants will destroy or kill the industry, but several independent analyses have found that other factors are currently playing a very significant role in the projections for coal in the United States, regardless of potential carbon regulations. For example, could you talk a bit about the current competition between coal and natural gas industries? Is this competition at least a partial reason if not the primary reason for the lack of construction of new coal plants across the country?

Dr. CRAFT. So if we want cheaper energy, building coal plants right now doesn't make sense, irrespective of EPA regulations. The EPA should not be blamed for coal being too expensive. In the most recent Energy Information Administration analysis of construction and operation costs of new generation, new coal without CCS, they found that it is more expensive than wind, baseload natural gas, and geothermal power. All of these can provide ample baseload generation including coastal wind, which is a strong and level output through the day. In addition, new coal—solar power plants are regularly financed at cost or 30 percent lower than the cost of new coal. Now, there is not public information on this but Austin Energy has publicly stated that they have seen offers at \$70 per megawatt hour or lower for solar, while according to the EIA, new coal is \$100 per megawatt hour. So thank you.

Ms. BONAMICI. Thank you. And I have another question as well. There has been some discussion about the jurisdiction under the Clean Water Act and some suggestion that it is clear when there is jurisdiction under the Clean Water Act and actually not quite. Can you discuss a bit about when there is jurisdiction under the Clean Water Act and why it is important that water be clean, even sometimes water that is running through private property if there is some nexus or connection with other waterways? Thank you.

Dr. CRAFT. Well, my expertise is not in water and legal issues, so I don't know that I would be able to answer that question directly but I would be happy to supply some information on that.

Ms. BONAMICI. Thank you very much. And I yield back the balance of my time. Thank you, Mr. Chairman.

Chairman SMITH. Thank you, Ms. Bonamici.

The gentleman from Texas, Mr. Neugebauer, is recognized for his questions.

Mr. NEUGEBAUER. Well, thank you, Mr. Chairman, and thank you for holding this important hearing.

Chairman SHAW, thank you for being here. Over the past 6 months, my colleagues and I have repeatedly questioned EPA about their conclusion that carbon capture and sequestration or CCS technology is commercially available and/or adequately demonstrated in a manner sufficient to impose it as a requirement on a new coal plants. Based on your technical expertise, do you believe that the CCS technology has been adequately demonstrated?

Hon. SHAW. Thank you. No, sir, I do not believe that is the case. We have actually conducted a study in September of 2012 evaluating our clean energy programs and concluded that at the time there were no plants that were achieving that, and more impor-

tantly today, there are no plants that I am aware of that are even under construction or planning that don't have significant federal funding to support that. And so there brings to mind the issue that there is a significant parasitic load associated with carbon capture and storage and that cost not only is economic but requires building bigger plants to get the same generation capacity, requires more fuel to generate that capacity later, and what is often I think ignored is the fact that it will tend to increase the emissions of other pollutants of concern in order to get the same megawatt down the wire. You are burning more fuel; you are having more emissions of the non-greenhouse gas emissions. Just because you are capturing CO₂ doesn't make those more healthy. So there is a lot of implication of that that I think cause concern.

Mr. NEUGEBAUER. Yeah, and I think one of the points that you made is that many of the projects that are being sited as an example of this actually are getting some federal assistance. And if I am correct, that makes them not eligible to be considered commercially available.

Hon. SHAW. That is currently—certainly the role that we use in Texas. We make that evaluation, that it has to be commercially viable and has to be one that has not received funding from state or federal agencies in order to ensure that that is commercially viable, not just can you spend enough money to get it done. And so, yes, you are correct.

Mr. NEUGEBAUER. Mr. Chairman, I would like to ask unanimous consent to enter in the record TCEQ's report analyzing the commercial availability of CCS in the context of Texas efforts' on—

Chairman SMITH. Okay. Without objection.

[The information appears in Appendix II]

Mr. NEUGEBAUER. Recently, EPA's Science Advisory Board, the SAB or SAB, however you want to pronounce that—West Texas has a little bit different inflection on some of those words—declined to review the science behind EPA's inclusion of a requirement in their CO₂ standards for new power plants based on EPA's claim that the rule only applies to the capture of carbon emissions and not storage or sequestration of captured carbon. This seems like a bureaucratic response to me that doesn't seem to address the simple reality that captured CO₂ has to go somewhere. Dr. Shaw, you want to—

Hon. SHAW. Certainly. I had the same—the same facts jumped off the page at me whenever I read it and heard about that. It seems interesting if you are an agency that is looking at having great transparency, that you would appear to try to discourage the Science Advisory Board from reviewing carbon capture and sequestration and then to go through the extraordinary means of suggesting that sequestration is not a part of that. As you point out, clearly, if you are going to capture it, you need to do something with that. It makes one wonder why they are concerned about having a further scientific review of the process.

Mr. NEUGEBAUER. I think one of the concerns that this Committee has had is that the EPA seems to want to shy away from any kind of evaluation of the science and, you know, I think most everybody thinks that the science ought to be driving the policy and not the policy driving the science.

One last question. Mr. Dierschke, thank you for being here. You know, I want to follow up with what Mr. Hall, I think, started in towards the end. You have several ranches and in many parts of the country we don't have stream fed tanks for cattle to get water from. Some of them are stream fed but some of them are captured by runoff and so forth. And, you know, if EPA begins to move in the direction that some of us fear, where are your cattle going to get a drink?

Mr. DIERSCHKE. That is an excellent question. We are not real sure because they want to fence off the streambeds and keep the cattle from the streambeds because of the contamination and those kind of things, so we are not sure. A lot of places we don't have groundwater and we rely on surface water for stock water. And it will probably—once again, we will either have to get out of the business or we will be with a very big expense of hauling water from somewhere. We will have to purchase water and haul it to them, which will increase the price of beef at the supermarket.

Mr. NEUGEBAUER. Yeah, I think on top of already a pretty tough cattle market because we have had fairly severe drought around cattle country and I think cattle numbers are at an all-time low now and for—and so now the federal government wants to restrict where you—additional opportunities to water your cattle. It doesn't make a lot of sense. But thank you so much for your—being here.

Mr. Chairman, I yield back.

Chairman SMITH. Thank you, Mr. Neugebauer.

The gentleman from California, Mr. Takano, is recognized.

Mr. TAKANO. Thank you, Mr. Chairman.

You know, I come from an area of the country in Southern California that has been greatly benefited by the Clean Air Act, inland Southern California. And as a teenager and as a child, I remember having to deal with smog alerts, and we don't have those as much anymore. And so, you know, I am mightily grateful for Mr. Hall and others who participated in the creation of EPA for the tremendous progress we have made in clean air.

Dr. Weinstein, I want to ask you something. Today's hearing is entitled "Examining the Science of EPA Overreach: A Case Study in Texas." I understand that you are an accomplished economist but you don't have any substantive experience or expertise in environmental science or public health, is that right?

Dr. WEINSTEIN. I am not formally trained in those areas, no.

Mr. TAKANO. Great. On your financial disclosure form, you wrote that you were only representing yourself today and have not had a federal grant or contract since October 2011, but your biography says that you have been a consultant for AT&T, Texas Instruments, Reliant, Entergy, Devon Energy, the Nuclear Energy Institute, and the Cities of Dallas and San Antonio, Texas, among other places. Can you tell us which private companies you have consulted for since October 2011?

Dr. WEINSTEIN. I haven't consulted with any private companies since then. I am on the board of a bank.

Mr. TAKANO. Okay. The Beal Financial Corporation?

Dr. WEINSTEIN. Yes.

Mr. TAKANO. And you have been a director of Beal Financial Corporation since the early 1990s?

Dr. WEINSTEIN. I have been on the board for 22 years, yes.

Mr. TAKANO. And are you still a director of that company?

Dr. WEINSTEIN. Yes.

Mr. TAKANO. You said yes. Did you receive any financial compensation as a director of Beal Financial Corporation?

Dr. WEINSTEIN. Yes.

Mr. TAKANO. Okay. Do you know if Beal Financial Corporation or Beal Bank and their affiliate companies have made any loans to the oil and gas industry?

Dr. WEINSTEIN. I don't believe so.

Mr. TAKANO. And I have some financial records that—on the corporations—I mean so I have some documents that would show that the Beal Corporation has made loans.

Dr. WEINSTEIN. Can you tell me to whom they were made?

Mr. TAKANO. Just a second here. Let me find it.

Dr. WEINSTEIN. We do—we have made some loans to utilities.

Mr. TAKANO. Well, let's see. If you bear with me for a moment. We see Merchant Power Plant, \$336,700,000 term loan; Odessa Power, \$280 million; Merchant Power Plant, \$215 million; Allegheny Energy, Greenberg, Pennsylvania, \$185 million. I could go on but—

Dr. WEINSTEIN. Well, as I said, we have made loans to the power generation industry. You asked me if we had made any loans to the oil and gas industry and not to my knowledge.

Mr. TAKANO. Okay. Well, fair enough. But don't you think that on your form that you submitted to the Committee you said that you were only representing yourself—

Dr. WEINSTEIN. Yes.

Mr. TAKANO. —and that you have had—well, I just thing having this information that your connection—your business connections would have been—

Dr. WEINSTEIN. It is all on my resume. I answered the questions on the form honestly.

Mr. TAKANO. My—I understand but I still feel that this disclosure, you know, would have been helpful for members of the committee and the public to understand how your testimony might—

Dr. WEINSTEIN. You are—

Mr. TAKANO. —be colored by—

Dr. WEINSTEIN. I think you are implying that my testimony is somehow colored by the fact that the bank on whose board I sit has made loans to the power-generating sector. I am not on the loan committee. I oversee the general operations of the bank, but I—frankly, I resent the implication that somehow my testimony has been colored by the fact that the bank on whose board I sit has been making loans to the power-generation industry.

Mr. TAKANO. Well, nevertheless, the title of this hearing is "Examining the Science of EPA" and you clearly don't have a background in public health or environmental science, but you do have a background in—

Dr. WEINSTEIN. I have a background in economic—

Mr. TAKANO. —economics—

Dr. WEINSTEIN. —science, yes.

Mr. TAKANO. All right. Thank you.

I yield back, Mr. Chairman.

Chairman SMITH. Okay. Thank you, Mr. Takano.

The gentleman from Arizona, Mr. Schweikert, is recognized for his questions.

Mr. SCHWEIKERT. Thank you, Mr. Chairman. It is interesting to sit in a hearing where all you Easterners—okay, that is funny—Arizona—never mind. There are a handful of different questions I wanted to sort of try to run and it is the joy of having only five minutes. On the panel who would be most comfortable with navigable waters of the United States in a background question? Anyone want to take a run?

Hon. SHAW. I can take a stab at it.

Mr. SCHWEIKERT. Okay. You understand some of the rule promulgations, some of the mechanics out there right now. Succinctly, how broad are some of the operational definitions moving right now?

Hon. SHAW. Some of the definitions that are being considered are extremely broad. You know, the—including prairie potholes, slews, things that—those playa lakes that—any body of water I think would be potentially included in some of the most broad definitions.

Mr. SCHWEIKERT. In some of the meetings, seminars, briefs you have read, areas that have not actually had consistent water running through them for decades and decades and decades?

Hon. SHAW. Correct. Even in some cases where water might traverse through a pipeline has been considered, which no physical connection except for manmade connection has been bandied about in some of those discussions as well.

Mr. SCHWEIKERT. Okay. Mr. Chairman, the reason for this particular question is I represent the Phoenix area and we have the Salt River that literally was a seasonal flow. It literally has not flowed for 100 years. And we have actually now put parks and recreation and we have actually cleaned up some brownfields and we have been very diligent and it seems about every ten years we go through this battle of, well, someone once went down a raft on it 100 years ago during a flood, so therefore, it might fall into the definition, and what is horribly frustrating about this is often it is a barrier to good conduct, good, you know, community efforts to clean up and do things and now we are fearful of other layers of bureaucracy. So I don't know if that sort of fits into some of the narratives you have heard out there.

Dr. Craft, you have an interesting specialty. You have a little one on the way? Congratulations. Are you sure you wouldn't want to be—or he or she wouldn't want to become an Arizonan instead of a Texan?

Mr. HALL. Texan. Tell him Texan.

Mr. SCHWEIKERT. I love my Texas brothers and sisters, but even on the right and left, I swear it is a cult. But that is a different discussion.

I have noticed in your testimony a couple of times you have sort of focused on ozone, so I am assuming that is somewhat in your area of specialization in your research?

Dr. CRAFT. Well, we are very concerned about ozone because of the ozone concentrations in Houston and as well the fact that ozone concentrations are increasing in some of the Texas major cities.

Mr. SCHWEIKERT. Okay. But, I never play gotcha, so this is—

Dr. CRAFT. Okay.

Mr. SCHWEIKERT. I am trying to be very honest in dialogue. But one of the statistical backgrounds you specialize in your data sets as a researcher?

Dr. CRAFT. Am I a statistician? I am not a statistician.

Mr. SCHWEIKERT. Okay. Well, then—all right.

Dr. CRAFT. Okay.

Mr. SCHWEIKERT. But even from the narrative of ozone and I know it is complicated; there are lots of moving parts. Can you give me a little background of your understanding of just sort of organic background ozone, ozone that actually is affected by literally activities of—you know, around the world and how you sort of do—if you were ever doing a data set, how you would reach out and do a normalization for those types of activities? And why this is important is it being from the desert Southwest, we have certain benchmark that is just there with man, without human—I mean it is—there are certain things that are going to exist. When you are looking at the data set, how do you do a normalization for it?

Dr. CRAFT. Well, that is more of an air modeling question as opposed to a statistical question or a health-based question. What we look at more of is the health implication of the exposure to that ozone, and that doesn't matter where the ozone was formed or how it got there, whether it was background, which in most cases has been shown not to impact whether an area meets the federal attainment guidelines.

Mr. SCHWEIKERT. Okay. As a researcher, particularly when looking at health data sets and affects on some populations, do you have a concern that sort of our static regulatory environment doesn't seem to move nearly as fast as technology and that sometimes there is technological opportunities out there but because we have sort of a command-and-control regulatory environment, we are always a decade or sometimes more behind in regulatory design compared to current technology?

Dr. CRAFT. Well, I think that is an issue we probably have across a number of—

Mr. SCHWEIKERT. Well, no, that is systemic and a command-and-control regulatory environment instead of sort of a crowd-source type of creative, flexible regulatory environment.

Dr. CRAFT. Right. I mean I guess I would say that the science on, say, ozone for instance is revised every several years to reflect the latest science and there are over 17,000 articles just yesterday if you look in PubMed on ozone and health. And so there is more information that is pulled into the record on a routine basis.

Mr. SCHWEIKERT. I know I am way over time, Mr. Chairman. Thank you for your patience. The doctor actually hit one of my fixations of sometimes the arrogance of what we think we know on how things work today will be different tomorrow because our understanding of the data and how it is modeled and where it is different and how are we going to have these discussions, make sure we are designing optionality and flexibility in these things. So thank you, Mr. Chairman.

Chairman SMITH. Thank you, Mr. Schweikert.

The gentlewoman from Maryland, Ms. Edwards, is recognized for her questions.

Ms. EDWARDS. Thank you very much, Mr. Chairman, and thank you to the witnesses.

I really feel good about today because I feel like I don't have to ask anymore about whether climate change is a fact. I mean the President said it last week in his State of the Union message and I am just going to take it as a given that climate change is a fact so we don't have to debate that.

My question goes to Dr. Craft. In your testimony you cite an article from the Texas Tribune that is titled "Antiregulation Politics May Have Hurt Energy Industry." As I understand it, the EPA began requiring greenhouse gas permits about three years ago that TCEQ refused to enact the rule and EPA had to step in and begin issuing permits. Can you describe the current situation and how what can only be called heel-dragging by TCEQ has negatively impacted Texas businesses and jobs and created regulatory uncertainty?

Dr. CRAFT. Yes, thank you. So we have been very concerned. This is one of the points in my opening statement about Texas' unwillingness to address the issue of greenhouse permits in our state. Like I said, we were the only state in the Nation that did not work with EPA to ensure greenhouse gas permits. Essentially, what happened is that once facilities—Texas penned some very aggressive language to EPA saying that they were—they did not have any intention at all to change their rules to be able to issue greenhouse gas permits. And as a result, the deadline came, there was no permitting authority within the state, so facilities that needed those greenhouse gas permits could not get them. EPA stepped in and had a federal implementation plan so that those facilities could continue to operate. This is a situation where, had EPA not stepped in, businesses would not have had a permitting authority by which to obtain permits to operate in the state. What—

Ms. EDWARDS. So Texas' refusal to actually issue the permits could have caused havoc within the industry sector had EPA not stepped in?

Dr. CRAFT. Well, exactly, and it did cause havoc within the business sector. It resulted in essentially a dual permitting authority situation in the state whereby facilities had to go to EPA for their greenhouse gas permits and then they had to go to the TCEQ for their air permits. When businesses realized that this was the implication, they recognized that it was a dual permitting authority. It was very onerous to do that, and the Texas Pipeline Association, which I think is mentioned in the article, they said that more than 50 planned projects since early 2011 have been significantly delayed by the Texas permitting process putting 48,000 jobs at risk. What has happened is TCEQ has recognized that they need to be the permitting authority for greenhouse gases and they are now in the process of trying to transition to be the—to issue those permits instead of EPA, but, you know, like I said, it has caused a dual permitting authority situation and it is bad for business in Texas.

Ms. EDWARDS. Thank you very much. I mean, you know, it really is clear to me—I mean there are other states that went about the implementation because it is the law and the regulations. TCEQ decided not to do that and has wreaked havoc in the industry, perhaps cost jobs and cost to the industry because of a dual permitting

process that is actually far more onerous. So I appreciate your sharing that.

I have one other question for you, and it is actually related to just regulating. You know, we have heard in some of the testimony that companies shouldn't have to disclose the names of chemicals contained in fracking fluids and a question around transparency. Could you just talk for a minute about what it means for, for example, the 300,000 people in West Virginia who are left without usable water to drink, cook, or bathe in and it is still a problem there just last month because of failure to disclose those chemicals and how dangerous that is to public health.

Dr. CRAFT. Sure. So we have been looking at the chemicals that are used in the hydraulic fracturing process, and I can tell you EPA is also looking at this issue. For many, many, many of those compounds—and there are thousands of compounds that are used—they are not used in very high concentrations but the fact is that we don't know a lot of information about the toxicity of those individual compounds. And so even though they might be used in small concentrations, there are issues with transportation of those compounds to the site, for instance. There are other factors which play a role in terms of risk and health. And so we are very interested in understanding that risk and toxicity of compounds that might be found in fracking fluid compounds.

Ms. EDWARDS. Thank you. I just wanted to ask Dr.—Mr. Dierschke, you didn't mean to suggest that because EPA was putting—requiring fences to be put around places of water contamination that it would be better for Texas cattle to drink the contaminated water for the beef that we eat, right?

Mr. DIERSCHKE. They have been doing it for centuries, so I suppose they will survive. The cattle will drink the stream water.

Ms. EDWARDS. Right. So you are okay with the cattle drinking the contaminated water and then us consuming the beef? You are okay with that?

Mr. DIERSCHKE. As long as science is——

Ms. EDWARDS. All right. Thank you.

Chairman SMITH. Thank you, Ms. Edwards.

The gentleman from Arizona, Mr. Schweikert, is recognized for a unanimous consent request.

Mr. SCHWEIKERT. Forgive me, Mr. Chairman. In my rush to ask a dozen different questions, I had a letter from the Water Advocacy Coalition I just wanted to put into the record.

Chairman SMITH. Okay. Without objection, thank you.

[The information appears in Appendix II]

Chairman SMITH. And the gentleman from Texas, Mr. Weber, is recognized for his questions.

Mr. WEBER. Thank you.

Mr. Dierschke, why don't you all just put up signs that say don't drink the contaminated water, okay?

Glad to hear that the President announced that global warming is—climate change is a fact and so we no longer have to be concerned about it. I didn't know that hope and change was—I didn't know that that meant climate change, okay, but then again, he never said if you like your climate, you can keep it. I just want to get that out of the way.

Mr. Weinstein, I am glad to hear that your business actually makes money by loaning money to industry and I regret that the gentleman from California is not here. I would suggest that you all meet up afterwards and you give him a course in economics that that is how this country survives.

And I want to address the foot-dragging question of the TCEQ, and the fact that Texas is losing jobs or could be losing jobs. I think Dr. Craft issued that concern, and we are glad you are concerned and we are glad you are in Texas. As Mr. Weinstein so aptly pointed out, Texas has created more jobs than any other state of the lesser 49 states in the Union and so can you imagine what we would have done, you know? Gosh, we could have really been off to gangbusters had it not been for the foot-dragging of TCEQ. I do want to address that.

And by the way, Dr. Craft, we are glad that even you recognize Texas is the place to be. So are you glad—

Dr. CRAFT. Thank you. I just wanted to comment that it wasn't my comment about the jobs. It was the Texas Pipeline Association—

Mr. WEBER. No, I got you.

Dr. CRAFT. —so just a clarification.

Mr. WEBER. Yeah. No, I got you. And there is a lot of them in Texas, and as you probably know, the pipeline has a 99.9 percent safety rating. It is the safest way to move oil or transport oil.

But, Dr. Shaw, I want to go to you. Foot-dragging on the part of the TCEQ—and I was in the Texas legislature. I was on the Environmental Reg Committee. I watched it very closely. How did you all get that past me?

Hon. SHAW. Well, Congressman, one of the things I think that is key that I have been asked to—and I have a responsibility to fulfill in my duty as Chairman of the Commission on Environmental Quality is first to uphold the law. And once we made the determination that we didn't have the legal authority to issue those permits, it no longer was an issue about whether I liked it or wanted it. It was an issue at its core about whether it is legal to do that. Furthermore, this was definitely an issue that has longer-standing implications from a principle standpoint. There were—imagine if you will what regulations we would be looking at from EPA at this point with regard to new and existing sources of CO₂ had Texas and other states not questioned the deadline that EPA gave about two months when we had to decide if we were going to comply with that. We might see even more burdensome and less science-based regulations had we not questioned and taken a stand. So we have a hearing before the Supreme Court next month that also was on this issue and perhaps at the end of the day things might look a little different.

Mr. WEBER. Well, I appreciate that.

And, Dr. Craft, you are quite the Twitterer it turns out. I think you have even mentioned in one of your tweets that Greg Abbott has been busy suing the federal government, our great attorney general. Do you remember that?

Dr. CRAFT. Personally, I have not tweeted in a long time. I do more blogging than I do tweeting, but—

Mr. WEBER. Right.

Dr. CRAFT. —I am trying to get better about it because—

Mr. WEBER. I have been able to find a couple of those, and I would submit what Dr. Shaw mentioned was that if our great attorney general, soon to be governor, had not been busy suing the federal government and keeping them out of Texas, then Dr. Weinstein would not have been able to make the statement that Texas has been leading the way for creating jobs in this country.

Dr. CRAFT. Well, I guess, you know, my concern was really that it is not clear what the theory of victory was there. I mean, you know, what would be the harm of going ahead and working with the EPA to establish the permits while you are challenging them? And just one comment about the Supreme Court case that is coming up, the Supreme Court case is not going to hear the argument—

Mr. WEBER. Let me—

Dr. CRAFT. —about the endangerment finding—

Mr. WEBER. Let me cut you off—

Dr. CRAFT. —which is that—

Mr. WEBER. I got you.

Dr. CRAFT. —he is there—

Mr. WEBER. I am running out of time. Carbon capture and sequestration, I have the three coastal counties of Texas coming from Louisiana going West and Southwest. Valero has a plant in Port Arthur, carbon capture and sequestration, the largest I would say arguably in the world; I am sure it is in the United States. Are any of you on the panel aware that it was built with 66 percent federal dollars from the Department of Energy from the American Reinvestment and Recovery Act? And so when you start talking about CCS, carbon capture sequestration storage, double S there, it is not economically feasible.

We had the CEO from Mississippi Power in to speak to the House Energy Action Team where they have cost overruns because of CCS in the hundreds of millions of dollars. It is not duplicable, it is not efficient, it is not effective, and there is no way that we can say that it can be duplicated on a large scale. Are you all aware of that? Apparently somebody is calling me and I have been on hold too long. Are you aware that it is not duplicable, Doctor?

Hon. SHAW. Yeah, correct, Congressman. You are absolutely correct that I am aware of no commercially demonstrated even close—

Mr. WEBER. Right.

Hon. SHAW. —and the costs are significant.

Mr. WEBER. Thank you. Mr. Chairman, if I may, just one quick question to Mr. Porter. Forty-two cases of contaminated wells was the figure bandied around under the Railroad Commission's watch. Do you remember that comment?

Hon. PORTER. Yes, I heard the comment.

Mr. WEBER. Okay. How many wells in Texas?

Chairman SMITH. Mr. Weber, your time is—

Mr. WEBER. A couple hundred thousand? Help me out here.

Hon. PORTER. About 400,000 roughly.

Mr. WEBER. Yeah. All right. Thank you.

Chairman SMITH. Thank you, Mr. Weber.

The gentleman from Texas, Mr. Veasey, is recognized.

Mr. BEASLEY. Thank you, Mr. Chairman.

I wanted to ask Mr. Porter a quick question. Oftentimes on this Committee or just we are talking about these environmental issues in general, it often gets deduced down to very black and white, you know, very simple style issues. And I wanted to specifically ask you about your hearing that you had on the earthquakes in Parker County not too long ago and I believe in Azle. You got about 1,000 people to show up to that meeting. And tell us just very quickly—people were very concerned about that, is that right?

Hon. PORTER. Yes, you are correct, Mr. Congressman. They were extremely concerned about that. And of course we at the Commission are concerned about it. We are trying to make sure that we understand exactly what is going on as far as the science and what the evidence is showing us. We have moved to hire a seismologist at the Railroad Commission. In fact, I believe interviews of that seismologist are starting today for that position. We are trying to gain a clear understanding of exactly what is happening and what kind of activity, if any, that we need to do at the Commission. You know, when people are having problems with their homes there, of course extremely concerned as the folks in Azle were.

Mr. BEASLEY. Right. Well, I appreciate that. And the reason I wanted to bring that up again is that, you know, it is oftentimes on this committee—it gets very—the argument gets very black and white, Republican versus Democrat type issues, but in Azle, that is a very, very, very conservative area, probably one of the most conservative areas in the entire state, definitely in North Texas. And people there were concerned about the earthquakes, just—not just people that are liberals concerned about earthquakes. So the last time we had the issue on earthquakes, that was how the discussion ended up being deduced down to and so I wanted to bring that up.

Dr. Shaw, good to see you again from my days serving on the Environmental Regulation Committee with Mr. Weber, and I wanted to talk with you about something that has come out lately and that is the pro-business stance that is bad for Texas that has been talked about a lot. And the—I know that one of your missions on the TCEQ is sustainable economic development, but the failure of Texas to adopt the 2010 EPA rule has resulted in the backlog of about 80 permits waiting for approval at EPA. This has delayed construction of facilities in Texas ranging from natural gas power plants, natural gas compressors, chemical processing facilities, and has even resulted in a decline in drilling activity in the Barnett Shale in the area that I represent. Wouldn't it have been better for Texas to work with the EPA instead of making lawyers rich and going into these costly court battles?

Hon. SHAW. Congressman, thank you. Certainly, my desired approach is always to work together, and unfortunately, the discussions that we had with EPA were not fruitful in that manner. For example, the letter that we—or the mandate that we got from EPA was that we were given about 2 months to decide if we were going to move forward with allowing EPA's regulatory scheme and we were going to implement that. I will refresh your memory that at that point we had no idea what regulating under EPA's program would mean because they had yet to give any information about

what BACT, best available control technology, would mean for regulating greenhouse gases. So at that point they were asking us to commit to doing something that we arguably determined we didn't have the legal authority to deal with, as well as the fact that we didn't have any understanding of what EPA thought that would mean. And so we felt that it was appropriate, certainly the legal aspect is enough, but that it made sense for us to continue to try to work with EPA to maintain an opportunity to ensure the regulations were not overly draconian. And long-term, we are still not out of the woods yet.

One of the things I will remind you of is that EPA passed what is called the Tailoring Rule, and if you recall, the justification for that was the Absurdity Doctrine—I don't know if I have that right—the Absurd Results Doctrine in that EPA wanted to avoid the absurd result of having the Clean Air Act applied as written to greenhouse gas regulations because, according to EPA's own number, that would result in I think 6 million additional permits across the United States. They—

Mr. BEASLEY. Let me ask you one more question because my time is about to expire—

Hon. SHAW. Sure.

Mr. BEASLEY. —here. As someone that is concerned about sustained economic development that—which is part of the mission of your organization, the lawyer for the Texas Pipeline Association said that there has been a lot of flaring of associated gas and that the delay in the permitting process has put about 48,000 jobs at risk in our state. Again, don't you think that it would have been better to work with the EPA and save these jobs, these 48,000 jobs, because right now all the jobs that we are creating in Texas—not all the jobs but the majority of jobs that we are creating in Texas are service-related jobs that pay a lot less than these 48,000 jobs would have paid in the oil and gas industry?

Hon. SHAW. Right. As I mentioned, one, we didn't have the legal authority; and two, had we not taken the stand, I would contend that we would have even greater loss of jobs had we not taken a stand to force EPA to base their regulations in science and to have a more reasoned approach moving forward because this is the tip of the iceberg. Right now, we are looking at—certainly Texas has been performing well relative to other states. Could it have been better? Yes. Would we like that to have happened? Yes. And certainly we are moving as we are given authority from the Texas legislature to be the permitting authority for greenhouse gases. But clearly, there are longer-term economic and, I would contend, environmental damages associated with EPA's approach with greenhouse gas at this point.

So we took a principled stand. We are going to work and—as we have been to continue to find ways to streamline the process, but we felt that the immediate cost was less than what the long-term costs would have been.

Mr. BEASLEY. Thank you, Mr. Chairman.

Chairman SMITH. Thank you, Mr. Beasley.

The gentleman from New York, Mr. Collins, is recognized.

Mr. COLLINS. Thank you, Mr. Chairman.

It has really been interesting being on this committee with so many Texans and hearing the debate today on the growth and the jobs and the economic activity. And as a New Yorker representing the highest-taxed, most-regulated, least-business-friendly state in the nation where we count how many jobs we lose, and if we lose a few less this year than we lost last year, somehow within New York's mindset, that is considered a win. So I do represent New York but don't agree at all with the tax and regulatory status of our state and say that that speaks volumes about what is right about Texas and not right about New York.

But, Dr. Craft, you made a statement that I want to clarify. You stated that coastal wind is more economical than coal?

Dr. CRAFT. I believe I said that coastal wind was—did not have—is consistent is what the point was of that statement.

Mr. COLLINS. Oh, it is consistent but you said it was—

Dr. CRAFT. More consistent—

Mr. COLLINS. —less expensive than coal.

Dr. CRAFT. I would have to go back and look. I have some notes of my comments. I don't remember saying that.

Mr. COLLINS. Okay. I mean wind is generally considered twice as expensive as coal, and if you take away the subsidies and it is interesting whenever I hear folks talk about wind, they never talk about how wind is so heavily subsidized. And if you take the subsidy away, then every cost number that you ever see put out relative to wind is gone.

Dr. CRAFT. Well, you know, Texas is generating more wind energy than any other state in the Nation right now, so—

Mr. COLLINS. Well—

Dr. CRAFT. —it is a big—

Mr. COLLINS. It is.

Dr. CRAFT. Yeah.

Mr. COLLINS. And because of the tax credits and the production tax credit, it is incentivized in a way that makes it more affordable than otherwise. So I would just suggest that—because I thought I heard you say that wind was more cost-effective than coal, and it is clearly not.

Dr. CRAFT. I can clarify—

Mr. COLLINS. Dr. Weinstein, I would like to just as a member of the committee say I appreciated your testimony and certainly would suggest that the line of questioning directed toward you probably speaks volumes to how accurate your testimony was and how hard-hitting it was when the only question that came back had absolutely nothing to do with your testimony. So thank you for that testimony.

But I would like to really—

Dr. WEINSTEIN. Let me say something about your question on coastal wind.

Mr. COLLINS. Yes.

Dr. WEINSTEIN. The most recent study of comparative costs conducted by the Energy Information Administration for different energy power-generating sources in the year 2016 combining both the construction and operating expenses found that solar thermal would be the most expensive and coastal wind would be the second-most expensive.

Mr. COLLINS. Right. And those are the same facts that I have always understood to be the case. Representing Western New York, there was a proposal to put wind turbines out in Lake Erie. As the county executive, I can tell you I fought that every which way I could. And when the numbers came out, to the extent it had any economic viability, it was all based on tax credits, not real costs. So in a day when our country is running deficits and debt, the last thing we should be doing is providing tax credits to an industry that is mature. So I would just let that stand.

Now, Mr. Dierschke, I represent the most agricultural district in New York. It is about 90 percent of the economy of the 27th Congressional District, a lot of dairy, a lot of specialty crops and the like. And I can tell you my farmers will tell you the EPA is one of the biggest impediments they have to expanding their farms and that every dollar they spend adhering to these EPA regulations, some of which are absolutely outlandish, especially when it comes to wetlands, is a dollar not invested in expanding their farms. And I just in my closing moments would like to hear your overview of farmers in Texas to see if they share some of those same concerns as our New York farmers.

Mr. DIERSCHKE. I think the Texas farmers and ranchers and private landowners also, we are getting a lot of fractured up ranches, a lot of ranchettes coming in, and they are also expressing their disappointment in having to—what all they have to do with involvement with EPA. So I am trying to be as nice as I can in—

Mr. COLLINS. Well, my farmers aren't very nice. They just call it out right for what it is. Were it not for some of these overreaching EPA requirements defining in some cases mud puddles as wetlands and worrying about the runoff from their dairy farms into their own pond, they would be investing more money, growing their farms, producing more milk in the 27th Congressional Districts. They don't pull any punches whatsoever.

Mr. DIERSCHKE. Okay. I will agree with you on that.

Mr. COLLINS. Thank you all very much. I yield back, Mr. Chairman.

Chairman SMITH. Thank you, Mr. Collins.

The gentleman from Georgia, Mr. Broun, is recognized.

Mr. BROUN. Thank you, Mr. Chairman.

The Clean Air Act has traditionally been grounded in cooperative federalism where the federal government and the states worked together to enforce air regulations. However, it has been widely known that the EPA does the bidding of special interest groups by way of sue-and-settle agreements. The Sierra Club targeted 36 states whose air programs EPA had previously approved, forcing them to change their State Implementation Plans or "face adverse EPA action."

The Attorney General from my beloved State of Georgia, along with 11 other states including Texas, have filed a Freedom of Information Act request for information on EPA's settlements and 45 lawsuits brought by environmental groups. EPA denied it for being too broad and failing to, as they described, "adequately describe the record sought." On February 6 of 2013 the states filed a new request and a fee waiver regarding the CAA's Regional Haze Program. Both were denied. After an appeal, the states filed a federal

lawsuit. I would like to enter into the record this release from the Georgia State's Attorney General Office that I understand was shared with the minority yesterday, Mr. Chairman.

Chairman SMITH. Without objection.

[The information appears in Appendix II]

Mr. BROUN. Thank you, Mr. Chairman.

Chairman Shaw, using some of EPA's recent regulatory decisions on the basis of your comments, how would you characterize the current relationship between the EPA and the states?

Hon. SHAW. It has been one where EPA has been less interested in having that cooperative federalism you talked about take place and more interested in taking efforts to have a one-sized-fits-all or, as was quoted to me from some administrators of EPA, to level the playing field, suggesting that EPA should do more than set the criteria that we are trying to attain and let the creativity—

Mr. BROUN. So they are not working with you all very much at all. Okay.

Given your experience to date with the EPA concerning issues such as Cross State Air Pollution Rule, Regional Haze, and the Flexible Permit Program, are you concerned about the role states like Georgia and Texas will play in future EPA regulations like carbon limits for existing power plants?

Hon. SHAW. Extremely so. I think it is critical that we be involved and I am concerned that we may not be able to have influence on the EPA's programs to move forward in the manner that allows us to have strong environmental programs that aren't damaged by greenhouse gas programs, for example, as well as maintain economic competitiveness.

Mr. BROUN. The EPA claimed that states were given notice in this SIP call. Do you believe the states and the public at large have an adequate opportunity to comment on policies that the EPA effectively issues through guidance?

Hon. SHAW. I think guidance is one of those issues that is of great concern because EPA has often argued that it is not legally enforceable, and yet, in practicality, it is. So they can issue guidance. If there is no opportunity for public comment and input, they basically go through an ad hoc rulemaking process that doesn't have any oversight, and I think that is poor policymaking and leads to decisions that are certainly not transparent and leads to bad decisions.

Mr. BROUN. And not scientifically based either, is that correct?

Hon. SHAW. Well, there is no way to know if they are to be able to bring to bear review to ensure that they are. So it makes it much easier for bad science to be—or no science to be involved in setting those rules.

Mr. BROUN. There is no transparency as such. It seems to me that this Administration that said it was going to be the most transparent administration, their definition of transparency is obscurity.

Where does Texas stand with their numerous FOIA requests and lawsuit filed by the 12 states?

Hon. SHAW. To my understanding there has been no progress in getting access to those forms—or to the data, which is problematic

as sunshine and public ability to look at raw data and to look at data helps to lead to better decisions.

Mr. BROUN. Do you know how many FOIA requests are being granted to the Sierra Club?

Hon. SHAW. I do not but it is more than have been granted to us.

Mr. BROUN. Well, it is my understanding that as of May of 2013, out of 15 requests from the Sierra Club, EPA has granted 11. And the states are trying to do their business and are not granted what these environmental groups are.

Hon. SHAW. And as partners, it certainly would be helpful for us as we are partners with the federal government in this cooperative federalism, it would seem that we would be at the front end of the list of getting access to shared data so that we can have informed and cooperative decision-making.

Mr. BROUN. Well, thank you, sir. I am a physician, I am a scientist, I am an applied scientist, and I just want to enter into the record that the idea of settled science is totally an unscientific philosophy. And we have seen a lot of people, particularly in this Administration—and my friends on the other side continue talking about settled science, about not only human-induced global warming but many other issues, and it is totally unscientific in that philosophy. There is should never be and never has been in the true scientific philosophy an idea about settled science.

Thank you, Mr. Chairman. I yield back.

Chairman SMITH. Thank you, Mr. Broun.

Let me thank our witnesses as well for your expert and much-appreciated testimony today. I happen to think it is nice to have an all-Texas panel every now and then, and we certainly did benefit from your knowledge and your testimony so—

Mr. BROUN. Mr. Chairman?

Chairman SMITH. The gentleman from Georgia.

Mr. BROUN. I want to thank you for having an all-Texas panel. I can understand all of them and I hope they can understand me being from Georgia, too. So thank you, Mr. Chairman.

Chairman SMITH. Thank you, Mr. Broun. And we stand adjourned.

[Whereupon, at 11:56 a.m., the Committee was adjourned.]

Appendix I

ANSWERS TO POST-HEARING QUESTIONS

ANSWERS TO POST-HEARING QUESTIONS

Responses by The Honorable Bryan Shaw

CHAIRMAN BRYAN SHAW'S RESPONSES TO QUESTIONS FOR THE RECORD

The Honorable Lamar Smith (R-TX)

U.S. House Committee on Science, Space, and Technology

Examining the Science of EPA Overreach: A Case Study in Texas

1. ***In your January 14th letter to EPA concerning its upcoming CO₂ standard for existing power plants, you stressed the importance of having separate subcategories for coal and other fuels. In addition, within the coal subcategory, EPA should set standards for different types of coal, like Gulf Coast and North Dakota Lignite, for example. Can you explain why you believe this is important?***

Response 1:

The initial starting point for regulation of emissions from existing sources under Federal Clean Air Act Section 111(d) is the establishment of performance standards by EPA for specific sources that are based upon the best system of emissions reduction (BSER). States have a unique role in regulating emissions from existing sources under Section 111(d) in that states are required to prepare and submit a plan implementing and enforcing the standard of performance established by EPA. In order for states to prepare a plan, states need to determine what would need to be done to achieve the standard, which starts with understanding the basis of the standard and how BSER was applied by EPA in establishing the standard.

The January 14, 2014 letter from TCEQ to EPA recommended that EPA consider differences within the existing source categories and fuel types in developing standards of performance that reflect BSER, because these two factors are directly related to the quantity of CO₂ emissions emitted from EGUs. The lack of economically reasonable and technically feasible add-on controls for CO₂ emissions from existing electric generating units (EGUs) necessitates that standards reflect BSER taking into consideration what can be done to limit CO₂ emissions on a unit type and fuel specific basis. There are inherent physical limitations on what can be done to reduce CO₂ emissions from existing EGUs. EGUs are generally designed and built for specific fuels. EGU efficiencies reflect the specific unit design and fuel being burned. One cannot "control" a subcritical unit that was designed to burn lignite to meet an output standard (lb./MW) that was based upon a supercritical unit burning bituminous coal. A supercritical EGU is more efficient because the unit is designed and built to operate at higher steam pressures and temperatures, i.e. steam tubes are generally smaller and steam tube walls are generally thicker. Additionally, the types of fuel burned will affect the efficiency and quantity of CO₂ emissions. Lignite-fired EGUs would generally emit slightly more pounds of CO₂ per million British thermal unit (Btu) fired due to the lower heating value and higher moisture content of lignite relative to subbituminous or bituminous coal. Therefore, establishing a standard that does not recognize different unit types and different fuel types would not reflect the applications of BSER, given the physical limitations in controlling CO₂ emission from EGUs.

Lignite typically has the lowest level of fixed carbon, the lowest heating value, and the highest moisture content of coals commonly burned as fuels in EGUs. Because lignite typically has a low level of fixed carbon, burning one ton of lignite would result in the least amount of CO₂ emissions relative to other coals. For example, common emission factors (EPA AP-42) for lignite, subbituminous, and high-volatile bituminous coals are 4600, 4810, and 5510 pound of CO₂ per ton of coal. However, since lignite typically also has a lower heating value and higher moisture content, operators would have to burn more tons of lignite to produce the same amount of electricity. Therefore, the actual pounds of CO₂ emitted per million Btu of lignite fired is generally slightly higher relative to subbituminous or bituminous coal.

CHAIRMAN BRYAN SHAW'S RESPONSES TO QUESTIONS FOR THE RECORD
The Honorable Lamar Smith (R-TX)
U.S. House Committee on Science, Space, and Technology

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2. ***When EPA proposed a new ozone standard of between 60 to 70 parts per billion at the beginning of this Administration, they estimated that it could cost \$90 billion making the most expensive environmental regulation in history. Recent reports continue to indicate that EPA is considering ozone levels within this range as part of the standards rule's five-year review. Do you have any reason to think a new regulation that range would cost any less now?***

Response 2:

The TCEQ does not expect that the costs for achieving an ozone National Ambient Air Quality Standard (NAAQS) between 60 and 70 parts per billion (ppb) would be significantly less now than when the EPA proposed this range for the standard in 2010. Some regulations implemented since 2010 and potential regulatory changes in the future could provide emission reductions, most notably the EPA's Tier 3 Motor Vehicle Emission and Fuel Standards rule. The EPA projects that the Tier 3 Motor Vehicle Emission and Fuel Standards rule would achieve design value decreases between 0.5 and 1.09 ppb in 2017. It is possible that the benefits from this rule could result in lower nonattainment classifications in some cases (e.g., marginal rather than moderate), possibly reducing the expected costs for particular areas, because nonattainment area requirements would be increasingly more stringent at higher classifications. However, the overall number of newly designated nonattainment areas and higher classifications are unlikely to be significantly different from the estimates used in the EPA's previous reconsideration of the standard. Therefore, the estimated costs would likely be in a similar range.

3. ***What will be the impact to Texas in terms of increased administrative costs, resource diversion and man hours when/if the new ozone NAAQS are implemented? What economic impacts or other negative consequences do you foresee?***

Response 3:

Texas currently has two areas designated nonattainment for ozone - the Dallas-Fort Worth and Houston-Galveston-Brazoria areas. Based on the most recent air monitoring data available, if the EPA lowers the ozone NAAQS to 60 ppb Texas could have as many as 15 areas designated nonattainment. This includes areas along the Texas-Mexico border, major metropolitan areas currently designated as attaining the ozone standard, and rural areas with no single major source of ozone precursors. If these areas were designated as nonattainment, there would be significant impact on state resources and the economic growth of Texas.

The TCEQ recently estimated that the total additional burden for implementing the 1997 ozone NAAQS in the Dallas-Fort Worth nonattainment area would be between 45,000 and 55,000 TCEQ staff-hours, at a cost of approximately \$1.2 million. Similar costs would be incurred for each potential nonattainment area under a revised ozone NAAQS, though the costs could be lower or higher depending on the classification assigned to an individual area.

In some cases, an attainment demonstration for a particular area might not require all the components necessary for an area like the Dallas-Fort Worth nonattainment area. However, the TCEQ would bear some burden regardless of classification or other specifics related to a particular area. For example, even if the TCEQ can demonstrate to the EPA that the air coming into an area from outside the United States has ozone concentrations over 60 ppb and there are no major sources of pollutants in the area (such as Big Bend National Park), a significant effort

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is required to make such a seemingly simple demonstration. This significant cost and effort by the state would not be expected to result in an improvement in air quality, but would be necessary to satisfy Federal Clean Air Act requirements.

3a. *If an area is found to be nonattainment, what are the consequences?*

Response 3a:

Regulations required by the Federal Clean Air Act would impact industry and some small businesses located in nonattainment areas. For example, if an area is designated nonattainment with a classification of moderate or higher, emissions sources in the area are subject to reasonably available control technology (RACT). RACT applies to all emission source categories addressed in EPA guidance (including small businesses like coating and printing operations) and all major stationary sources (such as industrial boilers and stationary engines). Often, the emissions reductions that result from federal RACT requirements are extremely small and target ozone precursors that have negligible benefit to improving air quality. Nevertheless, these RACT control measures must be implemented as required by the Federal Clean Air Act. Furthermore, additional control measures beyond RACT may be necessary to achieve attainment or to make required reasonable further progress (RFP) incremental reductions toward attainment.

The economic impacts can be quite significant and can affect an area in ways that may not be readily apparent. For example, under nonattainment new source review (NNSR) permitting, major sources are required to offset any new emissions by reducing emissions from existing sources. This affects whether new industrial sources and the accompanying jobs, can start operations in a new nonattainment area. This can be very limiting and expensive for areas with few, if any, major emissions sources and can even be problematic in a highly industrialized area such as the greater Houston area. For example, in the Houston-Galveston-Brazoria ozone nonattainment area, a credit to offset a new emission source can cost up to \$390,000 for each additional ton of emissions the new source would emit (1.3 to 1 offset ratio for a severe nonattainment area and a cost of \$300,000 per ton). This is one of several factors that industry considers when deciding on locations for new development or whether to expand or maintain existing operations.

Nonattainment can also have an impact on local governments and the public. Local governments in nonattainment areas are subject to transportation conformity, which applies to transportation plans and projects funded or approved by the Federal Highway Administration (FHWA) or the Federal Transit Administration (FTA). Transportation conformity requires local governments to conduct an analysis to estimate emissions associated with a transportation plan and demonstrate that those estimated emissions do not exceed the emissions limits established in the state's air quality state implementation plan (SIP). Motorists may also be impacted. Vehicle Inspection and Maintenance (I/M) programs are required in nonattainment areas classified as moderate or above in any 1990 Census-defined urbanized area with a population of 200,000 or more. In addition to their safety inspection, drivers in those areas are required to pay another fee to have their vehicle inspected to ensure it meets emissions requirements. If the vehicle fails to pass the inspection, it must be repaired and re-tested before an inspection sticker will be granted.

The higher cost of doing business, the increased cost of additional controls, and the increased cost of required vehicle emissions testing are all costs that ultimately would impact not only the economy of Texas but consumers within and beyond Texans.

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4. ***For many states, stationary sources have been controlled to the greatest extent possible. How do you expect states to achieve attainment of new lower standards when everything that can be controlled is already being controlled, and the only viable paths to attainment are beyond the state's authority?***

Response 4:

Stationary sources in Texas have already made significant emission reductions. In the last 13 years (2000 to 2012), statewide emissions of ozone precursor emissions from large stationary sources have dramatically decreased. Emissions of NO_x have decreased by 63% and VOC emissions have decreased by 41%. A result of these large decreases in emissions from stationary source is that now, the large majority of primary ozone precursors (NO_x emissions) are from mobile sources in many areas. For example, mobile source emissions represent 80% of the NO_x emissions in the Dallas-Fort Worth ozone nonattainment area and 71% of the NO_x emissions in the Houston-Galveston-Brazoria ozone nonattainment area. Furthermore, Texas would be limited in our options to address mobile emissions due to the very limited authority over mobile engine emission standards, the high volume of interstate traffic (from the North American Free Trade Agreement for example), and the fact that federal funds for congestion mitigation would be further diluted by having more nonattainment areas.

In some cases, additional controls on stationary sources within nonattainment areas might be technologically possible but at a much greater incremental cost. For example, for the Houston-Galveston-Brazoria 1997 eight-hour ozone attainment demonstration done in 2010, the TCEQ estimated that additional NO_x reductions were technologically feasible from stationary sources subject to the Mass Emission Cap and Trade (MECT) program. An additional 53 tons per day of NO_x reductions might be achieved, raising the MECT program's control level from the nominal 80% to almost 90% control. However, the TCEQ estimated that the initial capital costs of achieving this additional control would be approximately \$2.2 billion and could potentially be as high as \$3.2 billion. Total costs over the first five years including annual operating costs were estimated to be between \$4.1 and \$5.4 billion. The overall cost effectiveness of such a control measure would have been between \$41,700 and \$55,000 per ton on a five year basis. As such, the TCEQ determined that while the additional NO_x reductions might be technologically possible, the incremental cost of achieving this additional control was not economically feasible.

Additionally, if the ozone standard is reduced to a level near the pollution level entering the nonattainment areas, the only possible means for nonattainment areas to attain the standard is to reduce the background level pollution from upwind areas. While states may be able to reduce intrastate transport pollution to some degree, for sources within their geographic boundaries, this may have limited benefit and may require broad controls on numerous sources upwind of the nonattainment area. If the pollution background levels entering the state exceed the standard, then a state will not be able to attain the standard through its own actions. Going from current ozone levels in Texas to a level below 60 ppb would likely require a significant reduction in background ozone levels coming into Texas as well as a reduction in emissions from mobile sources. Texas would be extremely challenged in meeting an ozone NAAQS of 60 ppb within the near future.

5. ***What measures could streamline the EPA exceptional event process under the Clean Air Act (in which the Agency can designate that a violation of the standard is due to an "exceptional event" rather than controllable emissions)?***

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Response 5:

To streamline the exceptional event process, the EPA should more appropriately adhere to rules regarding weight of evidence and also provide comprehensive, specific, and timely guidance to states to clearly set expectations for exceptional event demonstrations.

The Federal Clean Air Act establishes six legal requirements for meeting the definition of an exceptional event. The EPA's current rule allows states to make a weight-of-evidence demonstration to satisfy each element of an exceptional event. In practice and in guidance, the EPA has required states to demonstrate that each legal requirement be met in a manner that amounts to evidence beyond a reasonable doubt, rather than a more appropriate preponderance of evidence when considering all six criteria. At the same time, the EPA has failed to provide comprehensive, specific, and timely guidance, which has resulted in states guessing what level of proof is needed for these submissions. It has also resulted in the EPA requesting additional information, analyses, and proof following a state's submission, thus delaying final action.

A fraction of the guidance needed for exceptional events demonstrations was provided by the EPA in May 2013. Specifically, the EPA issued draft interim guidance for exceptional event demonstrations related to high wind events. However, this guidance fell short of providing a comprehensive and understandable system of procedures and criteria for states to use in determining the evidence needed to support an exceptional event demonstration. In addition, this guidance only addressed exceptional events related to high winds and does not contemplate other naturally occurring event types, such as wildfire-related events. The EPA has committed to providing subsequent draft guidance on wildfire-related events in late 2013 or early 2014, but this guidance has not been released. Further, the EPA indicated they will release revisions to the exceptional event rules in late 2013 or early 2014, but there has yet to be an indication as to when the proposal will be released or the extent of the revisions to the rule.

5a. How long does the process typically take and what are typical costs to obtain an EPA decision on an "exceptional event" designation? What impact might this have on nonattainment designations and/or expediting infrastructure permitting and NEPA decisions?

Response 5a:

The following response is TCEQ's experience with EPA specific to four exceptional event packages submitted to EPA in 2013 – all four remain pending.

The TCEQ typically spends about six months and the equivalent of 700+ hours of employee time in developing each exceptional event demonstration package. EPA's interim guidance on exceptional events indicates that their review process from submittal to final determination should take no more than 18 months. Therefore, the full process could take approximately two years. In reality, however, the need for states to respond to EPA's requests for additional information, analyses, and evidence following a submittal can indefinitely prolong this process.

The majority of the expenses related to exceptional events is related to data collection, rather than interpretation, and is included in TCEQ's ongoing operational costs. For example, the TCEQ funds additional particulate matter monitors in the coastal area to help quantify background levels associated with exceptional events that may impact the Houston area. In addition to these costs, the TCEQ has set aside approximately \$300,000/year for contracted services in support of potential exceptional event flags (e.g., additional laboratory analyses for speciated PM_{2.5} samples).

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Historically, the EPA has allowed states to go back and submit exceptional event requests prior to designation if a more stringent standard is implemented. However, the time needed to assess whether an exceptional event meets the six legal criteria, develop an effective, approvable package, and receive final EPA approval could effectively result in a nonattainment designation without EPA's full consideration of exceptional events. Inappropriately designating an area as not attaining a standard or the classification of nonattainment can result in significant multi-faceted regulatory implications. For example, an area inappropriately designated as nonattainment without proper consideration of exceptional events can significantly delay the permitting process for new sources, require additional emission controls and reporting requirements, and subject construction or infrastructure related construction projects to unnecessary National Environmental Policy Act (NEPA) review.

6. *Besides EPA's new power plant rule, are there other EPA actions on the horizon that could affect the viability of coal as an energy source in a diversified energy portfolio?*

Response 6:

In addition to the EPA's various rulemaking activities for greenhouse gas emissions from new, modified, and existing power plants, there are a number of other EPA actions that may impact coal-fired power plants in the future.

- Cross-State Air Pollution Rule (CSAPR) Litigation and Replacement Rule – While CSAPR was vacated by the D.C. Circuit Court on August 21, 2012, the EPA has appealed the court's decision to the United States Supreme Court. If the EPA ultimately prevails in the CSAPR litigation, the EPA could reinstate CSAPR relatively quickly. Additionally, the EPA is actively developing a replacement rule for CSAPR in the eventuality that the Supreme Court affirms the D.C. Circuit Court's decision.
- EPA Determination on Regional Haze SIP – The EPA has not yet issued a determination regarding Texas' Regional Haze SIP revision submitted in 2009. If the EPA disapproves Texas' Regional Haze SIP, the EPA could issue a federal implementation plan (FIP) requiring controls on existing units, which has been done with some other states.
- Coal Combustion Residuals (CCR) Regulations – The EPA's CCR regulations were proposed in June 2010 but are not yet finalized. EPA provided two options in the proposed rule: Option I (Subtitle C option) proposed to subject CCR surface impoundments and landfills to the hazardous waste regulations under RCRA Subtitle C regulations; or Option II (Subtitle D option) proposed to regulate CCR landfills and surface impoundments by establishing national criteria in accordance with the RCRA Subtitle D regulations. CCRs are currently classified as nonhazardous industrial waste and recycled in a variety of applications, including the manufacturing of cement and cement products, masonry, roofing materials, road base/sub-grade materials, and waste stabilization/solidification materials. Subjecting CCRs to the hazardous waste regulations would negatively impact the legitimate reuse and recycling of these materials and increase waste management and disposal costs for coal-fired power plants.
- Clean Water Act Section 316(b) Cooling Water Intake Structures for Existing Facilities – The EPA's regulation for cooling water intake structures for existing facilities was proposed in July 2011 and was expected to be finalized in February 2014. However, the EPA recently received an extension on the settlement agreement deadline to April 17, 2014.

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- 2010 Sulfur Dioxide (SO₂) Primary National Ambient Air Quality Standard (NAAQS) – Initial designations were finalized in August 2013. Texas does not have any SO₂ nonattainment areas under the 2013 designations; however, additional designation rounds are pending after EPA finalizes the data requirements rulemaking. In addition to possible future nonattainment designations, the stringency of the one-hour SO₂ primary NAAQS is a challenge for permitting new coal-fired power plants, particularly for startup operations.
 - Upcoming Five-year Review of the Ozone NAAQS – While the 2008 ozone NAAQS of 75 ppb has not had a substantial impact on coal-fired power plants in Texas, a substantially lowered ozone NAAQS could have a significant impact on coal-fired power plants if background levels of ozone are near or exceed the standard. Regional controls at the state or federal level may be necessary to reduce intra- and interstate transport and existing coal-fired power plants would likely be impacted.
7. ***Recently, EPA's chemical risk assessment program, known as the Integrated Risk Information System, has been criticized by the National Academy of Sciences and others. TCEQ conducts similar activities for a variety of chemicals. Do you agree that these EPA chemical assessments are often not prepared in a logically consistent fashion, lack a basic framework, and do not transparently document the criteria the Agency uses in evaluating a study?***

Response 7:

Yes, we agree. As discussed by the National Academy of Science's National Research Council (NRC)¹, many critical elements for the development of a scientifically sound integrated risk information system (IRIS) assessment are basic and addressed in numerous EPA guidance documents. However, "implementation does not appear to be systematic or uniform in the development of IRIS assessments," as exemplified by the draft formaldehyde assessment which suggests "a problem with the practical implementation of the guidelines." In addition to the numerous problems detailed by the NRC, EPA holds a higher standard for the scientific defensibility of data that do not support a default or pre-determined EPA assessment pathway; is inconsistent across assessments regarding the data judged sufficient to support the direction of an assessment; and applies different standards to the same data depending upon whether they support default assessment procedures. Overall, EPA holds data to a high standard when it is contrary to their belief, while using a lower standard to judge data that justifies their desired path. This unequal treatment of data results in an unbalanced and biased approach towards risk assessment and undermines user and public confidence.

8. ***Do you support the principle that EPA should only base its regulations on transparent and reproducible scientific information? Do you have any examples of recent EPA regulatory activities that lack transparency?***

Response 8:

Yes, the TCEQ supports basing regulations on transparent and reproducible scientific

¹ NRC (National Research Council). 2011. Review of the Environmental Protection Agency's draft IRIS assessment of formaldehyde. Committee to Review EPA's Draft IRIS Assessment of Formaldehyde; National Research Council. The National Academies Press, Washington, D.C.

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information. Indeed, transparency is a prerequisite for sound scientific processes and for sound policy decisions. Unfortunately, this is not the case with EPA. For example, recent regulations targeting PM_{2.5} use two studies (American Cancer Society Cancer Prevention Study II and the Harvard Six Cities Study) for which data are not publically available. This violates the principle of transparency², which requires that the information used to justify major regulations be open and available to the public. These practices serve to promote sound science and therefore promote the public interest.

Another major example of EPA's lack of transparency and reproducible scientific information relates to carbon capture and sequestration (CCS). EPA has taken the position that CCS should not undergo a Scientific Advisory Board (SAB) review, because the "portion of the rulemaking addressing coal-fired power plants focuses on carbon capture and that the regulatory mechanisms for addressing potential risks associated with carbon sequestration are not within the scope of the Clean Air Act." Clearly carbon sequestration is a necessary component of carbon capture and storage and successful carbon sequestration is essential to the rule's intent to reduce carbon dioxide emissions. The SAB states in their January 29, 2014 letter, "Carbon sequestration, however, is a complex process, particularly at the scale required under this rulemaking, which may have unintended multi-media consequences. The Board's strong view is that a regulatory framework for commercial-scale carbon sequestration that ensures the protection of human health and the environment is linked in important systematic ways to this rulemaking. Research and information from the EPA, Department of Energy, and other sources related to carbon sequestration merit scientific review by the National Research Council or the EPA." The SAB's comments clearly bring into question EPA's determination that CCS is an adequately demonstrated technology. All EPA regulations must be based on transparency and the best science available. Unfortunately, this does not appear to be the case with respect to EPA's position on SAB review of CCS.

² (a) the transparency provisions of Executive Order 12866 and (2) recent memoranda from the White House and Executive Office of the President (including the 2004 Office of Management and Budget ("OMB") Peer Review Bulletin, President Obama's 2009 Memorandum on Scientific Integrity

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Examining the Science of EPA Overreach: A Case Study in Texas

- 1. EPA Region 6 (in Dallas) has a backlog of approximately 54 greenhouse gas permits. My understanding is that EPA's guidance is that these permits receive a completeness determination within 30 days. Congress also directed the EPA to issue these permits within one-year after this completeness determination**

But one company in my district submitted its application last February, and their application is still being reviewed by the EPA for completeness. With no indication of when the EPA will complete its review, this endless process in preventing a \$1.2 billion private investment that would create at least 100 new, good paying jobs in my district.

- 1a. Can you go into detail about the kind of work that TCEQ is doing with the EPA, and whether your involvement is helping to reduce this significant backlog?**

Response 1a:

As of February 25, 2014, EPA has received a total of 81 applications for a greenhouse gas (GHG) permit. According to their records, 28 permits have been issued and six are in the draft permit stage. TCEQ has entered into an informal work-share arrangement with EPA Region 6 to assist with 15 GHG air permit applications for projects in Texas. This represents approximately 32 percent of the remaining 47 pending applications. TCEQ is conducting the reviews on behalf of EPA, using their specified processes and formats. TCEQ agreed to conduct the best available control technology (BACT) review and write the statement of basis (SOB) and prepare the draft permit. EPA delivered the applications to TCEQ on December 12, 2013. As of February 28, 2014, TCEQ has completed the review for eight (8) of the 15 applications and returned them to EPA to conclude the remainder of the permitting process. EPA has committed to finalizing the TCEQ-assisted GHG applications in a timely manner. They estimate a timeframe of 60 to 90 days to send the work-shared permits to public notice upon return; however, some have gone to notice within 30 days.

- 1b. When do you expect TCEQ take over the role of issuing these permits from the EPA?**

Response 1b:

TCEQ anticipates the transition of permitting authority from EPA to TCEQ for GHG permits to occur late summer 2014. To shorten the timeline for TCEQ to become the permitting authority for GHGs in Texas, TCEQ and EPA are parallel processing the steps each agency must take for approval of TCEQ's GHG permitting rules. On October 23, 2013, the TCEQ Commissioners approved proposed rules and revisions to the Texas State Implementation Plan (SIP) to permit emissions of GHGs. On February 18, 2014, EPA proposed SIP approval of TCEQ's proposed rules and proposed the Federal Implementation Plan (FIP) be rescinded.

The next step in parallel processing is the adoption of TCEQ's rules, which are scheduled for Commission consideration on March 26, 2014. The last step before TCEQ becomes the authority over GHG permitting in Texas is EPA's final approval of the SIP revisions and rescission of the FIP, which will be effective 30 days after EPA publishes final approval in the *Federal Register*.

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TCEQ anticipates that this could occur late summer 2014.

Additional Transition (from EPA to TCEQ) Details:

EPA has indicated that once the FIP is rescinded, GHG permit applicants will have the opportunity to notify EPA in writing regarding transfer of their application to TCEQ.

EPA will remain the GHG permitting authority in three circumstances: 1) the applicant chooses to have EPA complete the review; 2) the applicant fails to notify EPA of its preference and notice of the draft permit has been published; and/or 3) EPA has issued the permit but the administrative appeals process is not complete.

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The Honorable Eddie Bernice Johnson (D-TX)
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Examining the Science of EPA Overreach: A Case Study in Texas

1. ***The Center for Public Integrity, InsideClimate News and The Weather Channel just concluded an eight month investigation regarding the Texas Eagle Ford shale gas deposit and the state's regulations over this recent hydraulic fracturing boom. The detailed investigation has raised a number of significant questions regarding both the quantity and quality of the data that the Texas Commission on Environmental Quality (TCEQ) obtains regarding chemical emissions from the hydraulic fracturing process***
- 1a. ***Please provide the Committee with a list of the permanent air monitors in the Eagle Ford area that are part of the Texas air monitoring system. Please include the exact location of each of these monitors.***

Response 1a:

There are currently 11 individual pollutant monitors at five stationary air quality monitoring sites in the 26-county Eagle Ford Shale area. In addition to data collected from stationary monitors, the TCEQ also gathers air quality data through the use of handheld monitoring instruments during investigations and conducts aerial surveys to identify air emissions sources. The following table provides the air monitoring site name, address, latitude, longitude, and pollutant parameters measured at the site.

Site Name	Address	City	County	Latitude	Longitude	Parameter
Laredo Vidaurri	2020 Vidaurri Avenue	Laredo	Webb	27.5174485°	-99.5152185°	O ₃ , CO, PM ₁₀ , Pb
Laredo Bridge	700 Zaragosa Street	Laredo	Webb	27.5018255°	-99.5029843°	VOC, CO, PM ₁₀
World Trade Bridge	11601 FM 1472	Laredo	Webb	27.5994440°	-99.5333330°	PM _{2.5}
Eagle Pass	265 Foster Maldonado	Eagle Pass	Maverick	28.7046070°	-100.4511555°	PM _{2.5}
Floresville Hospital Boulevard	1404 Hospital Blvd	Floresville	Wilson	29.1306750°	-98.1480600°	VOC, NO _x

O₃ – ozone

CO – carbon monoxide

PM₁₀ – particulate matter of 10 microns or less in aerodynamic diameter

PM_{2.5} – particulate matter of 2.5 microns or less in aerodynamic diameter

VOC – volatile organic compounds

NO_x – nitrogen oxides

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1b. Please provide a complete list of all oil and gas facilities in Texas that are permitted to "self-audit" their emission without reporting the results to TCEQ.

Response 1b:

In the *InsideClimate News* article the following statement was made: "Thousands of oil and gas facilities, including six of the nine production sites near the Buehrings' house, are allowed to self-audit their emission without reporting them to the state.... (Emphasis added)

It is important to note that the meaning of the term 'self-audit' as used in the report is unclear. The TCEQ uses the term 'self-audit' with a specific meaning under the Texas Environmental, Health, and Safety Audit Privilege Act (Audit Act). The Audit Act also provides certain immunities from administrative or civil penalties for violations voluntarily disclosed and corrected within a reasonable amount of time. Once disclosed by the regulated entity, violations are monitored by TCEQ staff to ensure compliance is achieved. If the violations are not corrected within established time frames, the regulated entity is subject to investigation and enforcement as appropriate.

InsideClimate News could be using the term 'self-audit' to describe the manner in which some oil and gas facilities are authorized by a permit by rule (PBR) but not required to submit a registration to the TCEQ. Owners/operators of these facilities are required to maintain records demonstrating compliance with PBR requirements and provide those records to the TCEQ upon request.

As of February 24, 2014, the TCEQ has issued 26,423 authorizations for oil and gas operations. This number includes facilities authorized by case-by-case new source review (NSR) permits, standard permits, and PBRs for which a permit was issued or registration was submitted to the agency. As described in more detail below, other facilities in Texas may be also authorized to emit air contaminants without registration. While all of the active oil and gas wells in Texas are not required to register with the TCEQ, the agency has been working closely with the RRC to share data concerning numbers of wells, locations of the oil and gas sites, along with production data. The 'Reporting of emissions' section, will address how this information is used to calculate the estimated emissions.

The *InsideClimate News* article did not discuss in detail the types of authorizations the TCEQ uses for oil and gas facilities or other important regulations that ensure protective regulatory oversight. The following information describes the authorization types typically obtained by oil and gas facility owners/operators in Texas.

- **De minimis:** This designation applies to negligible sources of air emissions. TCEQ maintains a list of sources and facilities that have been determined to be de minimis. Typically, this type of authorization cannot be used for oil and gas facility emissions at well pad sites. However, pipeline isolation valves may qualify as de minimis if all of the conditions in the rule and for this specific facility type are met.
- **Permits By rule (PBR):** PBRs are an authorization type developed for facilities which will not make a significant contribution of air contaminants to the atmosphere. The rules limit total site-wide emissions to specific amounts. Notably, site-wide emission limits must be below 250 tons per year (tpy) for nitrogen oxides and carbon monoxide, and 25 tpy for volatile organic compounds and sulfur dioxide. Since many oil and gas well sites

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can meet these requirements, this is the authorization used by most of these types of facilities throughout the state. A site must meet all of the conditions of the rule with no exceptions. Registration is only required when specifically stated in the rule, such as the Barnett Shale specific rules or when a site handles sour gas. Set-back distances from recreational areas and residences are also included in the PBR for facilities handling sour gas. It should be noted that the owner/operator must maintain records containing sufficient information to demonstrate compliance with all applicable general and specific requirements, including emission limits and provide those records to the TCEQ upon request. If an investigation is conducted, these records will then be used by TCEQ investigators to determine compliance.

- **Standard Permits:** This authorization type requires registration, is industry or activity specific, and is renewed every ten years. Like the PBR, the owner/operator must maintain sufficient records to demonstrate compliance with all applicable general and specific requirements, including emission limits.
- **New Source Review Permits:** This authorization type applies to major sources and minor sources that cannot meet the requirements of the PBR or standard permit. The conditions for the authorization are reviewed on a case-by-case basis and are site specific. Again like the PBR and Standard Permit, the owner/operator must maintain sufficient records to demonstrate compliance with all applicable general and specific requirements, including emission limits.

TCEQ's development of all authorization mechanisms depend on the type of facility it will authorize and the contaminants being emitted. All necessary steps are taken to demonstrate protectiveness for human health and welfare, including verification that the conditions of the authorization will not cause an exceedance of the NAAQS. This may be done through air dispersion modeling or screen modeling to establish setback distances. Other factors such as utilizing best available control technology (BACT) are required in the development of a Standard Permit or New Source Review Permit.

The TCEQ also adopted new requirements for maintenance, startup and shutdown (MSS) for oil and gas facilities, effective January 5, 2014. The development of the rules took into consideration data from monitoring and enforcement activities across the state indicating that emissions at levels of concern predominately result from sites that are not properly maintained or that do not follow best management practices (BMPs). Therefore, the new rules require the use of BMPs, development of a maintenance program to ensure that facilities are maintained and operated properly, and recordkeeping to demonstrate that the maintenance was conducted.

In addition to the authorization to emit air contaminants that is issued by TCEQ, there are federal requirements that apply to oil and gas facilities across the state of Texas. EPA's New Source Performance Standard (NSPS), 40 CFR Part 60, Subpart OOOO, published August 16, 2012, included new and revised regulations for the oil and gas industry. As part of the new regulations, beginning October 15, 2012, notification of each new hydraulically fractured natural gas well completion must be submitted to the delegated administrator (TCEQ) no later than two days before the well completion process begins. Since October 15, 2012, the TCEQ has received approximately 4,400 notifications for hydraulically fractured natural gas wells. Furthermore the new rules also contain requirements for recordkeeping and annual reporting that must be submitted to the TCEQ.

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The combination of the new and existing TCEQ rules, new federal requirements, and monitoring data all act to ensure that oil and gas activities are protective of human health and the environment and consistent with both state and federal regulations.

Reporting of emissions:

The federal Air Emissions Reporting Requirements (AERR) rule (found in 40 CFR Part 51) requires states to develop and submit periodic emissions inventories to the EPA every three years. Per this federal rule, point and area sources are defined based on a sources potential to emit certain pollutants and the sources location. As allowed under the AERR, the TCEQ uses lower reporting thresholds for point sources per 30 Texas Administrative Code Section 101.10 than those in the AERR. Even with these lower point source reporting thresholds, most upstream oil and gas sites do not meet reporting requirements as point sources. Therefore, as directed under the AERR the majority of upstream oil and gas sites are represented in the inventory as area sources.

Area sources are small-scale industrial, commercial, and residential sources that generate emissions. Based on guidance provided by the EPA, these types of sources are not required to report their emissions annually, instead the emissions are calculated and recorded on the county-level by the TCEQ. Area sources are divided according to the emissions mechanism: hydrocarbon evaporative emissions or fuel combustion emissions. Instead of the using the EPA-developed default inventory, significant resources have been invested in developing the TCEQ oil and gas area source inventory. The TCEQ oil and gas area source inventory is estimated using a state-specific oil and gas area source emissions calculator, which exceeds the EPA area source category requirements. This oil and gas area source emissions calculator uses county-level production and local equipment activity data with local emissions requirements to estimate emissions for individual production categories including compressors engines, condensate and oil storage tanks, loading operations, heaters, and dehydrators. This approach ensures that the TCEQ oil and gas area source inventory is more accurate than inventories that rely solely upon EPA default data.

- 1c. *Please provide a list of the number of oil and gas related complaints, including water quality related issues that have been filed with TCEQ by Eagle Ford residents since 2010. Please include the number of fines that have resulted from these complaints, the companies that have been fined, the dates of the fines and the specific fines they were required to pay.***

Response 1c:

The TCEQ has conducted 3,939 investigations in relation to oil and gas operations since September 1, 2009 in the Barnett Shale and Eagle Ford Shale areas; and since September 2012, the TCEQ has conducted over 700 investigations in relation to oil and gas operations in the Eagle Ford Shale area.

TCEQ not only responds to complaints by conducting investigations, investigators also conduct routine compliance investigations of regulated entities. In addition, the TCEQ may conduct reconnaissance investigations in areas where one or more of the following criteria apply: historic complaints have been received; flyovers (aerial surveys) of regulated facilities have been conducted; clusters of regulated facilities are located; follow-up of an ongoing

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investigation is required; and/or other factors that indicate the need for an on-site presence outside of a normal frequency.

The TCEQ is providing information that specifically addresses the number of complaint investigations conducted in the Eagle Ford Shale area in response to complaints received by the TCEQ, regarding oil and gas related activities in the Eagle Ford Shale. Due to the size of the file necessary to provide the requested list of complaints, a file transfer protocol (ftp) link has been established. Please see *Attachment A* for the instructions and the file name to access this data. The detailed list contains the complaints received by the TCEQ, regarding oil and gas related activities, which includes air, water and waste concerns, in the Eagle Ford Shale, from September 1, 2009 through February 24, 2014. The complaint information is summarized in the table below, including any resulting enforcement actions, and categorized by State of Texas fiscal year – September 1st – August 31st.

The TCEQ evaluates all verbal and written complaints received, alleging a possible environmental, health or regulatory concern. Upon receipt of a complaint, it is documented and then screened to determine if the complaint is within TCEQ statutory jurisdiction. Complaints which are not within the TCEQ's jurisdiction are formally referred to the appropriate federal, state or local authorities, and the complainants are provided contact information for the appropriate authority. Approximately 22% of the complaints received were referred to other jurisdictions.

Generally, complaint investigations involve an on-site investigation to determine if there are any violations of a TCEQ permit and/or authorization and/or applicable rules and regulations. If violations are documented during complaint investigations, it is addressed using the same standard agency protocols as for violations resulting from routine investigations. The TCEQ's enforcement process begins when a violation is discovered during an investigation conducted either at the regulated entity's location or through a review of records at TCEQ offices. For documented violations, the TCEQ follows its "Enforcement Initiation Criteria" to determine the appropriate course of action to pursue. This document may be found at the following link: <http://www.tceq.texas.gov/agency/eic.html>. To promote consistency in addressing air, water and waste violations, the criteria specified in this document are used to determine the appropriate level of enforcement action.

Documented violations are addressed by an enforcement action, either through the issuance of a Notice of Violation (NOV) or the issuance of a Notice of Enforcement (NOE). An NOV documents the violations discovered during the investigation, specifies a time frame to respond, and requires documentation of compliance. Most violations are quickly corrected in response to notices of violation. If an entity receives a NOV and fails to achieve compliance within a specified timeframe, the matter may be referred for formal enforcement. An NOV does not contain fines/penalties but does become part of a regulated entity's compliance history calculation.

For more serious or continuing violations identified during an investigation, the TCEQ initiates formal enforcement and the business or individual investigated receives an NOE. The issuance of an NOE begins formal enforcement, which is a process that results in an order and a fine/penalty. The NOE documents violations and puts the recipient on notice that a violation(s) have been referred to the TCEQ's Enforcement Division for development of an order and penalty/fine. The notice also provides information on the appeal process if violations are believed to be in error/or if new information is available.

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Summary of Complaints and Resulting Enforcement Actions by Fiscal Year					
Fiscal Year	Number of Complaints Received Related to Eagle Ford Shale	Number of Investigations Resulting from Complaints	Number of Notices of Violations (NOVs) Resulting from Complaint Investigations	Number of Notices of Enforcement (NOEs) Resulting from Complaint Investigations	Total Number of Violations Cited Resulting from Complaint Investigations
FY10	1	1	-	-	-
FY11	47	21	5	-	6
FY12	56	37	8	1	17
FY13	102	72	35	5	61
FY14 (to date)	55	10	2	1	4
Totals	243	141	50	7	88

In reviewing the data above, it is important to note that, in some instances, a single investigation may address multiple complaints received involving one entity or facility. Also, complaints received from 2010 to early 2013, as the Eagle Ford activities were increasing, were not consistently tracked in the TCEQ data systems for association with the Eagle Ford Shale.

Beginning in 2013, the TCEQ has been refining the data tracking to more consistently categorize oil and gas complaints and other routine investigation types in the identified 26 Eagle Ford Shale counties. This detailed tracking reveals that of 735 investigations conducted by the TCEQ related to oil and gas activity in the Eagle Ford Shale area since September 1, 2012, no violations were documented in 587 of the investigations. The violations documented in the remaining 148 investigations have been addressed through the issuance of a notice of violation or through the enforcement process.

A list of enforcement cases resulting from complaint and routine investigations of oil and gas facilities in the Eagle Ford Shale is also being provided via the ftp site (Please see *Attachment A*). Seven of the enforcement cases are the direct result of complaints that have been referred for formal enforcement. Since September 2010, in the Eagle Ford Shale, the Commission has issued 17 Administrative Orders assessing a total of \$135,160 dollars in administrative penalties and requiring corrective actions for oil and gas related activities in the Eagle Ford Shale. Nineteen additional enforcement cases are in various stages in the enforcement process.

In addition to conducting routine, complaint, and reconnaissance investigations, the TCEQ has secured services for a contractor to conduct aerial surveys (also referred to as "flyovers"). In the summer of 2011, flyovers were conducted in the Eagle Ford Shale area, and in the summer of 2013, flyovers were conducted in the Eagle Ford Shale area and the Permian Basin area. All of the flyovers utilized infrared imaging cameras mounted on aircraft to identify potential sources of emissions.

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The 2013 flyovers conducted in the Eagle Ford Shale area resulted in the collection of 286 aerial video images, and over 10,000 individual tanks were surveyed. The vast majority of these images identified no issues. Approximately five percent of the tanks were found to have some degree of emissions, either authorized or unauthorized. On the ground follow-up investigations are being conducted at facilities with observed emissions to determine compliance with authorizations and regulations. Additionally, the TCEQ, in coordination with other regulatory agencies, has conducted special outreach to make sure that oil and gas representatives are aware of the requirements, invested additional resources into monitoring and investigations (often expedited investigations) and conducted research to better understand emissions associated with oil and gas activities.

- 1d. Please provide the Committee with TCEQ's overall budget for each year since 2008. Please include a specific break-out of monies allocated specifically for air monitoring equipment for each of these years from 2008 – 2014.**

Response 1d:

The following table lists the TCEQ's total budget, funds allocated for operation and maintenance of air monitoring, and the funds specifically allocated for capital equipment in the air monitoring network for the years 2008 through 2014. The operation and maintenance of air monitoring includes costs associated with staffing, data collection and display, contracted operations, and consumables for more than 500 pollutant samplers located at over 200 monitoring locations across the state. Funds for capital equipment are used for the purchase of new and replacement equipment at TCEQ-owned monitoring sites.

Fiscal Year	Total TCEQ Budget	Funds in Support of Air Monitoring		
		Operating Costs	Capital Costs	Total
2008	\$571M	\$21M	\$1.1M	\$22.1M
2009	\$530M	\$19M	\$1.4M	\$20.4M
2010	\$529M	\$22M	\$1.5M	\$23.5M
2011	\$429M	\$20M	\$1.5M	\$21.5M
2012	\$362M	\$29M	\$0.9M	\$29.9M
2013	\$349M	\$20M	\$1.0M	\$21.0M
2014	\$372M	\$23M	\$0.7M	\$23.7M

- 1e. Please provide a list of unplanned chemical air releases, known as emission events, associated with oil and gas production in Texas broken out individually for each year since 2008.**

Response 1e:

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Emissions Events are upset events or unscheduled maintenance, startup, or shutdown activities, from a common cause that result in unauthorized emissions of air contaminants. A list of all emissions events reported to the TCEQ from September 1, 2007 through February 24, 2014 is included in the attached Excel file. This emissions event data is also summarized in the table below and categorized by State of Texas fiscal year - September 1st through August 31st. The data has been compiled by capturing a primary industry type code related to oil and gas extraction, transportation, or refining. The following is the list of NAICS industry codes used to compile the emissions events data:

21111: Oil and Gas Extraction
211111: Crude Petroleum and Natural Gas Extraction
211112: Natural Gas Liquid Extraction
32411: Petroleum Refineries
48621: Pipeline Transportation of Natural Gas
324110: Petroleum Refineries
486210 (and 48621): Pipeline Transportation of Natural Gas

Summary of Emissions Events by Fiscal Year

Fiscal Year	Number of Reported Emissions Events
FY2008	1,583
FY2009	1,959
FY2010	1,815
FY2011	2,036
FY2012	2,237
FY2013	2,996
FY2014 (through 2/24/14)	1,434
TOTAL	14,060

It is important to note that some of these emissions events did not meet the reportable quantities thresholds; therefore, the events were not required by rule to be reported to the TCEQ. All reported emission events are included in the table above.

By statute and rule, the TCEQ is required to evaluate every reported emissions event to determine if enforcement is warranted. Reported emissions events that do meet reportable quantities were or will be investigated by TCEQ staff to determine appropriate enforcement action.

As an additional source of information, the TCEQ Annual Enforcement Report contains detailed information related to emission events and other scheduled maintenance, startup, and shutdown activities performed by the regulated entity owner or operator that require prior

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notice and a final report per the TCEQ rules. The most recent report contains data from FY2012 through FY2013 and is located online at:
<http://www.tceq.texas.gov/enforcement/reports/AER/annenfreport.html>

- 2. *On February 5, 2014, I received a letter from the Environmental Integrity Project and a number of other environmental groups that states that “the existing network of air quality monitors maintained by TCEQ does not provide reliable information about the toxins that may accumulate in neighborhoods next to petrochemical plants.” Specifically the letter indicates that a review of emissions data collected by the EPA in 2010 shows that Texas refineries actually emitted two times the amount of hazardous air pollutants reported to the state’s emission inventory database.***
- 2a. *Please describe the air monitoring network used by the TCEQ to collect data on hazardous air pollutants emitted from Texas refineries. Please include the total number of air monitors maintained by the TCEQ throughout Texas and separately the total number of air monitors maintained by private companies in Texas that report this data to TCEQ. Please include the exact location of both the TCEQ and privately run monitors.***

Response 2a:

Texas has one of the most robust monitoring networks in the country. In 2013 alone, data from over 500 individual pollutant samplers at over 200 monitoring sites statewide were loaded into the TCEQ's database. Except in isolated occurrences, the TCEQ's air monitoring network is established to monitor ambient air, rather than pollutants from specific sources. Ambient air contains pollutants from all sources in an airshed, including refineries, vehicles, and transported emissions from distant sources, like smoke particles from Central America.

To measure hazardous air pollutants in ambient air, the Texas air monitoring network relies on stationary monitors consisting of both continuous and non-continuous samplers. Continuous samplers, such as automated gas chromatographs for volatile organic compounds, collect and analyze a sample every hour to provide near real-time data that is displayed on the agency's public webpages. Non-continuous samplers include those used in the sampling of carbonyls, semi-volatile organic compounds, and volatile organic compounds by canister. These samples are collected over a discrete time period, usually once every six days based on a national sampling schedule, and are analyzed in a laboratory before the resulting data is available to the public online.

Within the Texas air monitoring network, the TCEQ oversees the operation of 26 automated gas chromatographs, 58 canister samplers, 6 carbonyl samplers, and 6 semi-volatile organic compound samplers that measure ambient concentrations of hazardous air pollutants. In addition, the TCEQ receives hazardous air pollutant data from 15 automated gas chromatographs and 5 canister samplers from other entities. Overall, the TCEQ evaluates over 11 million data points for more than 115 different chemicals on an annual basis. Much of this data is collected in areas of heavy petrochemical and refining activity, such as the Houston Ship Channel and Beaumont-Port Arthur area, as well as areas of oil and gas development.

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The total number of air monitors and the definitions to supplement the data are being provided via an ftp site (Please see *Attachment A*). All pollutant samplers that were active between January 1, 2008, and February 24, 2014, are included so that the sites are comparable with the responses in the following question. Although important for interpreting and modeling the data, all meteorological samplers (such as temperature, barometric pressure, precipitation) were removed from the list.

2b. Please describe any procedures or policies TCEQ has in place to evaluate the accuracy of the network and/or individual monitoring stations, both those maintained by the TCEQ and those maintained by private companies, and the data being reported to TCEQ. Please include in this data a list of any audits performed of both the individual TCEQ monitoring stations and privately run monitoring stations to ensure the accuracy of the data being reported to TCEQ. This list should include all audits performed since January 1, 2008. For each audit report listed please include the date of the final audit report, the entity that performed the audit, a summary of the results and a link or reference to the actual report.

Response 2b:

The TCEQ quality assurance (QA) program encompasses documentation, assessment, and verification, as delineated in guidance and requirements specific to the objectives of various monitoring programs. The EPA-approved quality management plan (QMP) and quality assurance project plans (QAPPs) describe the processes, procedures, and requirements implemented to ensure ambient air monitoring data will be scientifically valid, of known precision and bias, complete, representative, and comparable. Other guidance documentation includes but is not limited to standard operating procedures and program-specific technical guidance.

The TCEQ participates in independent assessment programs such as the EPA National Performance Audit Program and the EPA Performance Evaluation Programs. In addition, the TCEQ and contracted laboratories are accredited by the National Environmental Laboratory Accreditation Program for each matrix, method, and parameter for which accreditation is available. Technical system audits are performed by both TCEQ staff and external parties, such as the EPA, to assess the TCEQ's entire quality system including quality assurance programs and data quality.

The instrumentation and methodologies used by the TCEQ adhere to rigorous sampling and analytical requirements as prescribed under federal rule and EPA guidance. As part of the TCEQ's comprehensive quality assurance program there are many levels and types of QA and quality control (QC) checks. Depending on the type and purpose of individual monitors, daily, weekly, monthly, quarterly, and annual QA/QC procedures are also performed. This includes annual performance evaluation audits conducted on each instrument by the TCEQ, the EPA, and/or specialized contractors using independently calibrated equipment.

In addition to the QA/QC procedures described above, data validation is an integral part of the TCEQ's quality management. Agency staff evaluate the data from collection through analysis to determine if the data meet project-specific data quality objectives. The data are reviewed for outliers, regional comparability, QA/QC requirements, and other data quality assessment

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indicators. Data that does not meet the project objectives completely are denoted accordingly. All data for which the TCEQ is responsible are reviewed and finalized prior to certifying to the EPA that the data are accurate, complete, and in conformance with applicable federal requirements.

Private monitoring data provided to the TCEQ is subject to the specific requirements of the programs or purposes for which the samplers were deployed. Those requirements are enforced by the responsible party or their designee. Depending on the agreement, data may be subject to automated validation tests and automated QA/QC checks. In addition, private monitoring data may be verified and validated by outside entities before being provided to the TCEQ.

Lists of TCEQ-conducted audits of individual samplers from 2008 to 2013 are being provided via an ftp site (Please see *Attachment A*). These lists do not include audits performed by external entities, such as those conducted by third-parties for the EPA. The TCEQ does not receive a formal final report from these third-party auditing entities, as reported findings are provided directly to the EPA. Unless data from privately run monitors are being provided under an agreement with the TCEQ, audits of these samplers are at the discretion of the entity responsible for their operation and maintenance. The TCEQ or a third-party contractor may audit private monitoring conducted as a result of an agreement with the TCEQ at an agreed upon frequency.

In addition to the audits listed in *Attachment A*, the EPA performs technical systems audits of the TCEQ monitoring network and quality system every three years. Since 2008, the EPA has audited the TCEQ in 2010 and 2013. The final report from the EPA's 2010 technical systems audit is included in *Attachment A*. As with any audit, the EPA noted some findings but was overall complementary of the maintenance and operation of the TCEQ's extensive monitoring network. The TCEQ has not received a final report from the EPA's 2013 technical systems audit at this time.

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Examining the Science of EPA Overreach: A Case Study in Texas

Attachment A

The following data files are located in the FTP server folder below:

Eddie Bernice Johnson Response 1c__ Enforcement in Eagle Ford Shale Area.pdf
Eddie Bernice Johnson Response 1c__ Complaints in Eagle Ford Area FY10 - FY14.xls
Eddie Bernice Johnson Response 1e__ Emissions Events__ FY08 to 2 24 2014.xlsx
Eddie Bernice Johnson Response 2a_ List of monitors.pdf
Eddie Bernice Johnson Response 2a_ TCEQ and Private Samplers List Definitions.pdf

Six (6) audit data table files in a folder named "Eddie Bernice Johnson Response 2b"

[ftp://ftp.tceq.texas.gov/pub/AirQuality/MonitoringOperations/mdma/DataRequests/C
hairmanShaw_ResponsesData/](ftp://ftp.tceq.texas.gov/pub/AirQuality/MonitoringOperations/mdma/DataRequests/C
hairmanShaw_ResponsesData/)

Please let us know when you have successfully retrieved the data or if you need any additional information. The data will be automatically deleted from the TCEQ external FTP server in 30 days. If you will be/unable to obtain the data within the 30 day timeframe, please notify us.

Responses by The Honorable David Porter

Answers to questions from U.S. Committee on Science, Space, & Technology

The Honorable Lamar Smith:

1. As you know, the inspector general issued a report on the Range Resource case, which outlined EPA's involvement in this issue. What is your opinion of the veracity of this report and its treatment of the events that took place surrounding the Range case? Did the IG report change the Commission's determination regarding the Range Resources wells?

ANSWER: I have serious reservations regarding the veracity of this report.

There is documented evidence that Al Armendariz (previous EPA Region 6 administrator) had been in contact with radical, anti-fracking groups before the EPA had officially issued its order against Range Resources. In emails dated December 7, 2010, the day the imminent and substantial endangerment (ISE) was issued, the Region 6 Administrator told groups, such as Earthworks and Downwinders at Risk, "We're about to make a lot of news." He went on to write, "There will be an official press release in a few minutes," proving that these emails were sent prior to the official issuance of the order.

The Inspector General's report claims that these interactions with local activists "were appropriate." Furthermore, the IG concluded that Mr. Armendariz had simply "informed environmental and citizen groups of the order and the associated press release after the region issued the two documents." The report continues, stating, "A review of the evidence showed that this communication occurred after the region issued its press release." This conclusion is in direct contradiction to Mr. Armendariz's own words in the email he wrote.

Crucial facts such as this, along with many more, are noticeably absent or completely glossed over in the official report. It essentially exonerates the EPA of any wrongdoing by ignoring facts or hiding behind vaguely worded agency guidelines.

The report explains under Section 1431 of the Safe Drinking Water Act, the EPA can take immediate action to protect public health when any source of drinking water is or will be contaminated if two basic conditions exist: "First, the EPA has information that a contaminant is in or likely to enter a public water system or underground drinking water supply and may present an imminent and substantial endangerment (ISE) to public health." Please note the vague language, such as "likely to" and "may present." The report goes on to clarify, "The preventative nature of Section 1431 means that for the EPA to take and enforce a Section 1431 emergency order, it needs neither proof that contamination has already occurred nor proof that the recipient of the order is responsible for the contamination." That's right. The EPA needs no proof.

The second condition that must be met for the EPA to issue an ISE states, "state and local authorities have not acted to protect public health from the ISE." In no uncertain terms

was this condition satisfied. The Commission was actively investigating the complaint and had already performed an inspection and collected samples before the EPA even became involved. Several pages further into the report, under the heading “State and Local Authorities Did Not Plan to Act Immediately”, the IG states, “The EPA asked the [Railroad Commission] if they planned to take action, and the [Railroad Commission] said they were not prepared to do so.” Based on detailed logs and accounts of the interactions between the EPA and the Commission regarding this case, that comment was either fabricated or completely taken out of context, but apparently the EPA needs very little evidence to support its claims or actions.

Also absent from the EPA’s Inspector General Report is any mention of objections by expert scientists working with the EPA regarding its decision to move forward based on the data available. However, Dr. Doug Beak, an environmental chemist with the EPA, questioned the hasty decision, noting, “There is not conclusive evidence because of the limited data set... The only way now to compare the data would be to make assumptions to fill in data gaps and I don’t believe we have enough experience at this site or data to do this at this time.” An outside EPA expert consultant, Dennis Coleman of Isotech, advised the EPA that before making a determination, it needed to “evaluate the potential for other sources that would be thermogenic and the geology or structures that would store or transmit the gas from origin to aquifer to be certain.” However, both these words of wisdom from known experts fell on deaf ears, and the EPA proceeded to conduct the investigation it wanted to in order to get the results it wanted.

The Inspector General’s report did not change the Railroad Commission’s determinations of the Range Resources wells. The Commission based its findings on the Range wells based on sound science and fact and stands by those findings.

2. There has been a lot of attention in the media lately surrounding the seismic activity in the North Texas area. Some are pointing to oil and gas production in this area as a potential source of this activity. Given the Railroad Commission’s role in regulating oil and gas production in Texas, what has the agency done in response to these events thus far, and what do you think the Commission’s role should be as it relates to seismic activity in your state moving forward?

ANSWER: The Railroad Commission takes this activity very seriously. Since the seismic events in North Texas began in late fall of 2013, the Commission has taken several steps toward addressing concerns that these events are caused by oil and gas activity. Much of the speculation regarding these events points toward commercial disposal wells being a potential cause.

Since the events began, Railroad Commission staff has been extremely vigilant in inspecting each disposal well in the area of concern to ensure these wells are operating within the Commission’s stringent regulations. The Commission regularly inspects all commercial disposal wells in the state, but these wells in particular are now being inspected on a monthly basis. In addition, staff has investigated and responded to each

and every complaint received from concerned residents of the area and have not found any of these complaints to be linked to oil and gas activity.

In early January I traveled with Commission staff to Azle, Texas to hold a town hall meeting with residents of the area. The purpose of this meeting was to hear the concerns from the citizens impacted most by these events. After this meeting, I directed the Commission's executive director to begin a nation-wide search for a qualified seismologist to be hired by the agency to help us study and compile data on the seismic events in Texas, so that we may better understand the causes of these events. I'm pleased to report that the director has had several interviews with qualified candidates for this position, and the Commission expects to hire someone in the near future.

It is my strong belief that as a regulatory body it is our duty to make decisions and rules based on sound science and proven facts. It is bad public policy to rush important decisions that may severely negatively impact the economy of our state based on speculation. Once our seismologist has had time to study this issue and help us understand the true causes of these events, we may then assess our options and decide the best path forward for the industry and the State of Texas.

3. As a state regulator of the oil and gas industry, do you find that any other federal agency is also encroaching on Texas' ability to regulate the activities within its borders?

ANSWER: Yes. I believe the U.S. Fish and Wildlife Service has increasingly targeted species for listing under the Endangered Species Act that are found in areas of prolific oil and gas activity in Texas for the express purpose of slowing down this production.

4. The U.S. is currently experiencing an energy revolution that is lowering energy prices and revitalizing the nation's manufacturing sector. At the same time, EPA has made clear that it intends to regulate hydraulic fracturing at the federal level. This is despite the fact that states have been successfully regulating the practice for years. In your view, does an additional layer of federal regulation threaten the energy and manufacturing renaissance we're experiencing?

ANSWER: An additional layer of federal regulation undoubtedly threatens the energy renaissance Texas and the rest of our country is experiencing right now. I believe allowing the federal government to regulate the oil and gas industry would cripple energy production and devastate the most robust sector of our economy.

The surge in unconventional oil and gas drilling has considerably bolstered the national economy, attracting more than \$120 billion in U.S.-based investments and contributing \$284 billion to the gross domestic product in 2012. By 2025, total contributions to the GDP are estimated to exceed \$530 billion. Additionally, studies project that the U.S. trade deficit will fall by more than \$164 billion in 2020 – the equivalent of one-third of the current trade deficit. Unconventional oil and gas activity supported 2.1 million jobs in 2012 and is also expected to bring in approximately \$1.6 trillion in government revenues from 2012 through 2025.

Texas plays a huge role in American energy production, accounting for nearly 40 percent of U.S. crude oil and almost 30 percent of our country's natural gas. In 2013, Texas' statewide production increased for the sixth consecutive year, with estimated production reaching over 850 million barrels of oil, a 21.2 percent year-over-year increase. Almost half of all drilling rigs in the country, and nearly a quarter of the rigs in the world, are located in Texas. On average, each drilling rig operating in Texas results in \$1.5 to \$2 million of additional sales taxes paid on an annual basis.

We can ill-afford to let an out-of-control federal agency such as the EPA threaten this economic boom.

a. What approaches is EPA considering? Do they have jurisdiction?

ANSWER: It is my understanding that much of EPA's concern on hydraulic fracturing is focused on groundwater contamination. In Texas we are proud of the fact that we do not have one recorded case of groundwater contamination related to hydraulic fracturing. It is evident that our state is doing a more than sufficient job of regulating this activity within our borders.

EPA may only have jurisdiction over a very limited portion of fracturing activity that takes place on federal lands. Because federal lands make up such a small portion of land in Texas, and there is currently no hydraulic fracturing taking place on these lands in Texas, I do not believe they have any jurisdiction over this activity in our state.

5. Do you support the principle that EPA should only base its regulations on transparent and reproducible scientific information? Do you have any examples of recent EPA regulatory activities that lack transparency?

ANSWER: I very strongly support the principle that ANY regulations an administrative or regulatory body writes should be based on sound science. To do otherwise is reckless and irresponsible.

The EPA's over-zealous, fear-mongering tactics used in the Range Resources case discussed in a previous question was not an isolated incident. The federal agency appears to be developing a habit of capturing the public's attention with sensational accusations only to later discreetly back-pedal on its claims, as the Range Resources case in Texas has a fact pattern strikingly similar to cases in Dimock, Pennsylvania and Pavillion, Wyoming.

After several months of public speculation to the contrary, the EPA finally issued a press release on July 25, 2012, concluding that water supplies in Dimock had not been contaminated by drilling activities in the area.

In late 2011, after the town's residents expressed concern over the quality of their drinking water, the EPA visited Dimock to conduct surveys regarding their private wells

and review drinking water data supplied by the Pennsylvania Department of Environmental Protection, Cabot Oil and Gas Exploration, and the residents.

The EPA thought it had found the perfect headline to further its political agenda, and Dimock became a poster child for anti-fracking campaigns. The town was even featured in the 2010 documentary, "Gasland," which infamously showed residents igniting water coming from their kitchen faucets and pointed to hydraulic fracturing as the cause.

However, in April 2012, the agency released preliminary test results from Dimock that "did not show levels of contaminants that would give EPA reason to take immediate action." After sampling private drinking water wells serving 64 homes between January and June of 2012, the EPA eventually admitted in late July that chemical substances found during its testing were naturally occurring and not the result of hydraulic fracturing.

The EPA also jumped the gun in Pavillion, Wyoming, when it released a draft report in December 2011 indicating that hydraulic fracturing was responsible for water contamination in private drinking water wells before thoroughly vetting the report. The agency bypassed the scientific process of independent peer review and publicly made claims that were not yet fully substantiated. Only after receiving backlash for the hasty allegations did the EPA agree to back down and retest its samples. In June 2013, the agency announced it would not move forward with plans to have independent scientists review its findings, but instead, would allow the state to continue any ongoing investigations.

The Honorable Randy Weber

1. The EPA is presently conducting an expansive and, frankly, unnecessary study of hydraulic fracturing. The agency also selected five sites to use as retrospective (going back in time) case studies for its report, one of which is located in Wise County, Texas in the Barnett shale.

a. What kind of coordination, if any, has there been between the EPA and your agencies as they conduct their analysis of the site in Texas?

ANSWER: The Railroad Commission, through an engineering firm under contract with the agency, is collecting duplicate samples whenever EPA comes to Wise county to sample water wells. We also have coordinated the release of data to the water well owners. There have been five separate sampling events between September, 2011 and May, 2013 related to the study.

b. Do you have any concerns about using retrospective sites as the basis for a study on hydraulic fracturing and groundwater contamination?

ANSWER: Because there is no water quality data available for the wells that are being sampled that predates oil and gas activity in the area, it will be impossible

to determine definitively if a specific oil and gas related incident caused contamination if any is detected.

Responses Mr. Kenneth Dierschke

QUESTIONS FOR THE RECORD
The Honorable Lamar Smith (R-TX)
U.S. House Committee on Science, Space, and Technology

Examining the Science of EPA Overreach: A Case Study in Texas

Mr. Kenneth Dierschke

1. Despite already facing myriad land management regulations, American farmers are the most productive in the entire world. How will Texas agricultural operations be impacted if every ditch, gully, and culvert on a farmer's land is subject to EPA jurisdiction?

It would appear as if the goal of EPA was to require farmers and ranchers to obtain permits each time they move topsoil. We are concerned about additional permits prior to planting, terracing, cleaning of ditches or other normal farming and ranching operations.

2. What impact do high electricity prices have on farmers? Should farmers be concerned by regulations pushing those prices even higher?

Energy costs are a major input item in every farmers cost of production. Whether it is in the form of fertilizer, diesel fuel, or electricity. These items figure heavily in the overall cost of production. Energy costs will average 35-40% of total costs.

3. If farmer can't pass the costs associated with greenhouse gas regulations to consumers, what impact will that eventually have on farmers' business operations? Could lay-offs be necessary?

Farmers and ranchers are known as "price takers not price makers". They are typically not able to pass any additional costs on in the production chain. Input costs are normally not recognized until the overall costs of a product are recognized, and that does not happen in a single growing season. Furthermore, most farmers do not use "outside labor" so rather than layoffs, the scale of operation would be reduced or eliminated.

4. Are Texas farmers concerned with other federal agencies?

The Environmental Protection Agency is at the top of the list of enemies of agriculture or farmers and ranchers. Because of the Endangered Species Act, the US Fish and Wildlife Department is becoming more recognized by most agriculture producers.

5. Do you support the principle that EPA should only base its regulations on transparent and reproducible scientific information? Do you have any examples of recent EPA regulatory activities that lack transparency?

Agriculture as an industry in the United States cannot exist without “sound science”. It is critical that science be used in the evaluation of any determination regarding agriculture production. If the science does not support the use of a product, it cannot be sustained.

Organizationally, we do not feel that the Science Advisory Board employed by EPA to evaluate the “waters of the United States study” used sound science. These hearings were critical to make public the use of “junk science” employed by the SAB.

6. Were there any comments or exchanges during the hearing that you would like to provide clarification on?

I would appreciate the opportunity to clarify certain remarks I made in response to one of Congresswoman Edwards questions during the House Science Committee hearing . I inadvertently failed to recognize the part of the question referencing “contaminated water” and mistakenly responded to the portion of the question about “fencing streams from livestock”. I apologize for this error.

First, I am not aware of any contaminated water in my area, near San Angelo. In fact, Farm Bureau has studied this issue and found very little if any, livestock contaminated waters. Our research shows that livestock caused contamination is usually by “wildlife” refuse.

Secondly, I would address the phrase, “livestock have been grazing like this for a hundred years”. My response to the question, was addressing the fact that cattle have been grazing from creeks and streams for as long as there has been ranching in Texas. We are heavily dependent on those water supplies to allow for the growing of cattle. To my knowledge, there is little or no “contaminated water” streams in our area of the state.

Finally, I want to be certain that my response is clear, that I nor any of the ranchers in our area would ever knowingly allow our livestock to drink unsafe water from any source. Cattle are our income stream, and if we don’t have healthy cattle our future income is in serious question. Fortunately, Americans have the safest most abundant source of food of any country in the world. We in Texas and the Texas Farm Bureau want to continue that tradition.

I apologize for my failure to answer correctly during the hearing.

Responses by Dr. Bernard Weinstein

QUESTIONS FOR THE RECORD
The Honorable Lamar Smith (R-TX)
U.S. House Committee on Science, Space, and Technology

Examining the Science of EPA Overreach: A Case Study in Texas

Dr. Bernard Weinstein

1. For years, Congress has pushed EPA to convene an independent panel of economic experts experienced with “whole-economy” modeling (which considers the broad economic/employment impact of rules, rather than on just those directly regulated) to evaluate whether EPA’s current economic modeling adequately measures the employment impacts of rules. What impact would you expect “whole-economy” modeling to have on cost-benefit analysis for NSPS?

Answer: I would expect a “whole-economy” model to find that the overall costs from environmental regulation are considerably greater than currently estimated. In particular, it would find that the number of jobs “forfeited” as a result of regulatory overreach is substantial.

- a. Would other rules benefit from such an approach?

Answer: I believe that policymaking in general would be much improved if all proposed laws and regulations were subjected to rigorous, “whole-economy” cost-benefit analysis.

2. Can you discuss coal’s role in mitigating “swings” in electricity prices? Is EPA’s rule, which effectively bans new coal plants from being built, a threat to our ability to mitigate these swings?

Answer: Coal-fired plants currently account for about 35 percent of electric power generation. If EPA has its way, more than 60 plants could be shuttered within the next five years. This could seriously impair the integrity of the nation’s power grids as base-load replacement plants, probably natural gas fired, are unlikely to be constructed in time. Renewables like wind and solar can help fill the gap, but they are intermittent and not base-load. In short, we run the risk of selective blackouts and brownouts in various parts of the country, especially during extremely hot or cold weather, if coal plants are retired too quickly.

- a. Are there other EPA regulations that also might play into this analysis?

Answer: The Cross-State Air Pollution Rule, Utility MACT, Boiler MACT and toxic regulations also have the potential to erode reliability of the power grids.

3. EPA has suggested that its regulations help the economy by providing regulatory certainty and incentivizing investments in technology. You state plainly in your testimony that “federal regulation does not stimulate the economy of Texas or the nation?” As an economist, can you discuss the problems associated with EPA’s assertion?

Answer: Almost by definition, regulatory intrusions retard investment and production. I can find no serious study by a reputable economist that concludes regulation—beyond what is required to ensure safety—provides a net stimulus to the economy. What’s more, when EPA promulgates regulations, they tend to be “one size fits all,” which usually makes no economic sense. For examples, EPA is now considering regulations related to hydraulic fracturing. But not all shales are created equal, the Bakken being quite different from the Barnett. That’s why regulation of the oil and gas industry is best left to the states.

4. What has been your experience with fluctuating natural gas prices? Prices are low right now, but do state utility regulators face the prospect of approving significant rate increases if generators are forced to be dependent on natural gas?

Answer: Natural gas prices are projected to remain fairly low for the next decade. This is why virtually every base-load power plant built over the past five years has been gas-fired. In deregulated states, like Texas, consumers can switch providers if they can find a better offer. In regulated states, fuel costs are typically passed through directly to customers. Still, all utilities, and their customers, will fare best in the long run if electric companies utilize a diversity of power sources: gas, coal, nuclear and renewable.

5. Please explain the effect of unilateral climate change regulations on the U.S. economy?

Answer: Total GHG emissions in the U.S. are lower today than they were 20 years ago, even though our economy is half again as large. According to the EPA, if the United States reduced greenhouse gas emissions to zero, that would have no effect on global emissions and/or global warming. The best way for the U.S. to battle climate change is not through more domestic regulation but by exporting our natural gas to China, India and other Asian countries who rely heavily on coal for power generation.

6. Do you support the principle that EPA should only base its regulations on transparent and reproducible scientific information? Do you have any examples of recent EPA regulatory activities that lack transparency?

Answer: I agree absolutely. And I would argue that all recently implemented and proposed EPA regulations lack transparency.

Appendix II

ADDITIONAL MATERIAL FOR THE RECORD

LETTER SUBMITTED BY COMMITTEE CHAIRMAN SMITH



David P. Poole
Senior Vice President - General
Counsel
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817-869-4254
817-869-9154 (fax)

February 4, 2014

Hon. Lamar Smith, Chairman
Committee on Science, Space & Technology
US House of Representatives
2321 Rayburn House Office Building
Washington, DC 20515

Re: Hearing on the Science of EPA Overreach: A Case Study in Texas

Dear Chairman Smith:

It is our understanding that your Committee will be holding a hearing examining the actions of the US Environmental Protection Agency (EPA) in the state of Texas, including certain enforcement initiatives in Parker County, Texas, that were later withdrawn by the Agency after the factual predicate for the initiatives proved to be meritless. On behalf of Range Resources Corporation (Range), I wanted to present you with accurate information that may be of some use as you consider this matter.

Water quality claims that apparently have been raised before your Committee are similar to those that have appeared at the hands of trial lawyers seeking economic recovery as well as in some media outlets. Range, through its counsel, has thoroughly refuted these claims by relying upon methodologies approved by the EPA and at the Agency's request. See attached document. It is important to understand that methane has appeared in water wells in the Trinity aquifer years prior to any drilling by Range. Further, the public is not exposed to additional risk due to drilling in light of system designs which ensure that (a) the wells are vented; and, (b) the gas is released from the water before the water is pumped into the house. This is confirmed by the combustible gas monitoring data we have from the Lipsky home and elsewhere. Any evidence linking methane in homes to gas produced in the Barnett shale strata runs contrary to analysis utilizing accurate and appropriate methodology.

The bottom line is that not one shred of evidence exists that suggests the Texas Rail Road Commission determination on Parker County was incorrect. In fact, all subsequent data, when viewed objectively and scientifically, confirms the RRC conclusion.

Sincerely,

David P. Poole

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January 24, 2014

VIA E-MAIL: rmasti@ap.org AND
CMRRR: 7160 3901 9845 9393 8098
Ramit Plushnick-Masti
The Associated Press
16945 Northchase, Suite 2110
Houston, TX 77060

Re: Cause No. CV11-0798 in the 43rd District Court, Parker County, Texas; *Steven and Shyla Lipsky v. Durant, Carter, Coleman LLC, Silverado on the Brazos Development Company #1 Ltd, Jerry v. Durant, Individually, James T. Coleman, Individually, Estate of Preston Carter, Range Production Company, and Range Resources Corporation*

Dear Ms. Plushnick-Masti:

I represent Range Production Company ("Range") in the above-styled lawsuit against Steven Lipsky (the "Lawsuit"). This letter is written in regard to a recent Associated Press ("AP") article by you entitled, "New Tests Find More Methane in North Texas Water." I am writing this letter on behalf of Range in order to provide you with various reports, studies and key findings related to this matter.

Range is disappointed that your article unfortunately ignored numerous key facts and tells a story that runs counter to objectively verifiable facts and data. Range has the utmost respect and appreciation for the role and tremendous importance of the AP in particular and the news media in general. Responsible natural gas development is an increasingly important topic, as it represents an incredible opportunity for the world's economy and environment. Range recognizes that credible, trusted and respected news outlets like the AP will continue to cover all aspects of our industry. It is our desire that facts and context continue to be recognized and reflected in that reporting.

Range has discussed many of these critical facts with you in the past during various phone discussions and email exchanges and it is disappointing that they continue to not be mentioned in the stories that you publish. We understand your desire to cover some of these

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January 24, 2014
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claims, although we strongly refute their conclusions, but we also believe it is a disservice to your readers to not have the complete spectrum of facts in order to fully comprehend the story and reach their own reasonable conclusions. I believe Range has provided you with virtually all of this material in the past, as it is public information.

You reported that Range's operations are responsible for methane in water wells in Parker County, Texas based on a "preliminary review" of data by Geoffrey Thyne and a "study" by Robert Jackson that is not yet peer reviewed or published and which Mr. Jackson has refused to even share. Mr. Thyne's and Mr. Jackson's opinions are not supportable and must be weighed against proper consideration of the facts and data associated with the occurrence of methane in the affected water wells, which are easily accessible to the AP through the Texas Railroad Commission's extensive investigation and hearing on the matter. Range could more directly disprove Mr. Thyne's and Mr. Jackson's "analyses" if they would share the information on which they rely, but they have failed to do so. Range has therefore been forced to defend itself against the superficial conclusions and theories contained in your article. As Range has expressed in the past, it is deeply unfortunate that Mr. Thyne and Mr. Jackson are not willing to back up their opinions with any real data. We truly hope that you and the AP take the time to more thoroughly examine all of the facts and data as it relates to this matter when considering future news coverage, in order to provide readers with a fair and accurate accounting of the topic.

Along with this letter, Range is providing a wealth of information that established that the theories underlying Mr. Thyne's and Mr. Jackson's conclusions have previously been considered and disproven, again all of which is public information. Enclosed please find two notebooks containing Range's March 7, 2011 response to the Railroad Commission's December 16, 2010 letter regarding the Lipsky complaint. The notebooks include correspondence between Range and the Railroad Commission [Appendix 1, Tabs 1 – 4]; Range's Closing Statement in the Commission Called Hearing [Appendix 1, Tab 6]; and various investigative reports and exhibits (including testimony before the Railroad Commission) provided by independent experts in the fields of geology, hydrogeology, petroleum engineering, and geochemical gas fingerprinting [Appendices 2 – 6].

The Railroad Commission thoroughly investigated Mr. and Mrs. Lipsky's claim, conducted a two-day evidentiary hearing, which unfortunately the AP did not attend, and ultimately determined that Range's activities had no impact on the water aquifer or the water wells in question. A number of highly qualified experts testified during the hearing and presented credible evidence that Range's activities were not responsible for any gas in the water well and that the methane in the area groundwater is a well-known naturally occurring event in this area of Parker County. Your article glossed over the Railroad Commission's ruling and failed to mention any of the evidence presented during the Railroad Commission hearing.

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It is also troubling to Range, because when we review Range's notes, you never appeared to reference the fact that Geoffrey Thyne had made any allegations, only that you had a copy of Mr. Jackson's claims that you were unwilling to allow Range to review before commenting on. It is very troubling to only discover allegations of wrongdoing against Range in your story after it is filed and not during your discussions with Range leading up to that reporting.

The Long History of Natural Gas in Area Water Wells

Your article (and apparently your sources) completely ignores the undisputed fact that natural gas, predominantly methane, is naturally present in the Trinity Aquifer in the area, a fact that has been commonly known for decades and is well documented. In fact, numerous state agencies, landowners and businesses have records of naturally occurring methane in the water aquifer for decades before Range drilled the Butler and Teal wells in 2009. Please note the photograph taken by a Parker County water well driller in 2005. [Appendix 3, Tab 26]. This water well was drilled four years before Range drilled either the Butler or Teal wells, and natural gas was so prevalent that it pushed the water out of the well and flared as shown by the photograph. This well is about 800 feet west of the Lipsky water well, and is known as the Hurst well.

There are several other documented instances in the immediate area in which natural gas was encountered in shallow water wells. For example, the Lake Country Acres public water supply (located about a mile east of the Lipsky property) has test results dating back to 1995 that show the presence of natural gas in the water. [Appendix 3, Tabs 29, 31-32]. Notably, the signage on the Lake Country Acres water storage tanks warns "DANGER: FLAMMABLE GAS" and "DANGER: NO SMOKING, NO OPEN FLAMES, NO SPARKS," warnings not typically associated with water wells or water storage. [Appendix 2, Tab 68; Appendix 3, Tab 32 (tab 25)]. Other uncontroverted evidence of the existence of methane in the water in the vicinity of the Lipsky property long before Range drilled the Butler or Teal wells is also included in these materials, and Range trusts that you will find such evidence to be significant.

Isotopic Analysis

Your article seems to imply that Mr. Thyne is the first person to consider isotopic analysis, but conspicuously absent from your article is a discussion of the isotopic and compositional analysis previously performed by Dr. Mark McCaffrey (B.A., Harvard; PhD., MIT), an independent geochemical gas fingerprinting expert with over 20 years of experience. In order to determine the source of the methane present in the water wells, Dr. McCaffrey analyzed gas samples from Range's Butler and Teal wells and 25 water wells, and utilized compositional and isotopic data from published scientific literature and a proprietary

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geochemical database. His geochemical fingerprinting analysis, together with all the other evidence presented during the Railroad Commission hearing in 2011, make it abundantly clear that the gas in the Lipsky well is a match to the much shallower Pennsylvanian Strawn formation, and not from the Barnett Shale located a mile below the aquifer. [Appendix 5].

Geology

Your article also ignores the geology of the area, which further demonstrates why methane may naturally migrate to shallow fresh water aquifers. Charles Kreidler, Ph.D, an independent hydrogeologist, demonstrated during the Railroad Commission hearing that the intersection of the Cretaceous formation (which is where the aquifer is found) and the gas-bearing Strawn formation represents an “angular unconformity” in which 150 million years of deposition have been lost to erosion, allowing the younger Cretaceous to abut the older Strawn directly and create a regional interconnection. Because the Strawn dips more steeply and in a different direction, the Strawn has the opportunity to communicate with the Cretaceous, thus allowing Strawn natural gas to enter the Cretaceous fresh water aquifer. [Appendix 2, Attachment 1, pp. 59-64].

The EPA Order and the EPA Investigation

Several aspects of the EPA’s Order were not reflected in the AP’s reporting, which have been raised by other websites, media outlets and legal experts:

- the EPA failed to consider that water wells in the area of the Lipsky water well experienced significant amounts of natural gas years before Range drilled the Butler and Teal wells;
- the EPA failed to evaluate the geology in the area and, specifically, below the Lipsky property;
- the EPA failed to consider that the Strawn formation is a methane bearing formation that exists beneath the Lipsky property;
- the EPA failed to investigate whether Strawn formation gas is thermogenic or biogenic;
- the EPA’s outside expert consultant, Dennis Coleman of Isotech, advised EPA that it needed to “evaluate the potential for other sources that would be

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thermogenic and the geology or structures that would store or transmit the gas from origin to aquifer to be certain” before it made a determination; and

- Dr. Doug Beak of the EPA, an environmental chemist, questioned the wisdom of issuing the Order based on the limited evidence:

“[T]his is not conclusive evidence because of the limited data set. ... The only way now to compare the data would be to make assumptions *to fill in data gaps* and I don’t believe we have enough experience at this site or data to do this at this time.”

[Appendix 1, Tab 6, pp. 16-17]. Your article failed to include any of these facts and your coverage of this same issue in January 2013 (“EPA changed course after oil company protested,” January 16, 2013) similarly omitted any meaningful discussion of these details, despite your conversations and email exchanges with Range leading up to your story being published. Instead, you wrote in January 2013 that “state regulators declared in March 2011 that Range Resources was not responsible” for the methane found in the private water wells, omitting the extensive research and evidence that led the Railroad Commission to that conclusion.

For these reasons (among others), a U.S. Congressman – Pete Olson (R-Tex.) – wrote in the *Houston Chronicle* (“Report on EPA and Range Resources omitted key facts,” January 22, 2013) that the story “falls well short of the AP’s claim to journalistic standards.” Representative Olson further explained:

“TRRC [Texas Railroad Commission] hearings revealed that gas contamination in water wells in Parker County has occurred since at least 2003, and the two water wells in question likely had gas contamination before Range Resources began drilling in 2009. Testimony also revealed that EPA staff members expressed doubt that the company could have caused or contributed to the alleged endangerment. These facts were absent from the AP article.

...

It was clear during TRRC’s hearing that EPA failed to conduct a comprehensive study. EPA ignored other possible migration pathways, including the shallower, nonproducing formation that most experts believed was the actual source of natural gas in the wells. TRRC examiners also found fault with the ‘fingerprinting’ tests that EPA

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conducted, which would have identified the formation where the gas originated. EPA incorrectly relied solely on the carbon fingerprint, when the appropriate geochemical parameters for fingerprinting were nitrogen and carbon dioxide.”

Increased Water Usage

One of the themes of your article is that the level of methane in the water wells has increased, but your story ignored the evidence presented to the Railroad Commission of increasing water usage in the area that is drawing down the aquifer. [Appendix 1, Tab 6, p. 11]. Dr. Kreitler presented evidence and testimony during the Railroad Commission hearing that increased pumping of water out of the aquifer associated with residential development in the area has caused the water level of the aquifer to significantly decline. The water level in this aquifer can be pulled down by even minimal amounts of pumping. As a result of increased pumping, waters and gas from the Strawn are more likely to mix with waters from the aquifer.

Unfortunately you and the AP have chosen to publish an article that paints Range as a culpable party based on “preliminary” opinions and sources who refuse to share any support for their opinions. The facts and data contained in the enclosed materials conclusively prove that Range’s activities did not impact the water aquifer, and should at least be given proper coverage as part of any balanced account of the story. Range understands the public interest in this matter, but it is essential for the public to be fully informed of the facts.

To that end, Range is willing to meet with you (or any other AP reporter) if there any questions concerning the enclosed materials and discuss the details of the “preliminary” opinions in your most recent article.

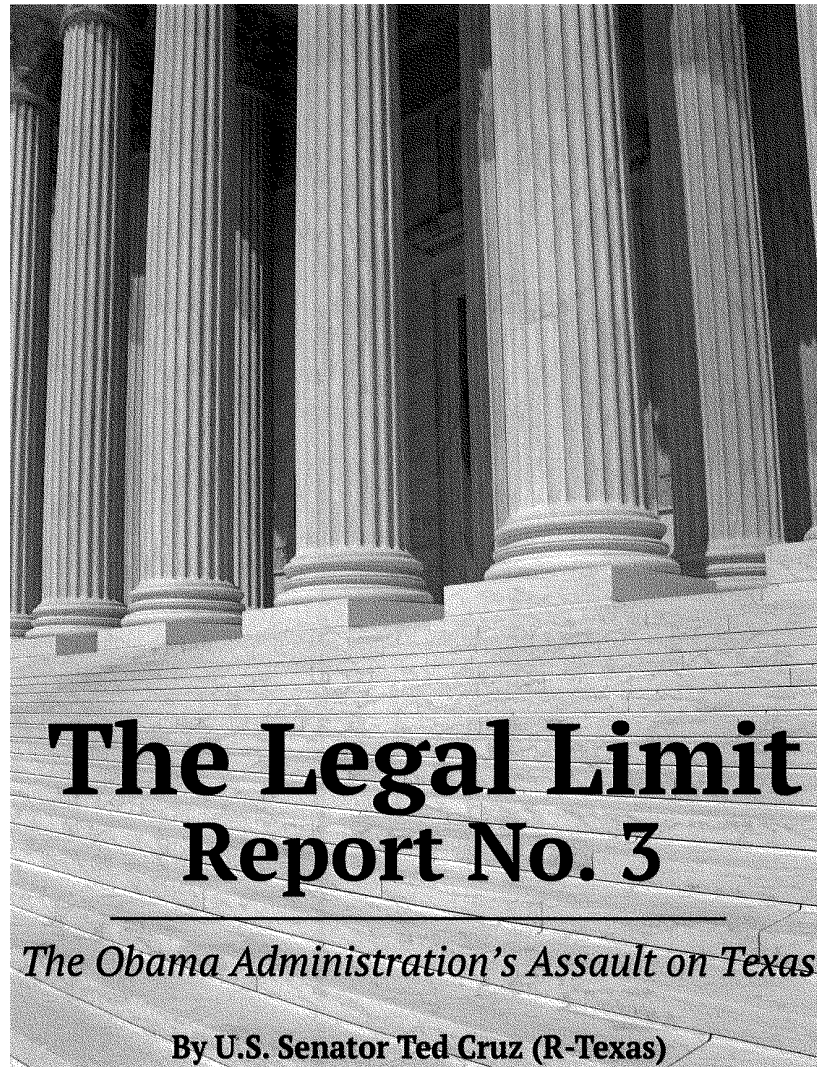
Very truly yours,



Andrew D. Sints

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Enclosures

REPORT SUBMITTED BY COMMITTEE CHAIRMAN SMITH



**THE LEGAL LIMIT: THE OBAMA ADMINISTRATION'S
ATTEMPTS TO EXPAND FEDERAL POWER**

Report No. 3: The Obama Administration's Assault on Texas

By U.S. Senator Ted Cruz (R-TX)
Ranking Member,
Senate Judiciary Subcommittee on The Constitution,
Civil Rights and Human Rights

The State of Texas has been forced to file multiple lawsuits to prevent the Obama Administration from encroaching on powers reserved for the States. There may be no better example of this Administration's disdain for States than its expansive view of federal power in litigation against the State of Texas. These ten cases show a consistent pattern of an Administration bent on displacing State sovereignty.

1. Obamacare's conditions on Medicaid funding are unconstitutional.

NFIB v. Sebelius, 132 S. Ct. 2566 (2012).

Texas joined 12 other States in arguing that Obamacare's individual mandate and conditions on Medicaid funding are unconstitutional. The Supreme Court in *NFIB v. Sebelius* voted 5-4 to rewrite the individual mandate as a tax, but it also ruled, by a vote of 7-2, that the Medicaid conditions placed on States were unconstitutional.

The Court agreed with the States' argument that withholding existing Medicaid funds from States that rejected expanding Medicaid "serve[d] no purpose other than to force unwilling States to sign up for the dramatic expansion in health coverage effected by the Act." 132 S. Ct. at 2603. As the seven-Justice majority concluded, "Congress may not simply conscript state [agencies] into the national bureaucratic army, but that is what it is attempting to do with the Medicaid expansion." *Id.* at 2606-07 (citation omitted; alteration in original).

2. The Department of Justice imposed unconstitutional preclearance on Texas's redistricting plans. *Texas v. United States*, 133 S. Ct. 2885 (2013).

Under Section 5 of the Voting Rights Act, the Obama Department of Justice opposed Texas's request for preclearance of the State's recently enacted redistricting plans. A three-judge panel of the District of D.C. adopted DOJ's arguments. But the U.S. Supreme Court vacated that decision after finding the Voting Rights Act preclearance coverage formula unconstitutional in *Shelby County v. Holder*, 133 S. Ct. 2612 (2013).

Shelby County explained that the coverage formula originally created in the 1960s was "based on decades-old data and eradicated practices." *Id.* at 2627. The formula, therefore, was no longer even attempting to remedy current constitutional violations, as required by law: "Our country has changed, and while any racial discrimination in voting is too much, Congress must ensure that the legislation it passes to remedy that problem speaks to current conditions." *Id.* at 2631.

3. **The Department of Interior imposed an unlawful moratorium on offshore drilling.** *Texas v. U.S. Dep't of Interior*, No. 2:10-cv-02949 (E.D. La.).

Texas sued the Department of Interior to overturn the Obama Administration's second drilling moratorium after the Deepwater Horizon disaster. The Administration re-imposed a drilling moratorium, after a nearly identical drilling moratorium had been invalidated in federal court just weeks earlier. See *Hornbeck Offshore Servs., L.L.C. v. Salazar*, 696 F. Supp. 2d 627 (E.D. La. 2010). The Administration acted unilaterally, rather than consulting with affected States and adequately assessing the economic consequences, as required by federal law. The Administration lifted the moratorium after the suit was filed, so the case was dismissed by agreement.

4. **Obama Administration's EPA tried to expand its power by regulating greenhouse gases.** *Texas v. EPA*, No. 12-1269 (U.S. Supreme Court).

On behalf of 14 States, the State of Texas challenged EPA's finding that it could regulate greenhouse gases under the Clean Air Act on the basis that greenhouse gas emissions contribute to man-made global warming. As Texas argued, EPA's finding never even determined or considered when climate conditions or greenhouse gas concentration levels endanger human health, as was required by law. EPA nevertheless implemented this regulatory agenda, which the U.S. Chamber of Commerce estimates is "the most burdensome, costly, far-reaching program ever adopted by a United States regulatory agency." *Coalition for Responsible Regulation, Inc. v. EPA*, 2012 WL 6621785, at *14 (D.C. Cir. Dec. 20, 2012) (Kavanaugh, J., dissenting from the denial of rehearing en banc).

The U.S. Supreme Court agreed to hear this case on February 24, 2014. *Coalition for Responsible Regulation, Inc. v. EPA*, 684 F.3d 102 (D.C. Cir. 2012), cert. granted, 134 S. Ct. 419 (2013).

5. **The Department of Education illegally withheld from Texas \$830 million in educational funding.** *Texas v. U.S. Dep't of Educ.*, No. 10-60793 (5th Cir.).

The Department of Education improperly rejected Texas's \$830 million share of the \$10 billion Education Jobs Fund. DOE misapplied federal law when it construed an amendment by Congressman Lloyd Doggett that imposed on Texas onerous standards for education funds that no other States had to satisfy. Congress subsequently repealed the Doggett Amendment, Texas received its share of education funds, and Texas dismissed its lawsuit challenging DOE's unlawful act.

6. **EPA tried to override Texas's program for incentivizing facilities to voluntarily comply with air permitting regulations.** *Texas v. EPA*, 690 F.3d 670 (5th Cir. 2012).

Texas prevented EPA from unlawfully stopping the Texas Flex Permits Program—which was created in 1994 under Democrat Governor Ann Richards. The Flex Permits Program is an air permitting program that incentivizes grandfathered operations, which pre-dated Texas's air permitting program that began in 1971, to voluntarily enter into this program. The Clean Air Act

gives EPA responsibility for identifying pollutants and setting national standards, while States retain the power to create permitting programs.

The 5th Circuit held EPA exceeded its power under the Clean Air Act when it tried to block Texas's air permitting program. The court noted that EPA did not disapprove of the program when it was created in 1994 or any of the subsequent five times the program was amended by Texas. The 5th Circuit concluded the federal government had encroached on powers reserved to the States: "It is clear that Congress had a specific vision when enacting the Clean Air Act: The Federal and State governments were to work together, with assigned statutory duties and responsibilities, to achieve better air quality. The EPA's final rule disapproving Texas's Flexible Permit Program transgresses the CAA's delineated boundaries of this cooperative relationship." 690 F.3d at 686.

7. **EPA unlawfully blocked Texas's air permitting program.**
Luminant Generation Co. v. EPA, 675 F.3d 917 & 490 F. App'x 657 (5th Cir. 2012).

More than three years after it was required to act under federal law, EPA disapproved of Texas's Pollution Control Project Standard Permit—that is, its plan to implement federal air quality standards. Under the Clean Air Act, States must adopt and administer plans based on federal standards set by EPA. The 5th Circuit vacated EPA's unlawful disapproval of Texas's plan, finding that "EPA created out of whole cloth" three "extra-statutory standards" while ignoring this "cooperative federalism regime that affords sweeping discretion to the states to develop implementation plans and assigns to the EPA the narrow task of ensuring that a state plan meets the minimum requirements of the Act." 675 F.3d at 932.

8. **EPA illegally imposed a cross-state air pollution rule.**
EPA v. EME Homer City Generation L.P., No. 12-1182 (U.S. Supreme Court).

EPA announced a new Cross-State Air Pollution Rule affecting 27 States, including Texas. But rather than allow these States to implement these standards as required by the Clean Air Act, EPA immediately imposed a federal implementation plan on all 27 States. The D.C. Circuit ruled for Texas and vacated EPA's rule as exceeding its statutory authority. *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7 (D.C. Cir. 2012). The U.S. Supreme Court heard the case on December 10, 2013. 133 S. Ct. 2857 (2013).

9. **Department of Commerce agency unlawfully promulgated an "emergency" fishing rule in the Gulf of Mexico.** *Texas v. Crabtree*, 2013 WL 2407674 (S.D. Tex. 2013).

An agency within the Department of Commerce, the National Marine Fisheries Services, tried to issue an "emergency" rule shortening the red snapper recreational fishing season in federal waters in the Gulf of Mexico. Texas alleged, and the federal government conceded, that this rule was promulgated simply because federal officials objected to Gulf States setting different rules governing red snapper fishing in their State waters. The Southern District of Texas vacated the emergency federal red snapper rule, finding that States are permitted to govern their own waters and the federal government did not use the procedures required by law to implement an emergency regulation. The court issued a strongly-worded opinion, describing the federal

government's arguments as "circular," "totally unacceptable," and "a mockery," and concluding that the federal government was "robbing from the poor to give to the rich." 2013 WL 2407674, at *9-10, *12.

10. Federal energy agency illegally ordered pipelines to report intrastate business activities. *Tex. Pipeline Ass'n v. FERC*, 661 F.3d 258 (5th Cir. 2011).

Texas successfully challenged orders by the Federal Energy Regulatory Commission that required intrastate natural-gas pipelines to make daily Internet posts about their intrastate business activities. The 5th Circuit agreed with the Railroad Commission of Texas that FERC's orders exceeded its jurisdiction under the Natural Gas Act. The court chided the federal government for overstepping its authority, noting that "[t]his distinction between interstate and intrastate natural gas transactions, historically, has always been recognized." 661 F.3d at 263.

* * *

These ten cases will not be the final chapter in the Obama Administration's assault on Texas. Texas has additional lawsuits pending against this Administration, including:

- A challenge to the Equal Employment Opportunity Commission's unlawful hiring guidelines that prevent employers, like Texas, from categorically excluding convicted felons from employment (*Texas v. EEOC*, No. 5:13-cv-0255-C (N.D. Tex.));
- A lawsuit to require EPA to designate areas of the country as complying with national air quality standards, after EPA missed the deadlines for doing so under the Clean Air Act (*North Dakota v. EPA*, No. 1:13-cv-00109-CSM (D.N.D.));
- An action brought by 12 States against EPA, seeking to gain access under the Freedom of Information Act to documents between EPA officials and environmental groups (*Oklahoma v. EPA*, No. 5:2013-cv-00726 (W.D. Okla.));
- A challenge to Title II of Dodd-Frank, which gives the Treasury Secretary and the Federal Deposit Insurance Corporation unilateral authority to take over and liquidate large financial institutions (*State Nat'l Bank of Big Spring v. Lew*, No. 1:12-cv-01032 (D.D.C.)—notice of appeal filed with D.C. Cir.); and
- A case challenging EPA's designation of Wise County as an ozone non-attainment area (*Texas v. EPA*, No. 12-1316 (D.C. Cir.)).

As Americans continue to suffer from a struggling economy, exacerbated by the misguided and botched Obamacare legislation, the worst thing the federal government could do is burden States that have managed to achieve economic growth in spite of the stifling federal regulatory environment. Unfortunately Texas must constantly defend itself against President Obama's expansive view of federal power, and I applaud Texas's legal challenges under the leadership of Attorney General Abbott against this Administration's assault on State sovereignty. I hope others will follow his lead.



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LETTER SUBMITTED BY COMMITTEE RANKING MEMBER EDDIE BERNICE JOHNSON



February 3, 2014

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Air Alliance Houston is a
501(c)(3) organization.
airalliancehouston.org

The Honorable Bernice Johnson
Ranking Minority Member
Committee on Science, Space and Technology
U.S. House of Representatives
394 Ford Building
Washington, DC 20515

Re: "Examining the Science of EPA Overreach" Hearing

Dear Representative Johnson:

On behalf of Air Alliance Houston, the leading grassroots air quality, environmental health and community advocacy organization in the Houston region, I am writing to express our fullest support for a continuing strong and aggressive Environmental Protection Agency (EPA) role in the enforcement of federal environmental laws in Texas. Without continuation of such a role by the EPA, it is problematic whether Texas will routinely strive to attain and maintain compliance with applicable air quality standards vital for the protection of our environment, our public health and our economy.

Since the federal Clean Air Act (CAA) was enacted in 1970, the EPA has worked diligently to reduce air pollution and protect air quality across the entire United States by setting clean air standards, adopting regulations, enforcing standards and regulations, and providing technical and financial assistance to state efforts toward reducing air pollution. Even though the CAA is a federal law regulating air pollution across the entire country, it recognizes that states have an important lead role in carrying out its requirements. Accordingly, the EPA allows a state, such as Texas, to elect responsibility for compliance with and regulation of federal requirements within its own borders by adopting and enforcing an EPA-approved state implementation plan (SIP). The state receives significant funding assistance from the EPA to implement and enforce the regulations, programs and policies prescribed in its SIP.

Texas fully availed itself of this voluntary responsibility by aggressively seeking and receiving delegation from the EPA of all air permitting authority within its borders. In doing so, Texas agreed to all the applicable CAA conditions: (1) that it may have stronger air pollution controls, but not weaker pollution controls than the minimum criteria set for the whole country by the EPA; (2) that the EPA retains over-sight authority over all state-delegated programs, and must approve each SIP; (3) that if a SIP does not meet the necessary CAA requirements, it is not approvable by the EPA; as a result of any such SIP disapproval, the EPA can issue sanctions against the state, and, if necessary, resume its ultimate responsibility under the CAA for air permitting and enforcement; and (4) that the EPA retains oversight of all state-issued air permits to ensure that they meet minimum national standards, and if they do not, that the EPA shall object to its

issuance, and, if the state agency fails to correct the deficiencies, then the EPA itself shall issue or deny the permit.

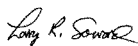
For several years now, Texas has continued to receive all the benefits of its delegated authority, including the significant amounts of federal funding attached, while, on numerous occasions, failing or refusing to abide by the commitments and responsibilities it agreed to when it sought and received the delegation. When the EPA has carried out its statutory duties and responsibilities under the FCAA --- setting national air quality standards; adopting regulations; enforcing standards and regulations; and retaining over-sight authority over all state-delegated programs by reviewing/approving SIPs and ensuring that all state-issued air permits meet minimum national standards --- Texas has challenged the EPA at every turn. While other states have routinely participated in the development of new federal initiatives and regulations, and the EPA has incorporated experiences and lessons learned from existing state programs, Texas has chosen not to participate. Instead, Texas has doggedly opposed almost every new federal environmental standard and regularly and routinely sued the EPA rather than work with the agency to address reasonable concerns and find consensus solutions.

The EPA has done nothing more than simply carry out its statutory duties and responsibilities under the FCAA --- duties and responsibilities Texas understood and agreed to when it accepted the administration of the federal clean air program within its borders. What we really have in Texas is nothing more than a federal agency, the EPA, telling a state, Texas, that it must comply with federal laws, as that state committed to do when it accepted the responsibilities of administering the FCAA within its borders. Likewise, it is the federal agency, the EPA, undertaking the duties, responsibilities and obligations it is charged with under federal law when a state does not meet the statutory and regulatory requirements that state agreed to uphold when it accepted administration of the federal clean air program.

Yet, despite all the bureaucratic conflict, litigation and resulting stalemate, progress has been made in cleaning up our air in Texas, primarily for two reasons. First, because the continuing Texas/EPA disputes foster regulatory uncertainty and have stalled some operations and planned expansions, many Texas industries have quietly worked behind the scenes with the EPA to ensure their compliance with all FCCA requirements and EPA regulations. Secondly, and most importantly, the clean air strategies that are currently working in Texas have been put in place over the years primarily because of federal requirements to do so and the reality of federal authority to act if the State fails to effectively act. As a former Commissioner of the Texas Commission on Environmental Quality, I can attest that had the EPA not been actively overseeing Texas' clean air efforts over the past decade, we would not have the improved air quality we see today. Further, only if the EPA continues its strong and active role will we have any real assurance that Texas will continue to strive further to clean up our air consistent with all applicable federal requirements. Texas can and should be the national leader in developing strategies and solutions to address environmental issues, but until it fully and freely accepts that responsibility, a strong and active EPA role must continue if we are to achieve a cleaner and healthier environment and maintain a strong and growing economy in Texas.

Thank you for allowing us to submit these comments.

Sincerely,



Larry R. Soward
President, Board of Directors

cc: The Honorable Lamar Smith, Chairman
House Committee on Science, Space and Technology

LETTER SUBMITTED BY COMMITTEE RANKING MEMBER EDDIE BERNICE JOHNSON



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February 5, 2014

Honorable Bernice Johnson
Ranking Minority Member
House Committee on Science, Space, and Technology
Minority Office
394 Ford Office Building
Washington, D.C. 20515

Dear Ms. Bernice Johnson,

We understand that the House Committee on Science, Space, and Technology is holding a hearing on, "Examining the Science of EPA Overreach: A Case Study in Texas." We respectfully request that the Committee address some real scientific issues that directly affect the health and quality of life of communities downwind from chemical plants and refineries in Texas and other states. More specifically, an accumulation of research and data collected within the last ten years shows that the petrochemical industry releases far more pollution than is reported to the U.S. Environmental Protection Agency (USEPA), or to the Texas Commission on Environmental Quality (TCEQ) and other state agencies.

For example, the USEPA's review of emissions data from 138 refineries estimated that the industry released more than 40 million pounds of hazardous air pollutants (HAPS) in 2010 – nearly three times the 14 million pounds reported to the Toxics Release Inventory the same year.¹ According to EPA's evaluation, Texas refineries alone emitted almost 9.7 million pounds of HAPS, more than twice the amount reported to either the Toxics Release Inventory or to the state's annual emission inventory in 2010.² (See tables A and B). Hazardous air pollutants include benzene, a known carcinogen, and hydrogen cyanide, which the Centers for Disease Control has identified as an asphyxiant sometimes used in chemical warfare.

The EPA data was developed through an Information Collection Request to help the Agency determine whether to require additional emission controls under Section 112 of the Clean Air Act. The ICR required emissions testing for certain pollutants — like hydrogen cyanide — that are almost never actually monitored at refineries, and invited (but did not require) refineries to use enhanced protocols

¹ We compared all Hazardous Air Pollutants reported to the Refinery ICR against all Hazardous Air Pollutants reported to EPA's Toxic Release Inventory. This comparison excludes a few Clean Air Act Hazardous Air Pollutants that were included in the ICR data, but which are not listed as reportable pollutants to the Toxic Release Inventory.

² We compared all Hazardous Air Pollutants reported to the Refinery ICR against all Hazardous Air Pollutants reported to Texas' emission inventory database.

to estimate equipment leaks and other emission sources that are often overlooked when refineries report their emissions to the Toxics Release Inventory or to state agencies.

The discrepancy confirms results obtained in other studies that compare reported emissions to the amounts actually measured in the field. For example, a 2010 study at the Shell Deer Park refinery in Houston measured benzene and volatile organic compounds from tanks at levels ten times higher than amounts based on the “emission factors” that many refineries rely upon to report such releases. ³Similar results were obtained at an evaluation of the BP Texas City refinery in 2009 performed by the National Physical Laboratory. Both the Texas City and the Shell Deer Park studies utilized differential absorption “Light Detection and Ranging” (LIDAR) technology that measures the concentration of various pollutants based on their light absorption capacity. We have attached an appendix that includes citations to these and other studies that the Committee might find to be of interest.

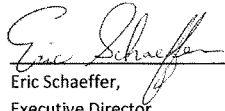
Why do these investigations find so much more pollution than refineries report? Because so many industry reports assume that operating conditions are ideal and pollution controls are working perfectly, which is far from the day to day reality at any manufacturing operation. The emission factors that are supposed to reflect leak rates for carcinogens like benzene or butadiene are rated “D” or “F,” which make them useless for estimating and reporting emissions. Testing of many hazardous air pollutants (like hydrogen cyanide, in the example above) is so infrequent as to be virtually nonexistent, or is conducted under conditions designed to minimize emissions.

The existing network of air quality monitors maintained by TCEQ does not provide reliable information about the toxins that may accumulate in neighborhoods next to petrochemical plants. More accurate emissions reporting can help fill that gap, by providing information that can be used to identify and estimate the potential exposure to communities that live downwind. Better data can also help uncover cost-effective opportunities to reduce such pollution, e.g., by improving combustion efficiency and plugging leaks.

Hundreds of thousands of Americans in Texas and other states live, work, or go to school in neighborhoods right next to refineries and chemical plants, and deserve to know what they are breathing and how these chemicals may affect their health. We hope the Science Committee can help find answers to these important questions.

³ Emission factors are a mathematical constant (e.g. pounds per unit of fuel combusted or throughput), derived from source testing or engineering calculations, that define the relationship between emissions of a given contaminant and the amount of raw material processed, the amount of fuel burned for heat or steam and its heat value and other factors. The factors are used to estimate emissions by multiplying the emission factor constant with the process conditions it is related to.

Sincerely,



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John Walke,
Clean Air Director, NRDC

Adrian Shelley,
Executive Director, Air Alliance Houston

Jane Williams,
California Communities Against Toxics

Enclosures

cc: The Honorable Lamar Smith
Chairman on Science, Space, and Technology

Remote Sensing Studies Demonstrate that Refinery Emissions are Underestimated.

Emissions from tanks, wastewater treatment plants, and flares cannot be measured using traditional methods because the releases are not vented through a discreet point or because the conditions, like at a flare tip, make it impossible to use traditional measurement techniques. Historically, facilities have used emission factors to calculate and report these emissions. But well established remote sensing technology, including Differential Absorption LIDAR (DIAL) and Passive Fourier Transform Infrared (PFTIR), has consistently shown that these emission factors can underestimate emission factors by several orders of magnitude or more. Both DIAL and PFTIR utilize the unique spectral signature of pollutants to measure its concentration in a plume of air. The main difference between the two is that PFTIR measures the infrared light emitted by the pollution and DIAL measures how the pollution absorbs light from an external source. Emission factors are a mathematical constant (e.g. pounds per unit of fuel combusted or throughput), derived from source testing or engineering calculations, that define the relationship between emissions of a given contaminant and the amount of raw material processed, the amount of fuel burned for heat or steam and its heat value and other factors. The factors are used to estimate emissions by multiplying the emission factor constant with the process conditions it is related to.

DIAL: Three separate DIAL studies at refineries in North America have shown that emission factors for tanks, wastewater plants, flares, and several other processes significantly underestimate emissions. DIAL measures pollution by emitting a pulsed laser beam through a column of air, and measuring the light that is reflected back to a sensor. Because different compounds like benzene, ethylene, and toluene each absorb and reflect light in different amounts and at different wavelengths, the sensor is able to determine the concentration and ultimately the mass of a specific compound.

1. DIAL Measurement of Emissions at BP Texas City (EPA 2010) – available at http://www.epa.gov/ttn/atw/bp_dial_review_report_12-3-10.pdf

The National Physical Laboratory conducted a DIAL test at the BP Texas City Petroleum Refinery in 2008. EPA issued a review of the data and found emissions from several units exceeded estimated emissions calculated using emission factors:

Table 1: Comparison of DIAL Results and Estimated Emissions¹

Source	Source Description	Compound	Average Emissions Measured Using DIAL ² (lb/hr)	Estimated Emissions Using Standard Estimating Procedures with Actual Conditions at the Time of the DIAL Test (lb/hr)
Tanks 1020, 1021, 1024, and 1025	External Floating Roof tanks storing crude oil	VOC	6.4	1.3 - 1.9
Tanks 1052, 1053, and 1055	External Floating Roof tanks storing crude oil	VOC	16.3	1.8 - 2.3

¹ EPA, CRITICAL REVIEW OF DIAL EMISSIONS TEST DATA FOR BP PETROLEUM REFINERY IN TEXAS CITY, TEXAS, EPA 453/R-10-002, ES-2, Table 1 (Nov. 2010).

² /d. (the DIAL results are related as "Average DIAL flux lb/hr," the flux is the average emissions over a given period of time).

Source	Source Description	Compound	Average Emissions Measured Using DIAL ² (lb/hr)	Estimated Emissions Using Standard Estimating Procedures with Actual Conditions at the Time of the DIAL Test (lb/hr)
Tanks 501, 502, 503, and 504	External Floating Roof tanks storing light distillates	VOC	8.6	3.0 - 3.9
Tank 43	Vertical Fixed Roof tank storing fuel oil #6	VOC	2	1.3
			9.3	1.3
Tanks 60, 63, 11, 12, 18, 42, 61, and 65	Vertical Fixed Roof and External Floating Roof tanks storing various products	VOC	9	0.6 - 9.1
Tanks 54, 55, 56, and 98	Vertical Fixed Roof and External Floating Roof tanks storing various products	VOC	3.1	0.3 - 9.7
Tanks 53 and 55	Vertical Fixed Roof tanks storing diesel fuel	VOC	23.8	4.8 - 5.2
F-8 EBU	Activated sludge unit	VOC	30	22 - 55
API separator	API separator	VOC	7	ND ¹
Wastewater vents	Vents from collection system	VOC	9	ND
Flare #6	Ground flare	VOC	13	17
Temporary flare	Temporary flare	VOC	6	100 - 300
ULC flare	Ultracracker flare	VOC	192	3 - 25
Coker Unit C	Coker	VOC	18	ND
Coker Unit C	Coker while cutting coke	Benzene	1.8	ND

Based on these measurements EPA concluded that:

- “For storage tanks, the average DIAL results generally are higher than [emission estimates calculated from emission factors and emission inventory reports].”³
- “On average, the DIAL results for external floating roof tanks storing crude oil were at least 3 to 7 times higher than estimates that used conditions at the time of the DIAL testing.”⁴
- “The average emissions from DIAL testing of the ultracracker flare were 6 times higher than the average hourly emission rate in the 2007 emission inventory report (192 lb/hr versus 31 lb/hr). Estimated emissions are even lower (3 lb/hr to 25 lb/hr) when using the actual flow and composition data during the DIAL test period and assuming a control efficiency of 98 percent.”⁵
- “Over the three days of DIAL testing it appears the ultracracker flare efficiency was highly variable between 50 and 90 percent.”⁶

³ *Id.* at ES-1

⁴ *Id.* at ES-4

⁵ *Id.* at ES-5

⁶ *Id.* at ES-5

2. DIAL Measurement of Emissions at Houston Ship Channel Refinery (City of Houston 2011) – available at <http://www.greenhoustontx.gov/dial20110720.pdf>

The City Houston conducted a comprehensive survey project regarding emissions from a combined refinery and chemical plant complex in the Houston Ship Channel area using DIAL and found:

Table 2: Comparison of DIAL measurements with estimated emissions⁷

Source	Compound	Average Emissions Measured Using DIAL (lb/hr) ⁸	Estimated Emissions Using Standard Estimating Procedures with Actual Conditions at the Time of the DIAL Test (lb/hr)
Southwest Tanks A-333, A-330, A-332	VOC	20.18	2.15
Southwest Tanks A-325, A-326	VOC	13.15	0.56
South West Tanks AP-17	VOC	42.6	0.46
Southwest Tanks AP-17, AP-16	VOC	51.53	0.39
West Tanks A-310, U-324-R1	VOC	15.8	0.43
CR-3	VOC	27.37	20.67
East Tanks J-327; J-328, J-331, J-332	VOC	37.05	9.52
East Tanks J-327; J-328	VOC	18.07	0.27
East Tanks J-327, J-328, J-331, J-332	VOC	35.98	9.53
Northwest Wastewater	VOC	1192	11
Northwest Wastewater	Benzene	7.3	0.11
East Wastewater	VOC	43.35	5.88
Tanks T-OL913 and T-OL920	Benzene	19.76	2.00
ACU BEU	Benzene	16.77	3.41
ACU BEU	VOC	77.48	2.49
Tanks South of ACU BEU D-350, D-351, D-381, D-352	Benzene	41.13	0.44

Based on these findings the City of Houston Bureau of Pollution Control and Prevention concluded:

- “The survey indicates that measured emissions from process areas and tanks exceed the emission factor estimates for benzene and VOCs. . . Emission factors used to estimate emissions from the Southwest Tanks VOCs produced the most potential underestimated emissions compared to the DIAL measured emissions, off by a factor of 132. The comparison of benzene emission factor estimates to the DIAL measured emissions produced potential underestimated emissions ranging from a factor of 5 at the Aromatics Concentration Unit/Benzene Extraction Unit area, to a factor of 93 for the tanks located south of the ACU/BEU area.”⁹

⁷ LOREN RAUN AND DAN W. HOYT, CITY OF HOUSTON, BUREAU OF POLLUTION CONTROL AND PREVENTION, MEASUREMENT AND ANALYSIS OF BENZENE AND VOC EMISSIONS IN THE HOUSTON SHIP CHANNEL AREA AND SELECTED SURROUNDING MAJOR STATIONARY SOURCES USING DIAL (DIFFERENTIAL ABSORPTION LIGHT DETECTION AND RANGING) TECHNOLOGY TO SUPPORT AMBIENT HAP CONCENTRATIONS REDUCTIONS IN THE COMMUNITY (DIAL PROJECT), 92-93, Table 4.4(a) (Jul. 2011) [Hereinafter Shell Deer Park DIAL Study].

⁸ See *supra* note 2.

⁹ Shell Deer Park DIAL Study, at 1.

- “If DIAL costs could be reduced, perhaps by having a unit built for dedicated North American service (reducing transportation and travel costs), the potential for significant savings from emissions reductions suggest that the feasibility of conducting comprehensive DIAL surveys at similar sites would significantly improve.”¹⁰
- “Dial emissions were verified by the [open path Fourier transform infrared (FTIR) measurement] concentrations”¹¹
- “DIAL was shown to be an effective technology for the measurement of mass flux from fugitive, non-point emission sources.”¹²

3. DIAL Measurement of Emissions at Alberta, Canada Refinery (Alberta Research Council 2006) – on file with EIP

The Ontario Ministry of Environment and Alberta Environment contracted the Alberta Research Council to take DIAL measurements of emissions from a refinery in Alberta Canada.

Table 3: Comparison of VOC estimates and DIAL measurements¹³

	Canadian National Pollution Release Inventory 2004 (metric ton/year)	DIAL VOC Measurements (metric ton/year)
Stack or point release	98.69	Not measured
Storage or handling	153.00	5,090
Fugitive releases	407.10	4,880
Spills	11.50	Not measured
Total	670.40	9,970

Table 4: Comparison of Estimated and Measured Benzene Emissions¹⁴

	Canadian National Pollution Release Inventory 2004 (metric tons/y)	DIAL Measurements (metric tons/y)
Stack or point release	0.039	Not measured
Storage or Handling	0.265	25.4
Fugitive releases	1.850	14.7
Spills	0.061	Not measured
Total	2.215	40.1

¹⁰ *Id.* at 99.

¹¹ *Id.* at 98.

¹² *Id.* at 1.

¹³ ALLAN CHAMBERS AND MEL STROSHER, REFINERY DEMONSTRATION OF OPTICAL TECHNOLOGIES FOR MEASUREMENT OF FUGITIVE EMISSIONS AND FOR LEAK DETECTION, 17, Table. 8 (2006).

¹⁴ *Id.* at 18, Table 9.

Based on these measurements, the report concluded:

- Emissions from storage tanks accounted for over 50% of the total site fugitive emissions of both C2+ hydrocarbons and benzene.¹⁵
- The coker area was responsible for over 40 % of the total site emissions of methane and was also a significant source of both C2+ hydrocarbons and benzene emissions.¹⁶
- The cooling towers accounted for about 13% of the sites emissions of C2+ hydrocarbons.¹⁷
- Based on the DIAL measurements, fugitive emissions losses of methane, C2+ hydrocarbons from the refinery surveyed represent lost revenue in the order of \$3.2 million per year (assuming product value of \$40/bbl)¹⁸

PFTIR Flaring Studies: EPA has directed several refining facilities to measure flare combustion efficiency using PFTIR. PFTIR analyzes the infrared light emitted by the gases released at the flare. Each compound emits a unique pattern of infrared light. Based on this, the analyzer can determine the concentration of carbon dioxide at the flare tip.

These tests found that adding too much steam, a common practice at refineries, reduces combustion efficiency and can even extinguish the flare. Furthermore, the steam threshold varied based on the hydrogen content, heat value, volume, and nitrogen content of the waste gas.

Table 5: Combustion Efficiency Measured at Several Flares Using PFTIR During Performance Testing.

Test Location	PFTIR Measured Combustion Efficiency	Actual Steam to Vent Gas Ratio (lb/lb)	Pages
Marathon Texas City Refinery ¹⁹	62%	6.01	6-24 – 6-27
	62%	5.76	
	68%	5.51	
	89%	1.80	
	78%	2.00	
	82%	0.70	
Marathon Detroit Refinery ²⁰	81%	4.0	33
	95%	2.1	37
	91%	2.2	41
Flint Hills Resources ²¹	83%	5.0	Appendix pg. 39
	89%	3.3	Appendix pg. 42
	84%	4.0	Appendix pg. 48
	79%	8.5	Appendix pg. 52

¹⁵ *Id.* at 27

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ MARATHON PETROLEUM COMPANY, LLC, PERFORMANCE TEST OF A STEAM-ASSISTED ELEVATED FLARE WITH PASSIVE FTIR (May 2010).

²⁰ MARATHON PETROLEUM COMPANY, LLC, PERFORMANCE TEST OF A STEAM-ASSISTED ELEVATED FLARE WITH PASSIVE FTIR – DETROIT (Nov. 2010).

²¹ FLINT HILLS RESOURCES PORT ARTHUR, LLC, PFTIR TEST OF STEAM-ASSISTED ELEVATED FLARES – PORT ARTHUR (June 2011).

Test Location	PFTIR Measured Combustion Efficiency	Actual Steam to Vent Gas Ratio (lb/lb)	Pages
	88%	6.4	Appendix pg. 57
	85%	5.2	Appendix pg. 59
Shell Deer Park ²²	57.1%	4.61	14
	79.8%	5.15	14
	87.9%	6.92	17
John Zink Test Flares ²³	75%	0.80	10
	60%	1.8	15
	87%	1.4	16

²² SHELL GLOBAL SOLUTIONS (US) INC., SHELL DEER PARK REFINING LP DEER PARK REFINERY EAST PROPERTY FLARE TEST REPORT (Apr 2011).

²³ DAVID T. ALLEN AND VINCENT M. TORRES, TCEQ 2010 FLARE STUDY FINAL REPORT (Aug. 2011).

Table A

Refinery Emissions of Hazardous Air Pollutants, 2010 EPA Information Collection Request (ICR) Data v. Amounts Reported to Toxics Release Inventory (TRI)				
STATE	COUNTY	FACILITY NAME	ICR (lbs.)	TRI (lbs.)
AK	Fairbanks North Star Borough	Flint Hills Resources Alaska LLC.	30,840	28,126
AK	Kenai Peninsula Borough	Tesoro Alaska Petroleum Company Kenai Refinery	50,193	42,967
AL	Mobile	Shell Chemical Company	102,032	25,884
AL	Tuscaloosa	Hunt Refining Co A Corporation	44,186	42,577
AR	Union	Lion Oil Company	230,628	125,847
CA	Contra Costa	Chevron Products Co. Richmond Refinery	481,650	88,409
CA	Contra Costa	ConocoPhillips San Francisco Area Refinery At Rodeo	119,083	35,895
CA	Contra Costa	Shell Oil Products Us - Martinez Refinery	300,165	123,106
CA	Contra Costa	Tesoro Refining And Marketing	87,067	33,305
CA	Kern	Big West Oil LLC (Prev. Shell Oil Products Us)	1,604	1,350
CA	Kern	Kern Oil & Refining Company	22,286	1,640
CA	Kern	San Joaquin Refining Company Incorporated	15,428	24
CA	Los Angeles	BP Carson Refinery	231,318	72,822
CA	Los Angeles	Chevron USA Products Co.	135,412	58,365
CA	Los Angeles	ConocoPhillips Carson Plant	56,681	27,590
CA	Los Angeles	Edgington Oil Company	1,129	1,791
CA	Los Angeles	Lunday-Thagard Oil Co	1,337	1,762
CA	Los Angeles	Mobil Oil Corp	222,247	119,024
CA	Los Angeles	Paramount Petroleum Corp	4,951	2,673
CA	Los Angeles	Shell Oil Products US - Wilmington	84,190	45,568
CA	Los Angeles	Union Oil Co Los Angeles Refinery	229,957	37,224
CA	Los Angeles	Valero Refining Co. - Wilmington (Prev. Ultramar Inc.)	92,016	13,126
CA	Los Angeles	Valero Wilmington Asphalt Plant	3,426	779
CA	San Luis Obispo	ConocoPhillips Santa Maria Facility- Refinery	6,700	5,770
CA	Solano	Valero Refining Co California Benicia Refinery	243,439	180,632
CO	Adams	Suncor Denver Refinery	290,281	29,739
DE	New Castle	Valero Refining Co. (Prev. Motiva Enterprises LLC)	10,492	13,369
GA	Chatham	Citgo Asphalt Refining Company	20,878	7,196
HI	Honolulu	Chevron Products Co - Hawaii Refinery	165,094	55,113
HI	Honolulu	Tesoro Hawaii Corporation Refinery-Kapolei	54,421	62,902
IL	Crawford	Marathon Petroleum Co LLC	469,771	161,418
IL	Madison	ConocoPhillips Co Wood River Refinery	636,428	229,667
IL	Will	Citgo Petroleum Corp	230,624	39,583
IL	Will	ExxonMobil-Joliet Refinery	618,689	88,063
IN	Lake	BP Products North America Inc, Whiting Refinery	2,498,287	367,359
KS	Butler	Frontier El Dorado Refining Company	380,340	154,779
KS	McPherson	National Cooperative Refinery	142,310	226,922
KS	Montgomery	Coffeyville Resources Refining & Marketing	462,783	55,420
KY	Boyd	Marathon Ashland Petroleum/Catlettsburg	516,145	171,967
KY	Pulaski	Somerses Refinery	381	3,723

Refinery Emissions of Hazardous Air Pollutants, 2010 EPA Information Collection Request (ICR) Data v. Amounts Reported to Toxics Release Inventory (TRI)				
STATE	COUNTY	FACILITY NAME	ICR (lbs.)	TRI (lbs.)
LA	Bossier Parish	Calumet Lubricants Co. LP - Princeton	11,690	7
LA	Caddo Parish	Calumet Shreveport Lubricants And Waxes LLC/Shreveport Refinery	182,792	112,546
LA	Calcasieu Parish	Calcasieu Refining Co	28,846	28,678
LA	Calcasieu Parish	Citgo Petroleum Corporation	1,477,331	363,026
LA	Calcasieu Parish	ConocoPhillips Co - Lake Charles Refinery	356,412	141,923
LA	Calcasieu Parish	Pelican Refining Company	1,964	1,695
LA	East Baton Rouge Parish	ExxonMobil Baton Rouge	799,473	581,193
LA	Plaquemines Parish	BP Oil Company Alliance Refinery	397,561	144,673
LA	St. Bernard Parish	ExxonMobil Refinery Complex	550,364	267,754
LA	St. Bernard Parish	Murphy Oil USA Inc Meraux Terminal	293,774	67,038
LA	St. Charles Parish	Motiva Enterprises LLC - Norco Refinery	449,819	188,452
LA	St. Charles Parish	Valero Saint Charles Refinery	136,380	39,934
LA	St. James Parish	Motiva Enterprises LLC/Convent Refinery	80,054	93,046
LA	St. John the Baptist Parish	Marathon Ashland Petroleum LLC	232,304	251,351
LA	St. Landry Parish	Valero Refining Co/Krotz Springs Refinery	300,631	50,317
LA	Webster Parish	Calumet Lubricants Co - Cotton Valley Refinery	31,597	34,913
LA	West Baton Rouge Parish	Placid Refining Co LLC/Port Allen Refinery	407,261	28,523
MI	Wayne	Marathon Ashland Petroleum	279,723	129,753
MN	Dakota	Flint Hills Resources LP	497,738	147,934
MN	Washington	Marathon Petroleum Co LLC Saint Paul Park Refiner	129,694	105,947
MS	Jackson	Chevron Texaco Products Company, Pascago	2,262,522	544,790
MS	Jones	Hunt Southland Refining Company	12,749	26,692
MS	Warren	Ergon Refining Inc	26,193	39
MT	Cascade	Montana Refining Company	25,217	114,125
MT	Yellowstone	Cenex Inc Laurel Refinery	1,717,732	93,779
MT	Yellowstone	Conoco Incorporated Refinery	846,343	58,903
MT	Yellowstone	Exxon Billings Refinery	370,464	64,532
ND	Morton	Tesoro - Mandan	641,176	376,658
NJ	Gloucester	Citgo Asphalt Refining Company	47,495	41
NJ	Gloucester	Valero Refining Co	515,157	194,795
NJ	Middlesex	Amerada Hess Corp Packaging	60,006	34,890
NJ	Middlesex	Chevron Products Company	2,944	103

Refinery Emissions of Hazardous Air Pollutants, 2010 EPA Information Collection Request (ICR) Data v. Amounts Reported to Toxics Release Inventory (TRI)				
STATE	COUNTY	FACILITY NAME	ICR (lbs.)	TRI (lbs.)
NJ	Union	Bayway Chemical Plant Of Infineum USA	231,184	53,921
NM	Eddy	Navajo Refining Co. - Artesia	280,759	263,026
NM	Lea	Navajo Refining Co. - Lovington	5,830	20,802
NM	McKinley	Giant Refining Co. - Ciniza Refinery	62,146	114,162
NV	Nye	Eagle Springs Refinery	12,027	2,762
OH	Allen	Valero Refining Co. (Prev. Premcor Refining Group)	80,916	96,904
OH	Lucas	BP Oil Company Toledo Refinery	423,846	128,529
OH	Lucas	Sunoco Inc. Toledo Refinery	147,690	37,294
OH	Stark	Marathon Petroleum Company LLC, Canton Refinery	148,366	44,795
OK	Carter	Valero Refinery Co/Ardmore Refinery	102,846	49,611
OK	Garvin	Wynnewood Refining Co	151,817	70,300
OK	Kay	ConocoPhillips Co Ponca City Refinery	278,755	266,613
OK	Tulsa	Sinclair Oil Tulsa Refining Tulsa Trucking	99,467	106,575
OK	Tulsa	Sunoco Pipeline LP - Sunoco Ballinger - Coleman County TX	58,949	59,509
PA	Delaware	ConocoPhillips Co. Trainer Refinery	128,488	29,896
PA	Delaware	Sunoco Marcus Hook Refinery	468,009	92,270
PA	McKean	American Refining Group Inc	308,623	184,971
PA	Philadelphia	Sunoco Girard Point Refinery	806,551	216,691
PA	Warren	United Refining Co/Warren Plant	108,134	35,911
TN	Shelby	Valero Refining Co. (Prev. Premcor Refining, Prev. Williams Refining LLC)	165,377	39,218
TX	Bexar	AGE Refining & Manufacturing	26,591	22,278
TX	Brazoria	Phillips 66 Company Sweeny Complex	309,991	187,676
TX	El Paso	El Paso Refinery	339,448	78,297
TX	Galveston	BP Texas City Refinery	2,015,283	464,888
TX	Galveston	Marathon Ashland Petroleum Co LLC	78,478	77,590
TX	Galveston	Valero Refining Co. Texas	124,613	71,086
TX	Harris	Channel Energy Energy	130,543	140,449
TX	Harris	ExxonMobil Ref & Supply	1,261,229	929,150
TX	Harris	Pasadena Refining System PRSI West Demolition Project	213,320	211,468
TX	Harris	Shell Oil Deer Park	176,583	145,800
TX	Harris	Valero Refining Houston Refinery	98,051	32,480
TX	Howard	Fina Oil & Chemical	117,854	90,334
TX	Hutchinson	ConocoPhillips Co. - Borger (Prev. Phillips 66 Co.)	427,432	355,881
TX	Jefferson	ExxonMobil Oil Beaumont Refinery	802,966	422,979
TX	Jefferson	Port Arthur Refinery	200,413	28,719
TX	Jefferson	Total Petrochemicals USA Inc. - Port Arthur Refinery	394,259	75,011
TX	Jefferson	Valero Refining Co. - Port Arthur (Prev. Premcor Refining Group Inc.)	576,442	54,649
TX	Live Oak	Valero Three Rivers Refinery	128,891	78,408

Refinery Emissions of Hazardous Air Pollutants, 2010 EPA Information Collection Request (ICR) Data v. Amounts Reported to Toxics Release Inventory (TRI)				
STATE	COUNTY	FACILITY NAME	ICR (lbs.)	TRI (lbs.)
TX	Moore	Valero Energy Corp. - McKee (Prev. Diamond Shamrock Refining)	119,069	45,825
TX	Nueces	Citgo East Plant Refinery	310,309	68,617
TX	Nueces	Citgo Refining & Chemicals Co LP	5,189	8,066
TX	Nueces	Flint Hills Resources LP - West Plant	723,633	239,000
TX	Nueces	Koch Refining Company	194,625	38,064
TX	Nueces	Trigeant Ltd	604	12
TX	Nueces	Valero Refining - Texas L.P.	226,591	81,831
TX	Nueces	Valero Refining Texas LP Corpus Christi East Plant	192,420	135,348
TX	Smith	Delek Tyler Refinery	53,474	50,182
UT	Davis	Big West Oil Co. (Flying J)	91,046	35,497
UT	Davis	Holly Refining & Marketing, Fka Phillips 66 Company	35,175	38,510
UT	Davis	Silver Eagle Refining	146,764	5,126
UT	Salt Lake	Chevron USA Products Company	154,632	64,480
UT	Salt Lake	Tesoro - Salt Lake City	251,408	57,172
VA	York	Giant Yorktown Refinery	66,997	71,267
VI	St. Croix	Hovensa LLC	1,877,381	274,369
WA	Pierce	U.S. Oil & Refining Co.	179,159	31,798
WA	Skagit	Anacortes Refinery Tesoro Northwest Company	265,146	80,028
WA	Skagit	Shell Oil Anacortes Refinery	59,814	19,945
WA	Whatcom	BP West Coast Products - Cherry Point	365,646	88,475
WA	Whatcom	ConocoPhillips Co Ferndale Refinery	169,066	66,284
WI	Douglas	Murphy Oil USA, Inc., Superior Refinery	99,609	16,973
WV	Hancock	Ergon - West Virginia, Inc.	80,821	4,973
WY	Carbon	Sinclair Oil Corporation	299,902	139,586
WY	Laramie	Frontier Refining Inc.	52,952	64,569
WY	Natrona	Little America Refining Co. (Sinclair)	155,030	35,565
WY	Uinta	Silver Eagle Refining-Evanston	33,538	4,832
WY	Weston	Wyoming Refining Company	7,820	11,401
TOTAL		Number of Facilities: 138	40,178,281	14,230,225

Source: EPA Petroleum Refinery ICR, Emission Inventory Data. <http://www.epa.gov/ttn/atw/petref/petrefpg.html>;

EPA Toxics Release Inventory 2010. <http://www2.epa.gov/toxics-release-inventory-tri-program/tri-basic-data-files-calendar-years-1987-2012>

Table B

Refinery Emissions of Hazardous Air Pollutants, 2010 EPA Information Collection Request (ICR) Data v. Amounts Reported to TCEQ's Point Source Emissions Inventory (TX EI)				
STATE	COUNTY	FACILITY NAME	ICR (lbs.)	TX EI (lbs.)
TX	Bexar	AGE Refining & Manufacturing	26,692	4,739
TX	Brazoria	Phillips 66 Company Sweeny Complex	310,381	59,307
TX	El Paso	El Paso Refinery	343,099	87,494
TX	Galveston	Bp Texas City Refinery	2,192,037	541,377
TX	Galveston	Marathon Ashland Petroleum Co LLC	79,531	67,598
TX	Galveston	Valero Refining Co. Texas	127,536	78,657
TX	Harris	Channel Energy Energy	130,504	117,233
TX	Harris	ExxonMobil Ref & Supply	1,277,989	1,006,101
TX	Harris	Pasadena Refining System PRSI West Demolition Project	219,140	206,894
TX	Harris	Shell Oil Deer Park	178,453	468,796
TX	Harris	Valero Refining Houston Refinery	99,329	35,744
TX	Howard	Fina Oil & Chemical	117,895	112,872
TX	Hutchinson	ConocoPhillips Co. - Borger (Prev. Phillips 66 Co.)	438,963	376,036
TX	Jefferson	ExxonMobil Oil Beaumont Refinery	900,637	372,842
TX	Jefferson	Port Arthur Refinery	205,725	59,604
TX	Jefferson	Total Petrochemicals USA Inc. - Port Arthur Refinery	396,892	30,089
TX	Jefferson	Valero Refining Co. - Port Arthur (Prev. Premcor Refining Group Inc.)	580,304	61,413
TX	Live Oak	Valero Three Rivers Refinery	134,033	81,101
TX	Moore	Valero Energy Corp. - Mckee (Prev. Diamond Shamrock Refining)	123,815	49,380
TX	Nueces	Citgo East Plant Refinery	310,309	104,045
TX	Nueces	Citgo Refining & Chemicals Co LP	5,189	5,309
TX	Nueces	Flint Hills Resources LP - West Plant	800,167	264,288
TX	Nueces	Koch Refining Company	205,939	46,222
TX	Nueces	Trigeant Ltd	604	2,494
TX	Nueces	Valero Refining - Texas L.P.	235,709	168,486
TX	Nueces	Valero Refining Texas LP Corpus Christi East Plant	193,234	134,329
TX	Smith	Delek Tyler Refinery	54,476	48,673
TOTAL		Number of Facilities: 27	9,688,583	4,591,123

Source: EPA Petroleum Refinery ICR, Emission Inventory Data. <http://www.epa.gov/ttn/atw/petref/petrefpg.html>;
Texas State Emission Inventory 2010, on file with EIP, available upon request.

LETTER SUBMITTED BY COMMITTEE RANKING MEMBER EDDIE BERNICE JOHNSON



February 4, 2014

The Honorable Eddie Bernice Johnson
U.S. House of Representatives
Washington, D.C.

Subject: February 5, 2014 Hearing Titled: "Examining the Science of EPA Overreach. A Case Study in Texas"

Dear Honorable Eddie Bernice Johnson:

To introduce myself, I am a former Texas Commission on Environmental Quality (TCEQ) official of twelve years involved in Clean Air Act inspections and enforcement at industrial plants in Texas, including oil refineries, chemical plants, power plants, natural gas processing plants, and others. More recently, I work on air quality in Texas for the Sierra Club's Lone Star Chapter, including Clean Air Act-citizen's enforcement cases .

On behalf of the Lone Star Chapter of the Sierra Club and its thousands of members and supporters in the great State of Texas I am submitting these comments about the full committee hearing scheduled for February 5, 2014 by the House Committee on Science, Space and Technology, titled "Examining the Science of EPA Overreach: A Case Study in Texas."

A brief summary of my experience includes:

1. I have 34 years of combined experience in the field of air pollution control and enforcement.
2. I served 12 years (1980-1992) as a state environmental regulatory official at the Texas Air Control Board ("TACB"), now the Texas Commission on Environmental Quality ("TCEQ"), which has federal regulatory oversight of industrial plants in Texas. My years at the TACB/TCEQ were spent in the field inspecting, for state and federal air regulatory compliance, a broad range of industrial plant sites, including major oil refineries, chemical and petrochemical plants, power plants, natural gas processing plants, incinerators, cement kilns, and more. I conducted compliance inspections and monitoring at more than 200 industrial plants annually.
3. During this time, I worked on enforcement actions against industrial plants that were in violation of their air permits. I wrote up investigation reports about violations.
4. Since 1992, I have spent 22 years working in environmental regulation and policy implementation primarily in Texas with non-governmental organizations, including Sierra Club's Lone Star Chapter.
5. My work for TCEQ and non-governmental organizations like Sierra Club has made me aware of the strong need for adequate enforcement of the Clean Air Act and air permits and the difficulties in achieving it. Texas has a huge number of plants subject to the Act, and for enforcement of the Clean Air Act to mean anything, it is vital that citizens be able to aid the government in holding industry to the law.
6. During my time working with Sierra Club's Lone Star Chapter, I have been actively involved in all the citizen suit enforcement actions that Sierra Club has brought against plants in Texas that violated regulatory requirements.
7. The suits in which I have been involved in this capacity for Sierra Club include:
 - A suit filed in 1997 against Crown Central Petroleum Corporation for 15,000 violations at its Pasadena, Texas refinery (suit was settled in 2001) that for excessive and repeat sulfur dioxide (7,500 hourly violations) and hydrogen sulfide (7,500 hourly violations) emissions;

- A suit filed in 2004 against American Electric Power for thousands of smoke and soot violations at its Welsh coal-fired power plant it owned (suit was settled around 2008);
- A suit filed in January 2008 against Shell Oil Company and two affiliates for hundreds of air violations at a Deer Park refinery and chemical plants they owned (suit was settled in April 2009);
- A suit filed in August 2009 against Chevron Phillips Chemical Company for many air violations at a Houston/Cedar Bayou chemical plant it owned (suit was settled in November 2010);
- Two suits commenced in September 2010 and May 2012 against Energy Future Holdings Corp. and Luminant Generation Company (“Luminant”) for 20,000 violations at its Big Brown Steam Electric Station and thousands of violations at its Martin Lake Steam Electric Station—both coal-fired power plants (suits are ongoing); Luminant’s Monticello Steam Electric Station had 18,000 violations and a CAA Notice letter has been filed on this plant; and
- A suit commenced in December 2010 against ExxonMobil Corporation and two subsidiaries for hundreds of violations at a Houston/Baytown, Texas refinery and chemical plant complex they own (suit is ongoing). Emissions involve upset incidents releasing illegal levels of benzene, hydrogen sulfide, sulfur dioxide, particulate matter, nitrogen oxides, carbon monoxide, and other harmful chemicals.

None of this legal action would have been necessary if the TCEQ had been properly enforcing the law and protecting the citizens of Texas. It appears from the title of the hearing and the makeup of those invited by the Committee to testify that the hearing is going to be yet another one-sided affair to attack by certain members of Congress on the EPA. I submit these comments to provide you and the Committee with a more complete picture of environmental protection in Texas and the vital role that EPA plays. In contrast to the views expressed by many in Congress, the Sierra Club endorses strong enforcement of our public health laws in Texas. Our state

agencies, unfortunately, often fail to perform the actions required under the federal programs they are delegated or authorized to implement. EPA action is sometimes necessary to assure that Texans benefit from the same public health and economic benefits that other citizens in other states enjoy. When those EPA actions require polluters in our state to have to pay to clean up their messes, some members of Congress, regrettably chose sides with the polluters rather than with the people.

Part 1 - EPA Action in Texas is Needed, Overdue, and Vital in Saving Lives and Protecting Ecosystems. - As you know EPA is charged through federal statutes like the Clean Air Act and Clean Water Act with protecting public health and the environment across the United States - even in Texas. The Agency's actions are not optional for the EPA Administrator or the Agency employees, they are mandated by federal statutes and the deadlines imposed by law and regulation. Since the creation of the EPA in 1970, there has been important improvements in certain environmental metrics, like urban ozone air pollution, the availability and quality of drinking water, and proper management and disposal of highly toxic industrial waste. We still have a long way to go to achieve a clean and safe environment, but it is undeniable that EPA and statutes such as the Clean Air Act and Clean Water Act have made incredible progress over the last 40 years. Congress should be proud of and congratulatory to the long record of achievement of EPA. Recent polling by the American Lung Association and others demonstrates that the American people certainly are.^{1 2}

Unfortunately, many of the steps taken to ensure progress happened with state regulators in Texas kicking and screaming and having to be dragged every step of the way. It is regrettable but all too often the case that environmental improvements have happened in spite of, and not with the cooperation of, the individuals responsible for leading state regulatory agencies in Texas.

¹ <http://grist.org/climate-policy/2011-02-16-public-trusts-epa-loves-clean-air-act-wants-congress-to-butt-out/>

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² <http://www.nrdc.org/media/2013/131017.asp>

The simple fact of the matter is that if state agency heads in Texas were doing their jobs, it would be unnecessary for EPA to step in and be active in enforcement or regulatory actions in Texas. But because of the lack of regulatory enforcement by agencies such as the Texas Commission on Environmental Quality and the Texas Railroad Commission, the EPA has all too often had to step in as the regulator of last resort to protect lives and to assure that Texans were protected from pollution. EPA has often acted via its offices in Dallas and Houston, leading to the irony of Texans working as federal regulators from those two cities having to protect Texas families when state regulators in Austin failed to do enforce the law.

Part 2 - State Agencies Are Often Captured by the Industries They Are Supposed to Regulate.

Many of the federal environmental statutes have an important role for state agencies. The state agencies are the front-line regulators and enforcers of federal statutes (through delegation and authorization), with EPA or other federal agencies acting as backstops and providing support or assistance. Unfortunately, time after time agencies in Texas have shown themselves unable or unwilling to properly enforce critical provisions of federal statutes like the Clean Air Act or Clean Water Act, putting EPA in the position of choosing to either step in or allowing Texas families to be exposed to unsafe levels of pollution.

For example, EPA has a 14 year old program called the National Petroleum Refinery Enforcement Initiative to bring refineries across the country into compliance with major provisions of the Clean Air Act.³ Leading up to the start of the initiative in 2000, EPA was repeatedly finding problems with Clean Air Act compliance at facilities, in particular noncompliance with (i) the New Source Review/Prevention of Significant Deterioration (NSR/PSD) provisions for units such as fluidized catalytic cracking units and heaters and boilers, (ii) with New Source Performance Standards (NSPS) on units such as flares, sulfur recovery units, and fuel gas combustion devices, (iii) problems with leak detection and repair requirements, and (iv) problems demonstrating compliance with the National Emissions

³ <http://www2.epa.gov/sites/production/files/documents/refineryinitiative-powerpoint021111.pdf>

Standards for Hazardous Air Pollutants (NESHAP) regulations for benzene, a known human carcinogen.⁴

The enforcement initiative has had bipartisan support and it has been a great success. The program began at the end of the Clinton Administration, but it picked up steam and existed for 8 years under the Republican administration of George W. Bush, and it has continued under President Obama. Since March 2000, EPA has entered into 32 settlements with U.S. companies that refine over 90 percent of the Nation's petroleum. These settlements covered more than 100 refineries in 32 states and territories, and resulted in annual emissions reductions of more than 93,000 tons of nitrogen oxides and more than 256,000 tons of sulfur dioxide. Settling companies have agreed to invest more than \$6.5 billion in control technologies and pay civil penalties of more than \$93 million.

Approximately half of the refinery capacity now under settlements with EPA are in Region 6 of EPA which includes Texas, Louisiana, and Oklahoma. Major refineries in Texas and neighboring states who have reached settlements with EPA and have made investments to reduce pollution include Citgo, Conoco, Exxon Mobil, Koch Industries, Marathon, Shell, Total, Valero, and Western Refining. It is without exaggeration that the environmental benefits of the EPA settlements are savings lives in cities like Houston, Corpus Christi, and Port Arthur. There would have been more Texan families rushing their children in the middle of the night to emergency rooms for asthma attacks, more elderly Texans suffering heart attacks and strokes, and more pollution leading to school absenteeism and a weaker economy but for the hard and dedicated work of EPA. I have included an Appendix to this letter that includes more detail about the toxic emissions from refineries, demonstrating the need for vigorous law enforcement to protect Texas families.

For all its success, the refinery initiative shows, regrettably, the lack of enforcement of the federal Clean Air Act that existed at the state level in Texas and neighboring states for many

⁴ <http://www2.epa.gov/enforcement/petroleum-refinery-national-case-results>

years. *If state agencies had been properly reviewing permits, enforcing regulations, and issuing fines sufficient to incentivize compliance instead of rewarding noncompliance, there never would have been a need for a federal enforcement initiative.* State regulators at the TCEQ should be embarrassed that such a widespread level of noncompliance was found by EPA in the refinery sector. If the TCEQ had any shame it would formally apologize to the thousands of hard working Texas families that were exposed to illegal levels of pollution and were made to suffer years of breathing fumes and benzene vapors before EPA got engaged. I would suggest that a better use of Committee time would be to hold hearings about the lack of enforcement of delegated federal programs by certain state agencies, and the public health impacts of that lack of performance. If there is criticism to be leveled at EPA, it is perhaps best directed at the tendency of the Agency to look the other way for years or decades while knowing full well that state agencies are failing to perform fundamental enforcement responsibilities in federal programs.

Finally, it is interesting to note that in contrast to the rhetoric that we sometimes hear from the trade associations who want us to believe the environmental compliance hurts the economy, our country is refining more petroleum today than we did just a few years ago or at the start of the enforcement initiative. EPA knows how to enforce the law, it enforces the law in Texas for the sake of Texans, and it does so with the necessary skill to keep the economy growing.

Part 3 - EPA Makes Decisions Based on Best Available Science. A Case Study of Ozone Smog.

Ozone is a chemical compound that can form in the air around our cities and oil/gas fields. It is produced when other pollutants, namely hydrocarbons and nitrogen oxides, react in the presence of sunlight. The orange and red alert days that we see in Texas cities like Dallas, Fort Worth, Houston, and San Antonio are largely the result of higher than safe levels of ozone. Texas has had unsafe levels of ozone in its cities for many decades and some of the earliest work of state and federal environmental agencies in Texas in the 1960's and 1970's was dedicated to understanding and solving the ozone smog problem in cities like Dallas, Houston, and El Paso⁵.

⁵ <http://www.tceq.texas.gov/airquality/sip/siplans.html>

Unfortunately, recent policy and actions by TCEQ show that the leadership of the Agency is now more interested in sowing doubt and questioning the science of ozone toxicity, rather than solving the problem of ozone pollution once and for all.

EPA is charged by Congress in the federal Clean Air Act with determining the level of ozone and other pollutants in the ambient air that is safe to breathe with an adequate margin of safety. These safe levels are known as the National Ambient Air Quality Standards (NAAQS). Congress wisely gave EPA the responsibility for establishing a single national standard, rather than having states determining their own standards which quickly could have devolved into a race to the bottom in public health.

The NAAQS are promulgated by the EPA to meet requirements set forth in Sections 108 and 109 of the CAA. Sections 108 and 109 require the EPA Administrator (1) to list widespread air pollutants that reasonably may be expected to endanger public health or welfare; (2) to issue air quality criteria for them that assess the latest available scientific information on nature and effects of ambient exposure to them; (3) to set “primary” NAAQS to protect human health with adequate margin of safety and to set “secondary” NAAQS to protect against welfare effects (e.g., effects on vegetation, ecosystems, visibility, climate, manmade materials, etc); and (5) to periodically review and revise, as appropriate, the criteria and NAAQS for a given listed pollutant or class of pollutants.⁶ With this structure, the EPA is tasked by Congress in reviewing the scientific literature to determine the level of ozone pollution in the air that will be protective of public health, and then, setting a standard that is *even tighter* than that by including “an adequate margin of safety.”

The process that EPA conducts for setting of NAAQS is incredibly rigorous and an example of how important sound science is to the work of the Agency. The core document representing EPA’s scientific evaluation of the medical evidence related to air quality standards is known as

⁶ U.S. EPA, Air Quality Criteria for Ozone and Related Photochemical Oxidants (2006 Final). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-05/004aF-cF, 2006.

the air quality criteria document (AQCD), or just the criteria document. The criteria document from the most recent update of the ozone NAAQS is a large volume that includes numerous chapters on the science, toxicology, and atmospheric chemistry and physics of ozone⁷. Most importantly, it provides a scientific assessment of the latest medical, toxicological, and epidemiological evidence from the peer-reviewed scientific literature.

According to EPA, the purpose of the air quality criteria document for the last update to the ozone standard in 2008 was to critically evaluate and assess the latest scientific information published since the previous review in 1996, with the main focus being on pertinent new information useful in evaluating health and environmental effects data associated with ambient air ozone exposures. Other scientific data are also discussed in order to provide a better understanding of the nature, sources, distribution, measurement, and concentrations of ozone and related photochemical oxidants and their precursors in the environment.⁸

The most recent criteria document for ozone underwent multiple levels of scientific and public review. A First External Review Draft (dated January 2005) was released for public comment and was reviewed by the Clean Air Scientific Advisory Committee (CASAC) in May, 2005. The CASAC is the independent scientific advisory committee created by Congress in the Clean Air Act to advise the EPA Administrator on setting the appropriate level of the NAAQS. Public comments and CASAC recommendations were then taken into account in making revisions to the document for incorporation into a Second External Review Draft (dated August, 2005), which underwent further public comment and CASAC review. Public comments and CASAC advice derived from review of that Second External Review Draft were considered in making revisions incorporated into the third and final version of the document (dated February, 2006). That final document was used by EPA staff and the EPA Administrator in the updating of the standard.

⁷ Ibid.

⁸ Ibid.

The ozone criteria document included numerous chapters on ozone measurement, monitoring, ozone formation, and other matters important to the science of the pollutant. However, the review of health-related toxicological and epidemiological studies were in Chapters 5, 6, and 7.

Chapter 5, titled “Toxicological Effects in Laboratory Animals and In Vitro Systems” was written by a combination of EPA and independent scientists from the U.S. and around the world, and then reviewed by additional scientists, including:

- Dr. Lori White—National Center for Environmental Assessment (B243-01), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711
- Mr. James Raub—National Center for Environmental Assessment (B243-01), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711 (retired)
- Dr. Deepak Bhalla—Department of Occupational and Environmental Health Sciences, Wayne State University, Detroit, MI
- Dr. Carroll Cross—School of Medicine, University of California, Davis, CA
- Dr. Mitch Cohen—NYU School of Medicine, New York University, New York, NY
- Dr. Steven Kleeberger—National Institute of Environmental Health Sciences, Research Triangle Park, NC 27711
- Dr. George Liekauf—Department of Environmental Health, University of Cincinnati, Cincinnati, OH
- Dr. David Basset—Department of Occupational and Environmental Health Sciences, Wayne State University, Detroit, MI
- Dr. E.M. Postlethwait—Department of Environmental Health Sciences, University of Texas Medical Branch, Galveston, TX
- Dr. Kent Pinkerton—Center for Health and the Environment, University of California, Davis, CA
- Dr. Edward Schelegle—Department of Anatomy, Physiology, and Cell Biology, University of California, Davis, CA
- Dr. Judith Graham—American Chemical Council, Arlington, VA
- Dr. Paul Reinhart—National Center for Environmental Assessment (B243-03), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711

Chapter 6, titled “Controlled Human Exposure Studies” was written and reviewed by numerous additional scientists, including:

- Dr. James S. Brown—National Center for Environmental Assessment (B243-01), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711
- Mr. James Raub—National Center for Environmental Assessment (B243-01), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711 (retired)
- Dr. William C. Adams—Human Performance Laboratory, University of California, Davis, CA, (retired)
- Dr. Milan J. Hazucha—Center for Environmental Medicine, Asthma, and Lung Biology, University of North Carolina, Chapel Hill, NC
- Dr. E. William Spannake—Department of Environmental Health Sciences, Johns Hopkins University, Baltimore, MD
- Dr. Edward Avol—Department of Preventive Medicine, University of Southern California, Los Angeles, CA
- Dr. Jane Q. Koenig—Department of Environmental and Occupational Health, University of Washington, Seattle, WA
- Dr. Michael Madden—National Health and Environmental Effects Research Laboratory, U.S. Environmental Protection Agency, Chapel Hill, NC
- Dr. William McDonnell—National Health and Environmental Effects Research Laboratory, U.S. Environmental Protection Agency, Chapel Hill, NC

Chapter 7, titled “Epidemiological Studies of Human Health Effects” was written and reviewed by a group that included:

- Dr. Dennis Kotchmar—National Center for Environmental Assessment (B243-01), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711
- Dr. Jee Young Kim—National Center for Environmental Assessment (B243-01), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711

- Dr. David Svendsgaard—National Center for Environmental Assessment (B243-01), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711
- Dr. Kazuhiko Ito—New York University School of Medicine, Nelson Institute of Environmental Medicine, Tuxedo, NY
- Dr. Patrick Kinney—Columbia University, Mailman School of Public Health, New York, NY
- Dr. Richard Burnett—Health Canada, Ottawa, CN
- Dr. Vic Hasselblad—Duke University, Durham, NC
- Dr. Lucas Neas—National Health and Environmental Effects Research Laboratory, U.S. Environmental Protection Agency, Chapel Hill, NC

Clean Air Science Advisory Committee created an Ozone Review Panel to review and provide comment on the criteria document. The Ozone Review Panel was comprised of:

- Chair, Dr. Rogene Henderson*, Scientist Emeritus, Lovelace Respiratory Research Institute
- Dr. John Balmes, Professor, Department of Medicine, University of California San Francisco,
- Dr. Ellis Cowling*, University Distinguished Professor-at-Large, North Carolina State University, Colleges of Natural Resources and Agriculture and Life Sciences
- Dr. James D. Crapo*, Professor, Department of Medicine, National Jewish Medical and Research Center
- Dr. William (Jim) Gauderman, Associate Professor, Preventive Medicine, University of Southern California
- Dr. Henry Gong, Professor of Medicine and Preventive Medicine, Medicine and Preventive Medicine, Keck School of Medicine, University of Southern California, Environmental Health Service
- Dr. Paul J. Hanson, Senior Research and Development Scientist, Environmental Sciences Division, Oak Ridge National Laboratory (ORNL)

- Dr. Jack Harkema, Professor, Department of Pathobiology, College of Veterinary Medicine, Michigan State University
- Dr. Philip Hopke, Bayard D. Clarkson Distinguished Professor, Department of Chemical Engineering, Clarkson University
- Dr. Michael T. Kleinman, Professor, Department of Community & Environmental Medicine, 100 FRF, University of California - Irvine
- Dr. Allan Legge, President, Biosphere Solutions, 1601 11th Avenue NW, Calgary, Alberta
- Dr. Morton Lippmann, Professor, Nelson Institute of Environmental Medicine, New York University School of Medicine
- Dr. Frederick J. Miller*, Consultant, 911 Queensferry Road, Cary, NC
- Dr. Maria Morandi, Assistant Professor of Environmental Science & Occupational Health, Department of Environmental Sciences, School of Public Health, University of Texas - Houston Health Science Center
- Dr. Charles Plopper, Professor, Department of Anatomy, Physiology and Cell Biology, School of Veterinary Medicine, University of California - Davis
- Mr. Richard L. Poirot*, Environmental Analyst, Air Pollution Control Division, Department of Environmental Conservation, Vermont Agency of Natural Resources, Bldg. 3 South, 103 South Main Street, Waterbury, VT
- Dr. Armistead (Ted) Russell, Georgia Power Distinguished Professor of Environmental Engineering, Environmental Engineering Group, School of Civil and Environmental Engineering, Georgia Institute of Technology
- Dr. Elizabeth A. (Lianne) Sheppard, Research Associate Professor, Biostatistics and Environmental & Occupational Health Sciences, Public Health and Community Medicine, University of Washington
- Dr. Frank Speizer*, Edward Kass Professor of Medicine, Channing Laboratory, Harvard Medical School
- Dr. James Ultman, Professor, Chemical Engineering, Bioengineering program, Pennsylvania State University

- Dr. Sverre Vedal, Professor of Medicine, Department of Environmental and Occupational Health Sciences, School of Public Health and Community Medicine, University of Washington
- Dr. James (Jim) Zidek, Professor, Statistics, Science, University of British Columbia
- Dr. Barbara Zielinska*, Research Professor , Division of Atmospheric Science, Desert Research Institute

The EPA staff and outside scientists who authored the criteria document reviewed thousands of peer reviewed papers. To illustrate, the team that worked on Chapter 5 on animal and in vitro toxicology reviewed approximately 260 scientific studies. The group that wrote and reviewed Chapter 6 on controlled human exposure reviewed 160 studies, and the group that worked on Chapter 7 on ozone epidemiological studies reviewed over 360 scientific papers on the topic.

I encourage the committee to familiarize itself with the process that EPA undergoes as it develops the criteria documents that are the foundation for national standards like the NAAQS. While no scientific review and distillation process is perfect, and no scientific conclusions ever unchangeable given the incremental nature of science, I have no doubt that in any fair assessment the Committee will see that EPA determines the standards in a manner that is transparent, exhaustive, and conducted by subject matter specialists drawn from all across the country. Those experts review and assess thousands of peer reviewed scientific papers before drawing their conclusions and recommendations. In addition, the process is informed by the expert assessments of the Clean Air Science Advisory Committee, the independent scientific body that was created by Congress to provide EPA with the best recommendations on air quality matters.

A sampling of some of the conclusions of the ozone criteria document includes the following statements:⁹

⁹ Ibid.

Results from controlled human exposure studies and animal toxicologic studies provide clear evidence of causality for the associations observed between acute (#24 h) O₃ exposure and relatively small, but statistically significant declines in lung function observed in numerous recent epidemiologic studies. Declines in lung function are particularly noted in children, asthmatics, and adults who work or exercise outdoors.

The epidemiologic evidence shows significant associations between acute exposure to ambient O₃ and increases in a wide variety of respiratory symptoms (e.g., cough, wheeze, production of phlegm, and shortness of breath) in asthmatic children. Epidemiologic studies also indicate that acute O₃ exposure is likely associated with increased asthma medication use in asthmatic children.

The extensive human clinical and animal toxicological evidence, together with the limited available epidemiologic evidence, is clearly indicative of a causal role for O₃ in inflammatory responses in the airways.

Aggregate population time-series studies observed that ambient O₃ concentrations are positively and robustly associated with respiratory-related hospitalizations and asthma ED visits during the warm season. These observations are strongly supported by the human clinical, animal toxicologic, and epidemiologic evidence for lung function decrements, increased respiratory symptoms, airway inflammation, and airway hyperreactivity.

Taken together, the overall evidence supports a causal relationship between acute ambient O₃ exposures and increased respiratory morbidity outcomes resulting in increased ED visits and hospitalizations during the warm season.

Repeated O₃ exposure over several days has been shown to increase responsiveness to bronchial allergen challenge in subjects with preexisting allergic airway disease, with or without asthma. Asthmatics also show a significantly greater neutrophil response (18 h postexposure) than similarly-exposed healthy individuals.

Epidemiologic studies have reported associations with a range of respiratory health outcomes in asthmatics, from decreases in lung function to hospitalization or ED visits for asthma, thus supporting this population group as being likely to experience increased risk for O₃-induced health effects.

Part 4 - State Regulators Cherry Pick Studies and Misrepresent EPA Science. A Case Study of Ozone Smog. One might suspect that with the qualifications of the EPA and outside scientists who work on the criteria document, and the qualifications of the CASAC panel that provided the review mandated by the Clean Air Act, state regulators would be supportive of the NAAQS setting process and have some comfort that EPA is setting standards that are based on sound science.

Unfortunately, that is not the case in Texas.

The TCEQ, under the leadership of Chairman Shaw and his predecessors Buddy Garcia and Kathleen White, has repeatedly attacked the EPA ozone standard and the other NAAQS that have been updated. Chairman Shaw and his staff submit comments to EPA, letters to newspapers, and make statements in public meetings that are critical of the EPA standard setting process and that cast doubt on whether ozone smog is toxic at all. They do so by cherry picking the one or two studies that run counter to the scientific consensus and then presenting those one or two studies to the public as the definitive and most scientific work that has been published and the only ones that are important in Texas. They also repeatedly misrepresent the process that EPA follows, which is truly amazing given the exhaustive scientific review that EPA performs,

the number of outside experts from medical schools and universities around the world that are brought in to provide assistance, and the rigorous review provided by the Clean Air Science Advisory Committee. Hopefully, the brief synopsis and listing of experts provided in this short letter demonstrates to your Committee the level of scientific rigor that EPA follows, and the misguided nature of TCEQ's attacks on EPA science.

For example, the good people at the Environmental Defense Fund (EDF) wrote about TCEQ attacks on the ozone standard.¹⁰ According to EDF, testimony of Mike Honeycutt, TCEQ chief toxicologist, to EPA about the ozone standard in 2011 included this distortion: "These studies are based on the supposition that the majority of people breathe outside air 8 to 24 hours each day while the scientific data clearly show this is not the case." In actual fact, the hundreds of studies that EPA reviews include a full range of exposures, from short term 1-hr exposures to examine acute effects, to studies that examine year and multiyear exposures and differences in ozone between metropolitan areas where people live for decades. As EDF notes, Mr. Honeycutt's comments also seem to suggest that Texans who do spend long hours outdoors – construction workers, carpenters, utility workers, lifeguards and athletes – don't deserve protection by the EPA from the health impacts of ozone.¹¹

Mr. Honeycutt also demonstrates what can only be described as a complete lack of understanding of the most basic tenets of epidemiology when he attempts to use the excuse that asthma attack incidents are higher in the winter (when ozone levels are low) than in the summer (when ozone levels are high) as an excuse not to regulate ozone. The state has even gone so far as to suggest that perhaps ozone exposure is protective of human health, in complete and total contradiction to the consensus of the hundreds of scientists who study ozone toxicology and epidemiology for a living and publish peer-reviewed papers on the subject.

¹⁰ <http://blogs.edf.org/energyexchange/2010/02/11/tceq-at-it-again/>

¹¹ U.S. EPA. Air Quality Criteria for Ozone and Related Photochemical Oxidants (2006 Final). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-05/004aF-cF, 2006.

According to EDF, Mr Honeycutt said, “We hear anecdotally that hospital visits for asthma rise when ozone levels rise, but hospital admissions data show this is not the case. Texas Inpatient Hospital Discharge data on numbers of hospital visits for asthma between 1999 and 2001 actually show that fewer children in Texas visit the hospital for asthma during peak summer ozone season as compared to wintertime. Results from a 4-year (2000-2003) air quality study conducted by Texas A&M University and Driscoll Children’s Hospital indicate hospital admissions to be weakly correlated with ambient daily maximum ozone levels. The Kaiser Permanente Report and the Gauderman study in 2004 found no increased hospital admissions in elderly patients and health effects in children due to ozone alone.”¹²

Perhaps Mr. Honeycutt is unable to grasp the basic concept that complex diseases like asthma can and do have multiple triggers, like ozone (which is higher in the summer) or viral infections (which are higher in the winter).¹³

The TCEQ Commissioners also show no embarrassment about stepping out of their fields of expertise, and making statements about ozone and public health that fly completely against the medical consensus of the hundreds of scientists and the thousands of papers that formed the recent EPA criteria document.

When a group of Dallas County doctors recently petitioned the TCEQ to take steps to reduce ozone in Dallas-Fort Worth to bring the area into compliance with the NAAQS, the Dallas Morning News reported this response from Chairman Shaw:¹⁴

¹² <http://blogs.edf.org/energyexchange/2010/02/11/tceq-at-it-again/>

¹³ http://science.house.gov/sites/republicans.science.house.gov/files/documents/hearings/100411_Honeycutt.pdf

¹⁴ <http://thescoopblog.dallasnews.com/2013/10/texas-rejects-dallas-county-doctors-bid-to-cut-coal-pollution-as-premature-still-seeing-harm-to-our-patients-doctor-says.html/>

Describing the doctors' request as premature, commissioners said they could address any concerns about pollution in the next scheduled update of the state's Dallas-Fort Worth clean-air plan, due for a commission vote in December 2014.

They also questioned the role of ground-level ozone, or smog, in public health. Chairman Bryan W. Shaw said studies suggest that cutting ozone alone might not prevent asthma attacks. "I'm convinced that it doesn't make sense to get ahead of the science," Shaw said. He later added, "I don't want there to be this knee-jerk reaction."

New Commissioner Toby Baker, who seems to be an honorable official, is nonetheless not a research scientist nor a physician. His science background consists of a bachelors degree in poultry science from Texas A&M University. Despite his lack of direct scientific training on ozone epidemiology, he took the lead from Chairman Shaw and himself recently opined against the overwhelming expertise of the hundreds of doctors and scientists who worked on the EPA criteria document (through a review of thousands of studies):¹⁵

Commissioner Toby Baker said asthma has "a wealth of confounding factors." To assume that a correlation between high ozone and asthma hospitalizations means ozone causes asthma is "frankly irresponsible," Baker said.

Under recent TCEQ leadership, TCEQ has shown itself willing to put politics and the wishes of the polluters in the state above sound science. In an earlier era, I don't doubt that the TCEQ leadership would have been standing with the tobacco companies denying year after year that smoking caused cancer and heart disease or was addictive. The TCEQ seems determined to sow doubts about the toxicity of ozone, and in leveling baseless charges about EPA and its regulations. Unfortunately, this kind of process has real world implications. Polluters should be seeing a united front from their state and federal regulators, knowing that environmental

¹⁵ Ibid

compliance is required by both. But when polluters see the state being so highly critical of EPA processes, even if its with artificial and fabricated arguments, it creates a mixed message and an atmosphere where polluters see the state agency as an excuse not to follow federal requirements. When it comes to the TCEQ, the great people of Texas deserve much better from the state agency they have charged with protecting their health.

Part 5 - Other Examples of State Failure and The Need for EPA Intervention to Save Lives and Protect Health. There are numerous other examples of state regulatory agency failure that put lives or ecosystems at risk that then required EPA or other federal agencies to step in. They cannot be fully catalog in a short letter like this, but I am happy to provide additional information in the future if the Committee wishes. The failures include:

(a) Former TCEQ Chairman Kathleen White and TCEQ managers knowing that TCEQ staff were altering test reports mandated by the Safe Drinking Water Act of levels of radioactivity in drinking water in numerous Texas communities. EPA enforcement staff had to step in to assure that the test reports were not altered and that people were properly notified that their water was unsafe to drink.^{16 17}

(b) TCEQ failing to take steps necessary to bring ambient ozone levels in Houston down from extreme levels in the 1990's, until EPA stepped in and threatened to withhold federal highway construction funds unless TCEQ got serious. The engagement by EPA resulted in the creation of the highly successful "Texas Emission Reduction Program" which has taken thousands of old dirty diesel vehicles off the road and replaced them with cleaner vehicles, resulting in cleaner air for millions of Houstonians.¹⁸

¹⁶ "Texas politicians knew agency hid the amount of radiation in drinking water."
<http://www.khou.com/news/local/-Texas-politicians-knew-agency-hid-the-amount-of-radiation-in-drinking-water-122205439.html>

¹⁷ <http://www.texasvox.org/radiation-in-houstons-tap-water-compounded-by-tceq-lowballing-radiation-scores-in-drinking-water-throughout-texas/>

¹⁸ <http://governor.state.tx.us/news/speech/10620/>

(c) In 2011, TCEQ officials attempted to muzzle Rice University Professor John Anderson and edit a report he was writing for the state on the impacts of sea level rise in Galveston Bay and the effects that climate change are having on sea level along the Texas coast. Dr. Anderson's scientific statements about climate change are consistent with the 98% of the world's scientists who acknowledge the reality of carbon emissions changing the climate. Unfortunately, the scientific consensus and the statements of Dr. Anderson run counter to the opinions of Governor Perry and commissioners he has appointed to run the TCEQ.^{19 20}

(d) In 2010, EPA issued an imminent and substantial endangerment enforcement order against a natural gas driller in Parker County, Texas after EPA scientists concluded that natural gas in drinking water wells near a drilling operation were contaminated with natural gas from the producer and that levels were high enough to cause a risk of fire or explosion.²¹ Since EPA got involved, the contamination in Parker County has been reviewed numerous times by: 1. an geologist from the University of Wyoming/Colorado School of Mines who has worked in the past for oil/gas producers;²² 2. the Inspector General's Office²³; 3. Duke University²⁴; 4. independent consultants and scientists for an affected homeowner.^{25 26 27} All 4 outside lines of

¹⁹ <http://www.chron.com/news/houston-texas/article/Professor-says-state-agency-censored-article-2212118.php>

²⁰ http://www.ricethresher.org/censored-professor-revokes-article-1.2682502#.UvEYq_ldWSo

²¹ http://www.epa.gov/region6/6xa/pdf/range_order.pdf

²² <http://www.usatoday.com/story/news/nation/2013/01/16/epa-gas-company-protested/1839857/>

²³ <http://www.epa.gov/oig/reports/2014/20131220-14-P-0044.pdf>

²⁴ <http://www.star-telegram.com/2014/01/17/5494950/new-tests-find-more-methane-in.html>

²⁵ <http://www.eenews.net/energywire/2013/11/04/stories/1059989870>

²⁶ <http://www.eenews.net/stories/1059976604>

²⁷ http://www.eenews.net/assets/2013/02/19/document_ew_03.pdf

evidence have supported the science and law behind EPA's action in Parker County, and yet, the Railroad Commission has yet to order the driller to fix the contamination problem.

Conclusion


The sole drinking water source for 300,000 people in West Virginia was recently contaminated by a chemical spill. We now know that spill was the result of a bad corporate actor, but also enabled by the complete failure by state regulators to properly protect the public from the chemical company that contaminated the water.

Unfortunately, to the people of Texas, that kind of absent environmental enforcement is all too familiar. Failure to enforce the law and a complete lack of accountability for safety at state agencies contributed to the explosion at West Fertilizer on April 17, 2013 that left 15 Texans dead and injured another 160. On March 23, 2005, the explosions at the BP Texas City refinery left 15 dead, 170 injured. On April 16, 2013, a fire at the Exxon Mobil Beaumont complex caused 1 death, 11 injuries. And these are just a small snapshot of the kinds of accidents that government regulations are supposed to prevent.

Regrettably, even federal agencies that are either starved of resources or who develop relationships that are too close to the industries they are supposed to oversee can fail badly, resulting in tragic consequences. For example, when the Mine Safety and Health Administration failed to act, a mine collapse at the Massey Big Branch Mine in West Virginia in 2010 killed 29 miners. When the Minerals Management Service (MMS) failed to properly assure the safety of offshore drilling, the Deepwater Horizon Platform exploded in 2010 in the Gulf killing 11 workers. The MMS has rightfully been dismantled and completely replaced.

Congress should be finding ways to fully fund, empower, and support federal agencies like EPA and OSHA, not holding hearings designed to muzzle the federal agencies and prevent public health protections.

Sincerely yours,

A handwritten signature in black ink that reads "Neil J. Carman". The signature is written in a cursive, flowing style.

Neil J. Carman, Ph.D.
Clean Air Program Director
Lone Star Chapter of the Sierra Club
1202 San Antonio street
Austin, Texas 78701

cc: The Honorable Lamar Smith
Chairman
Committee on Science, Space and Technology

cc: marcy.gallo@mail.house.gov

Appendix -- Summary of Oil Refinery Air Toxics Emissions

Oil refineries even today in 2014 are allowed to emit many toxic chemicals and criteria pollutants, which is why major upset/malfunction/breakdown emissions from the oil refineries poses a concern for public health in communities nearby and downwind to these sources. Failure by state agencies to properly enforce the Clean Air Act and issue fines sufficient to create changes in corporate behavior have enabled millions of pounds of illegal emissions from refineries entering the skies of Texas the last several decades.

Most air toxics are reported in the EPA's Toxic Release Inventory (TRI) annual reporting system. But they are not separated out from annual emissions inventories that include normal operating emissions and upset emissions. In this Appendix I explain the toxic nature of emissions from refineries, showing why the lack of enforcement of environmental regulations is particularly harmful in Texas.

1. BENZENE EMISSIONS - KNOWN HUMAN CARCINOGEN: Large volumes of benzene are emitted during the refining process and may be larger than chemical plants. Benzene gas is routinely emitted as fugitive leaks from several hundred thousand pieces of equipment in benzene service, such as pumps, valves, flanges, connectors, compressors, and other equipment. Flares do not burn all benzene and excessive benzene vapors can escape especially during flare smoking events related to upset events. Refineries emit tens of thousands of pounds of benzene every year and are not yet required have the monitoring technology to precisely measure 100% of the benzene fugitive and stack emissions they release, and so the benzene emissions are reported as estimates.

2. AIR TOXIC EMISSIONS - CARCINOGENS, TERATOGENS, MUTAGENS, and other health effects result from a soup of air toxics. Air toxics include Benzene, 1,3-Butadiene, Diethanolamine, Dioxin, Methyl Tertiary Butyl Ether, several Polycyclic Organic Compounds (PAHs), Styrene; Carbon disulfide, Carbonyl sulfide, Cyclohexane, Hydrofluoric acid, Methyl

Ethyl Ketone, Naphthalene, Phenol, Propylene, Sulfuric acid, 1,2,4-trimethylbenzene; Biphenyl, Cumene, Dioxin, Ethylene, Ethylbenzene, and Xylenes;

3. HYDROGEN SULFIDE (H₂S) EMISSIONS - NEUROTOXIN: Tar sands crude is a dirty feed stock containing H₂S gas and sulfur compounds. H₂S is a potent neurotoxin and genotoxin. This a prime reason refineries stink.

4. SULFUR & SULFUR COMPOUND EMISSIONS - CHRONIC AND ACUTE TOXINS: Emissions profile includes lots of toxic sulfur compounds such as sulfur dioxide (SO₂), sulfur trioxide (SO₃), sulfurous acid (H₂SO₃), sulfuric acid (H₂SO₄), carbonyl sulfide (COS), carbon disulfide (CS₂), hydrogen sulfide (H₂S), and others. Sulfur compounds are typically stinky compounds and several are toxic chemicals like H₂S, COS, and CS₂.

5. FINE PARTICLES EMISSIONS - CHRONIC AND ACUTE TOXINS: Cracking units such as the fluid catalytic cracker (FCCU) emit large volumes of toxic PM_{2.5} (fine particulate matter or fine particles) compared to chemical plants which will have less PM_{2.5} and have no similar catalytic crackers. Ultrafine particles less than one micron are not currently regulated or controlled. Polycyclic Aromatic Compounds (PAHs) or Polycyclic Organic Matter (POMs) are multiple benzene-containing toxins like benzo-alpha-pyrene (BAP), which is a more powerful human cancer-causing agent than benzene. Dozens of PAHs are considered as recognized or suspected human carcinogens.

6. CATALYSTS - ACUTE AND CHRONIC TOXINS: Catalysts contain different toxic heavy metals such as vanadium, etc. used in cracking units and alkylation catalysts such as HF or H₂SO₄. Catalysts are emitted as PM_{2.5} fine particles and ultrafines.

7. KEY AIR TOXIC SUBSTANCES EMITTED FROM OIL REFINERIES:

* 7 refinery Carcinogens: Benzene, 1,3-Butadiene, Diethanolamine, Dioxin, Methyl Tertiary Butyl Ether, several Polycyclic Organic Compounds (PAHs), Styrene;

* 14 refinery Acute Toxins: Ammonia, Carbon disulfide, Carbonyl sulfide, Cyclohexane, Hydrogen sulfide, Hydrofluoric acid, Methyl Ethyl Ketone, Methyl Tertiary Butyl Ether, Naphthalene, Phenol, Propylene, Sulfur trioxide, Sulfuric acid, 1,2,4-trimethylbenzene;

* 22 refinery Chronic Toxins: Ammonia, Benzene, Biphenyl, 1,3-Butadiene, Carbon disulfide, Carbonyl sulfide, Cumene, Cyclohexane, Dioxin, Ethylene, Ethylbenzene, Hydrogen sulfide, Hydrofluoric acid, Methyl Ethyl Ketone, Methyl Tertiary Butyl Ether, Naphthalene, Styrene, Propylene, Styrene, Sulfur trioxide, Sulfuric acid, 1,2,4-trimethylbenzene, Xylenes;

* 8 refinery Developmental Toxins: Benzene, Biphenyl, 1,3-Butadiene, Dioxin, Ethylbenzene, Phenol, Toluene, Xylenes

* 1 refinery Mutagenic Toxin: Styrene

* 3 refinery Neurotoxins: Cumene, Hydrogen sulfide, Mercury,

* 6 refinery Reproductive Toxins: Benzene, 1,3-Butadiene, Dioxin, Ethylbenzene, Toluene, Xylenes

* 8 refinery Toxic Metals from tar sands crude oil: Mercury, Zinc (zinc oxide), Lead, Nickel, Chromium, Boron, Arsenic, and Vanadium, as well as organocomplexes of those metals

List of refinery air toxics including Hazardous Air Pollutants:

Ammonia - AT, CT

Benzene - C, BD, R, CT - ***

Biphenyl - BD, CT - ***

1,3-Butadiene - C, BD, R, CT - ***

Carbon disulfide (CS₂) - AT, CT - ***

Carbonyl sulfide (COS) - AT, CT - ***

Cumene - CT, N - ***

Cyclohexane - AT, CT
 Diethanolamine (DEA) - C - ***
 Dioxin (TCDD) - C, BD, R, CT - ***
 Ethylene - CT
 Ethylbenzene - BD, R, CT - ***
 Hydrogen sulfide (H₂S) - N, AT, CT
 Hydrofluoric acid (HF) - AT, CT - ***
 Mercury (Hg) - N - ***
 Methyl Ethyl Ketone (MEK) - AT, CT - ***
 Methyl Tertiary Butyl Ether (MTBE) - C, AT, CT - ***
 Naphthalene - AT, CT - ***
 Phenol - BD, AT - ***
 Polycyclic Organic Compounds (PAHs) - C - ***
 Propylene - AT, CT
 Styrene - C, M, CT - ***
 Sulfur trioxide (SO₃) - AT, CT
 Sulfuric acid (H₂SO₄) - AT, CT - ***
 1,2,4-trimethylbenzene - AT, CT - ***
 Toluene - BD, R - ***
 Xylenes - BD, R, CT - ***

AC = ACUTE TOXIN

BD = DEVELOPMENTAL TOXIN (causes birth defects)

C = CARCINOGEN, or known human cancer-causing agent

CT = CHRONIC TOXIN

M = HERITABLE MUTAGEN (causes genetic changes to DNA or genes)

N = NEUROTOXIN

R = REPRODUCTIVE TOXIN

***HAP = HAZARDOUS AIR POLLUTANT - the most toxic air pollutants and are deemed to be "hazardous" under the 1990 Clean Air Act (list of 188 HAPs is in Title III of 1990 Federal Clean Air Act Amendments, November 15, 1990)

Benzene-containing "aromatics" compounds include: Toluene, Xylenes, Benzene, Ethylbenzene, Naphthalene, Phenol, Cumene, Polycyclic Aromatic Hydrocarbons (PAHs), Cresols, Styrene, Biphenyl, Dibenzofuran, Acetophenone, Quinoline, Chlorinated Dibenzofurans, and Chlorinated Dioxins.

LETTER SUBMITTED BY COMMITTEE RANKING MEMBER EDDIE BERNICE JOHNSON

Dear Ranking Member Johnson,

My name is Steve Lipsky, and I, along with my wife Shyla and our three children, have been living a nightmare for the past 4 years, ever since our water well became contaminated with methane from nearby drilling operations. I have recently been made aware of a House Science, Space and Technology Committee hearing that is being held on February 5th, 2014 entitled "Examining the Science of EPA Overreach: A Case Study in Texas." One of the cases of "overreach" that may be discussed is the case of our water contamination from natural gas drilling by Range Resources and EPA's role in helping to protect our family.

When we first drilled our water well in 2005 there was no drilling in the area, and our water was clean and drinkable. Range Resources began drilling in the area in 2009 and in late 2009 we noticed that our water was bubbling. In July 2010, our well stopped pumping water and the well service company determined our water well was so full of methane the pump was "gas locking." The service company lit our water on fire. We were alarmed, and in August 2010, we called the Texas Railroad Commission but they never took any action.

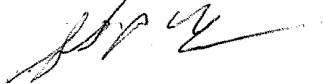
EPA invoked its power to protect our drinking water in December 2010, prompting Oklahoma Senator James Inhofe to request an Inspector General's investigation into EPA's actions in 2011. Late last year, the EPA Inspector General released its report concluding the EPA was justified in intervening to protect our drinking water, despite assertions to the contrary from Range Resources. EPA withdrew its legal complaint against Range Resources in 2012 despite having a report from an independent scientist showing that a gas well drilled by Range likely polluted nearby water supplies.

Despite this independent evidence, and the evidence gathered by the EPA that proves that the methane in our water well has the same chemical makeup as the methane in the well drilled by Range Resources, our water continues to be polluted, flammable and too unsafe to drink. Testing by Range Resources found methane in our water at 2.3 mg/L while independent testing by Duke University found methane at 44 mg/L and over 50 mg/L. We currently purchase water that is delivered to our home.

We are not alone. Several of our neighbors have water that bubbled and became flammable shortly after Range's drilling operations. There are hundreds of stories of families like ours in drilling areas across the country who are counting on the EPA to help them when the state regulators ignore their pleas for assistance. When state regulators fail to address serious water quality issues, we need the EPA to investigate.

I hope that you will consider this information as the hearing progresses on Tuesday. I am happy to discuss this issue with any member of the Committee or Committee staff if that would be helpful to you.

Thank you,
Steve Lipsky
Weatherford, Texas



LETTER SUBMITTED BY REPRESENTATIVE RALPH M. HALL



PRO-BUSINESS • PRO-TEXAS
FOR OVER 75 YEARS

February 5, 2014

The Honorable Lamar Smith, Chairman
Committee on Science, Space, and Technology
2321 Rayburn House Office Building
Washington, DC 20515

RE: Examining the Science of EPA Overreach: A Case Study in Texas

Chairman Smith:

Thank you for convening the Science, Space and Technology Committee to take up the critical issue of the role that science plays in the regulatory decisions of the Environmental Protection Agency. I want to take the opportunity to share some thoughts on this issue which is of great importance to both the Texas Association of Business (TAB) and all businesses in Texas.

TAB is a broad-based, bipartisan organization representing more than 4,000 Texas employers and over 200 local chambers of commerce. As Texas' leading employer organization for more than 90 years, TAB represents some of the largest multi-national corporations as well as small businesses in almost every community in the state. The cumulative effect of the many significant EPA regulatory decisions in recent years on businesses and consumers in the State of Texas has been significant. This impact can only be justified if, in fact, the scientific and technical basis of these actions is beyond question. Unfortunately, we have reason to believe that many of these actions are not based on valid scientific evidence and that such actions, because of their questionable basis, represent an overreach of authority.

Introduction

A significant challenge in the world of environmental regulation is not only finding the proper balance between the benefits that result from reducing the effects of man's activities and the costs to society of that protection, it is also defining where that balance properly lies. Environmental law is directly and necessarily connected to the laws and principles of science. The law establishes the process and procedure through which what we know, or at least believe, about the science of human health is applied to the control of industrial and business activities and their effects on the environment.

But the intent of the law is not primarily to establish process and procedure. The process is secondary to the goal of public welfare and it is through the application of science that we determine how certain activities affect public health and our environment and to what extent.

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The promulgation and implementation of environmental regulations often creates tension between the regulated that must bear the immediate direct costs of regulations and those seeking to ensure that those subject to regulation are complying with requirements to protect the public. Such regulations must achieve a balance between the degree of protection that is required or technically feasible and what costs our economy and our institutions can absorb without negatively affecting overall productivity, employment and public well-being.

The Role of Science in Balancing Costs and Benefits

The debate as to whether regulations to control industrial pollution are justified, regardless of their underlying legal authority, has been ongoing for decades. This debate is all too often mischaracterized as a trade-off between public health and the profitability and competitive position of businesses. These positions are not mutually exclusive. In fact, the decision to adopt an environmental rule must be one that balances the costs of imposing the rule with the benefits presumed to accrue from its implementation. Thus the cost-benefit analysis has become the focus of much of the ongoing debate as to whether environmental rules being proposed achieve that proper balance.

No meaningful or rational debate of the justification of a proposed environmental rule can take place unless both the costs and the benefits can be accurately presented and both opponents and proponents can agree to and understand the basis for the representation. Since benefits derive from public health impacts which are presumably avoided under some proposed regulation, we must look to the science of human health response to pollutants to determine what the health benefits are. *Any cost-benefit analysis, therefore, is only valid if the underlying science upon which the regulation is based is equally valid.*

Public Perceptions of Environmental Costs and Benefits

Obviously, there are many member of the public and organizations that purport to represent the public interest that support increasingly stringent environmental regulations. That support is generally based on the belief that the benefits of the regulations have been shown to exceed the costs. But since the determination of benefits must be based on an adequate scientific foundation, the implication must be that those supporters believe such scientific basis exists.

Proponents of more stringent environmental regulation have continually offered the opinion that businesses and industry routinely overestimate the negative effects of new rules and that a clear record exists to support the contention that progressively stronger environmental controls have generally yielded positive net benefits. More detailed analysis of the impact of environmental regulations, however, is beginning to better characterize and document the effects on businesses and economic activity and more clearly demonstrate that new regulations can have significant negative effects on capital investment, productivity and job growth¹.

¹ Greenstone, Michael. "The Impacts of Environmental Regulations on Industrial Activity: Evidence from the 1970 and 1977 Clean Air Act Amendments and the Census of Manufacturers." *Journal of Political Economics* Vol. 110, No. 6 (2002): 1175-1219.

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It is also increasingly clear that the presentation of the benefits of environmental rules to the public does not result in a meaningful awareness of risks or cost. Granted, communicating detailed information concerning highly technical issues that relate to environmental regulations - epidemiology, physiology, modeling and statistical analysis - is never a simple or easy task for any agency responsible for the communication. It must be acknowledged that many of those to whom those communications are directed may lack the knowledge base or experience to properly interpret or apply the information conveyed. The vast majority of those members of the public who support more stringent regulation, however, are typically presented with a representation that a rule is being proposed because it has been found to be justified based on an analysis of costs and benefits without any knowledge of the underlying technical analysis or validity or any science that might support the proposal.

Air Quality Regulations Under the Clean Air Act

From the date of its enactment, EPA has adopted a great many rules under the Clean Air Act which have significantly reduced air emissions. In spite of the dramatic increases in air quality, however, the number, scope and cumulative cost of additional rules continues to increase. EPA and supporters of this initiative have generally taken the position that these rules are both necessary to protect public health and justified because the public health benefits outweigh the costs to businesses and industry to comply. What is completely missing, however, is any clear record of what specific improvements in public health have resulted from these significant reductions in air emissions. Recent analysis of EPA's methodology for determining the costs and benefits of new regulations, however, suggests that there are valid reasons to question whether or not there is a process in place to ensure that public health benefits are being appropriately identified and whether the costs of increasingly stringent rules can indeed be justified.

Reliance on Statistical Correlations.

A threshold question in assessing the validity of any regulation based on a scientific justification is what constitutes "good" science? One critique of the regulatory analysis process is that EPA relies almost exclusively on observational epidemiological studies to establish a basis for additional regulations. These studies compare measures of health impacts (e.g., hospital admission or death statistics) with local or regional air quality data and attempt to assess whether there is any statistical correlation. Based on statistical correlations, a regulatory agency may determine that there is sufficient justification to proceed with some additional regulation. It is absolutely necessary to recognize that such observational studies are a substitute, and arguably a poor substitute, for actual clinical data collected under controlled experimental efforts.

The statistical significance of the correlations found in these studies that have been used to justify EPA rulemaking is often very weak and reflects a number of interdependent assumptions that are highly questionable, including, for example, the assumption that local or regional monitoring data actually reflect exposure levels for those individuals captured in the studies. More importantly, these studies cannot be used to establish any direct cause-and-effect relationship and are not supported by actual clinical data. They are, in fact, often at odds with clinical data. This leads to another question, which is, when statistical analysis of observations cannot be supported by data from controlled experimentation, what is the justification for ignoring the clinical data and depending instead on statistics?

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The use of published epidemiological studies rather than clinical data is not categorically inappropriate. We are a very long way from being able to support an environmental regulatory structure that can be properly founded on a base of knowledge derived from comprehensive scientific experience. The almost complete dependence on epidemiological studies, however, without acknowledging their limitations, compromises the validity and utility of the regulatory analyses. The value of studies of statistical correlation is the extent to which they inform and direct further research.

Obviously, research that fails to suggest a correlation that might justify further investigation is less likely to attract the attention of the scientific community and certainly less likely to get published. As it relates to establishing a justification for environmental rules, epidemiological studies that show no correlation between exposure and health effects are just as valid and informative as those that do. However, in the promulgation of many rules under the Clean Air Act, EPA's statistical methods essentially ignore studies that do not show a positive correlation between pollution and health effects. EPA's methodology arbitrarily assumes that studies that suggest a positive correlation between air quality and health effects are valid, while equally rigorous studies that show zero or a negative correlation are invalid.

As an illustration, in EPA's analysis of the health effects of $PM_{2.5}$, the outcome of the analysis is predetermined by the choice of what studies to incorporate into the analysis and what statistical methodology to apply. In assessing the significance of studies that attempt to correlate $PM_{2.5}$ exposure and observed health effects, EPA has used a method of statistical analysis that presumes that any negative correlation is by definition invalid. As a result, studies of the potential effects of ambient $PM_{2.5}$ in Dallas, TX, Houston, TX, Birmingham, AL, Las Vegas, NV and Riverside, CA, where no positive correlation between $PM_{2.5}$ and health effects was observed, were simply ignored and not factored into the determination at all. Although it may be difficult to accept that the negative correlations found in these cities could support an assumption that higher levels of $PM_{2.5}$ were actually conducive to improved public health, it must be acknowledged that the results for these cities readily support the possibility that, at least under certain conditions, there is no correlation between $PM_{2.5}$ and the health effects under review. The choice of statistical method ignores that very plausible conclusion. More importantly, discounting the results from those cities attributes positive benefits to significant population centers from $PM_{2.5}$ reductions where the data clearly suggests that such reductions will produce no such positive benefits. Ignoring legitimate data because it does not fit a hypothesis hardly constitutes good scientific method.

No Threshold Model of Health Impact.

Another significant problem with the methodology EPA currently uses in assessing public health effects is the assumption that there is no safe level of a given pollutant, even at levels that reflect natural background concentrations or even levels below background. EPA is required under the Clean Air Act to establish national standards for air quality that protect public health with an adequate margin for safety. Having done that, EPA continues to project that reducing pollutant concentrations to zero will continue to have some progressive public health benefit. This assumption is a completely arbitrary policy decision – there is no clinical data to support a model that assumes that there is no level below which health effects are undetectable. Moreover, this “no threshold” model is completely contrary to well-established rules, well documented in the

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toxicological literature, that many constituents clearly have thresholds for exposure below which negative health effects are not observed.² Again, another example of an arbitrary policy decision trumping legitimate science.

Presumption of Causality

One major shortcoming in the use of statistical analysis of epidemiological data is the difficulty in establishing causal relationships between the health effects measured and the ambient environmental conditions one might assume are responsible for the effects. In the absence of clinical data collected under controlled conditions, a presumption of causality is appropriate only when the statistical correlation is very strong and when additional confirmation, such as related clinical evidence, is available. Again, in the example of the most recent PM_{2.5} NAAQS rule, when the results of the epidemiological studies that EPA cited as a basis for reducing the NAAQS are reviewed, it is obvious that the relative risk factors associated with these studies do not support any reasonable assumptions that the measured air quality concentrations are in any way causative of the observed health effects.

A relative risk factor of 1:1 would indicate that there is no increased risk – i.e., those exposed to the pollutant in question (PM_{2.5}) are no more likely to manifest the health effect than those not exposed. On the other hand, *if* corroborating evidence were available, a relative risk factor of 3:1 might be reasonably indicative of some causal relationship. Only a few of the studies cited show any measurable departure from a relative risk of 1:1 at all; and, for those that do, the deviation is very small. Not one begins to approach a factor of 2:1, much less 3:1, the minimum range at which established principles of epidemiology would suggest that any assumptions about causation can be reached legitimately. Again, EPA has utilized a methodology for analyzing the health effects of pollutants that is inconsistent with established principles accepted by the scientific community.

The Value of a Statistical Life and Avoided Risk

Perhaps the greatest shortcoming in EPA's regulatory assessment methodology is the way in which public health effects or health benefits are characterized for consumption by the public. This leads to representations that are misleading and poorly understood by the public and affected stakeholders. The actual purported benefit of any new air quality regulation for any one individual is an extremely small reduction in risk. The risk reduction target for most constituents of concern is a reduction on the order of 1 in 100,000 to 1 in one million (between one-one thousandths and one- ten thousandths of a percent). The fact is that the public is poorly prepared to put such risk factors into context or meaningfully evaluate them against the myriad other factors that represent sources of risk in our everyday lives.

Under EPA's methodology, the total of these very small statistical differences are aggregated across an entire population to arrive at a number of "statistical" lives. The aggregation of very small changes in individual risk across a population of many millions results in a completely different perception by the public. What was on an individual basis a very small risk that someone may dismiss as insignificant is now made more significant by aggregating the risk to

² <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3038594/pdf/btxc12-001.pdf>

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suggest that real, whole people are now being harmed in the absence of the rule. From this representation comes the all-too-often mistaken characterization that new air quality regulations save many lives. Even assuming that EPA projections of health benefits are realistic (only for the sake of argument), a rule can only extend any one life by a very small amount. Air quality regulations do not confer immortality. They cannot and do not save lives. Just as importantly, the public who are exposed to the representations of these presumed life-extending benefits have no context within which to compare these very small statistical risks to other common risks they face daily that may be of far greater magnitude and significance, such as dietary habits and other lifestyle choices.

Estimates of Health Benefits That Conflict with Empirical Observation

One means of evaluating the validity of a regulatory assessment of public health benefits is a test of whether the results are consistent with laboratory or other empirical observations. Many of the representations that form the basis of the value of air quality benefits are not supported by actual laboratory analysis. These results also may not pass the test of common sense observation.

For example, an EPA decision to change its method of estimating health impacts in 2009 resulted in an increase in presumed mortality attributed to PM_{2.5} emissions from 88,000 to 320,000 deaths per year. This assessment would have one accept as plausible that 13% of all deaths in the U.S. are a result of PM_{2.5} concentrations - *concentrations that with few exceptions meet current national air quality standards*. The estimate of 320,000 deaths is almost half of either of the two most common causes of death in the U.S. – heart disease and cancer – and almost 10 times the number of deaths due to traffic accidents. Even more difficult to understand is how PM_{2.5} pollution can account for 320,000 deaths per year when the total number of deaths attributable to chronic respiratory disease in the U.S. is less than half that number – approximately 138,000 annually.³

But one of the more glaring examples of a statistically derived assessment of public health benefit not standing up to real world common sense observation relates to asthma. The incidence of asthma is perhaps the most common public health impact cited as a basis for the need to further reduce ozone and particulate matter emissions, despite the very significant progress in controlling these emissions over previous decades. It is indisputable, that if ozone and PM emissions are causally related to the rates of incidence of asthma, then the significant reductions in emissions that have occurred can only have reduced the rate of incidence of asthma. Except that no such reductions in the incidence of asthma have occurred.

On the contrary, researchers almost without exception acknowledge that the rate of incidence of asthma has been progressively increasing for decades, a trend in exactly the opposite direction from that of ambient air pollutant concentrations. The potential for certain air pollution conditions to trigger asthmatic responses certainly has been observed, but simple, basic scientific observation clearly shows that the incidence of asthma and ambient air pollution are not positively related.

³ Center for Disease Control, National Vital Statistics Report, 61(4). May 8, 2013

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Benefits and Costs of the Clean Air Act

In March of 2011 EPA released a report which attempts to demonstrate that regulations adopted under the Clean Air Act beginning in 1990 and projected to the year 2020 will have a positive benefit-to-cost ratio of 30-to-1. This ratio, however, is based on an error in the use of a total number of deaths avoided as a factor in the calculation, rather than the appropriate factor – the total number of life-years preserved. When corrected to include the appropriate factor, the ratio is reduced from 30-to-one to 5-to-one. Despite the obvious error which is now clearly understood by many observers, many EPA officials and others continue to cite the wrong figure.

Even when corrected, however, the argument will be that the ratio still reflects a positive net benefit. As discussed above, however, there are valid reasons to suggest that specific elements of the chosen regulatory assessment methodology overstate the benefits that accrue from certain air quality regulations. Reasonable corrections to EPA's questionable assumptions results in a benefit-to-cost ratio that is actually negative, meaning that the costs exceed the benefits. But, even if only half of the questionable benefits estimated under the current methodology are discounted, the benefit-to-cost ratio is still not clearly positive. This clearer understanding of the benefits of air quality regulations strongly suggests that a review of the methodology for quantifying such benefits is in order and that a stronger role for valid scientific analysis is warranted.

The Public Health Effects of Increased Regulatory Costs

Although the question of costs and benefits of regulations is typically viewed as a simple equation with costs on one side and benefits on the other, in reality the issue is more complex. The fact is that costs imposed by new environmental regulations are directly reflected in the costs to consumers or indirectly result from the increased costs on manufacturers, service providers and institutions. It is also well established that personal economic well being is directly and positively correlated with physical health and life expectancy. In fact, the correlation between economic wealth and longevity is far stronger than those used to justify rules such as the new PM_{2.5} NAAQS.

It must be recognized that an assessment of costs that may be justified when compared to the benefits those costs are assumed to "buy" must also take into account that those costs potentially impose conditions that may represent ancillary costs that mitigate calculated benefits. Put more simply, the presumed public health benefits of a proposed rule impose costs to consumers and those costs also work to reduce well-being. The body of evidence to support this contention is robust and the positive statistical correlation is clear and obvious – people live longer when they have access to greater financial resources and death rates increase when those resources are diminished. The author of one comprehensive study that characterized much of this work summarized the results as follows:

"It is now among the *firmest of epidemiological findings*, across industrialized societies, that socioeconomic status is inversely related to health status. In particular, higher income has been routinely shown to be a significant inverse predictor of morbidity and mortality. Similarly, the large and growing literature on unemployment and health is highly consistent in demonstrating elevated morbidity and mortality associated with unemployment and withdrawal from the labour force. It follows that economic growth, the major source of socioeconomic status improvement,

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should lead to lower morbidity and mortality rates, whereas economic decline—especially in conjunction with high unemployment—should increase mortality rates.”

While the links between new air quality regulations and additional public health benefits may, in fact, be tenuous, it can be clearly demonstrated that the economic well-being of an individual has a direct and significant correlation with that person’s physical well-being and longevity. Regulations that drive up the cost of essential goods and services, increase energy costs and reduce employment and economic opportunities force individuals to make economic choices that without question affect their health and welfare. Such assessments of the economic impact of new regulations are seldom given merit for the same reason that the calculated public health benefits don’t attract the public attention until they are aggregated to equate to some statistical equivalent of a real person. If EPA were to use the same method of aggregating the financial impact of new rules it is entirely reasonable to assume that for every statistical life saved by the rule another statistical life would be lost by due to financial destitution.

Conclusion

It is the position of TAB that current methodologies for analyzing and assessing the technical and scientific basis for environmental rules frequently do not utilize the best practices and are often inconsistent with accepted scientific principles and guidelines. Texas, of course, is not the only state potentially affected by these policies, however, our position as a major consumer of energy in the course of providing a significant part of the energy products and other commodities and services to other states and nations means that Texas bears a disproportionate share of the negative and avoidable effects. This overreach translates into increased costs to businesses and consumers, obstacles to access to markets and competition, legal and procedural challenges to proposed rules and uncertainty in capital investment and job markets.

Texas has enjoyed relative success during the efforts to recover and grow our economy. But we are left to wonder, along with other states as well, what might have been if more reasonable standards of scientific justification had been a part of the regulatory process from the beginning. We also welcome any consideration of reasonable changes to the regulatory process that will help improve the scientific and technical basis of regulations and public awareness of the true costs and benefits of regulatory actions.

Thank you for your consideration of this important issue and for the opportunity to provide our thoughts. If you have any questions or require additional information concerning our position in this matter, please feel free to contact me at 512.637.7707 or sminick@txbiz.org.

Respectfully,



Stephen Minick
Vice President for Governmental Affairs

LETTER SUBMITTED BY REPRESENTATIVE RANDY NEUGEBAUER



September 2012
SFR-097/12

HB 469 Report: Emissions Profile for Clean Energy Projects

A Report to the 83rd Texas Legislature

printed on
recycled paper

Air Permits Division

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

HB 469 Report: Emissions Profile for Clean Energy Projects

Prepared by
Air Permits Division

SFR-097/12
September 2012



Bryan W. Shaw, Ph.D., Chairman
Carlos Rubinstein, Commissioner
Toby Baker, Commissioner

Zak Covar, Executive Director

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Introduction

Pursuant to House Bill (HB) 469, passed by the Texas Legislature during the 81st regular session, 2009, the Texas Commission on Environmental Quality (TCEQ) has evaluated the emissions profile set out in Sections 120.001(2)(B) and (C) of the Natural Resources Code (NRC), and in the Texas Health and Safety Code, Sections 382.003(1-a)(A), (B) and (C). The TCEQ is required to make recommendations to the legislature on whether elements of the emissions profile should be increased or decreased. This report is the second required by Section 7 of HB 469 and due by September 1, 2012, with one subsequent report due on September 1, 2016.

Executive Summary

Before making recommendations on the emissions profile, the TCEQ is required to determine whether any commercially demonstrated electric-generating facility operating in the United States meets the criteria and emissions profile for a coal gasification and carbon sequestration “clean energy project” as specified by the NRC 120.001(2).

The determination includes assessing whether a facility is capturing and sequestering greater than 70 percent of carbon dioxide and whether any commercially demonstrated “advanced clean energy project” in the United States [that meets the criteria and emissions profile specified by Sections 382.003(1-a)(A), (B), and (C), Texas Health and Safety Code] is capturing and sequestering greater than 50 percent of the carbon dioxide in the emissions stream from the facility than would be required to meet the emissions profile set out in those paragraphs.

The TCEQ did not identify any commercially demonstrated electric-generating facilities that would meet the emissions profile described in Section 120.001(2). Based on a review of the emissions profile, as compared to recently permitted electric-generating facilities in Texas and the carbon capture-and-sequestration project database from the US Department of Energy’s National Energy Technology Laboratory (NETL), it appears the carbon dioxide capture and sequestration (CCS)

requirement is the limiting factor for a clean energy project¹ and for an advanced clean energy project².

The TCEQ is aware of several pilot projects throughout the United States that use conventional carbon dioxide removal chemicals such as amines, ammonia, or other chemicals. The American Electric Power (AEP) Mountaineer plant used a chilled ammonia process to capture up to 20 percent of the stack carbon dioxide emissions. In May 2011, the AEP concluded the project at its Mountaineer site with no current plans to commercially demonstrate a higher capture percentage. While the process of sequestration—pumping the carbon dioxide at high pressure into geologic formations—is a proven process, there is not a commercially demonstrated project with a carbon dioxide capture factor of 50 percent or more from the total emissions stream.

For example, Summit Texas Clean Energy received a permit in December 2010 for an Integrated Gasification Combined Cycle (IGCC) plant which would achieve up to 90 percent CCS and in February 2012 signed engineering, procurement and construction contracts. However, construction has not commenced nor has a start of construction date been set.

Also, the proposed Tenaska Trailblazer Energy Center project, which also has not begun construction, has an agreement with environmental groups to capture and sequester at least 85 percent of the carbon dioxide in the emissions stream. Therefore, the 90 percent and 85 percent for Summit and Tenaska, respectively, are not considered commercially demonstrated.

This is a key point because before any control technology can be considered technically feasible, it must be commercially demonstrated through a process that involves long-term operation with high reliability and minimal malfunctions. Until a company builds a large-scale carbon dioxide capture system for an electric-generating facility, and shows it to be a reliable form of emissions control, the TCEQ cannot consider the technology as commercially demonstrated.

¹ Clean Energy Project is defined in the Natural Resources Code, Section 120.001(2). A clean energy project deals solely with coal and petroleum coke-fired projects, and the percent of carbon dioxide that must be captured is 70 percent.

² Advanced Clean Energy Project is defined in the Texas Health & Safety Code, Section 382.003(1-a). An advanced clean energy project includes broadened fuel types, and the percent of carbon dioxide that must be captured is 50 percent.

Clean Energy Project Application Process

The review of advanced clean energy and clean energy projects will be coordinated through the Air Quality Division at the TCEQ. The TCEQ has a website at <terpgrants.org> with all necessary forms and information for the grant process. The process begins with the TCEQ issuing a Request for Grant Applications for these projects. Upon submittal of a project and supporting documentation, TCEQ staff will review the project to ensure that the emissions profile is met and that the technology proposed by the applicant is reasonably capable of meeting the emissions profile. The TCEQ will also coordinate with the Comptroller, the Railroad Commission, and the Public Utilities Commissions since each agency has certain requirements created by HB 469.

The TCEQ issued a Request for Grant Applications for advanced clean energy projects and new technology projects under grant solicitation number 582-11-10755. The grant solicitation was opened on October 15, 2010, and closed on November 29, 2010. No grant applications were received under this grant solicitation.

Assessment of the Emissions Profile

The TCEQ is required to adopt baseline emissions for sulfur dioxide and mercury to create emission limits for these pollutants in the emissions profile while the other pollutants in the emission profile have mandated emission limits.

The TCEQ adopted the baseline emission for mercury that is in HB 469, which requires 95 percent reduction on an annual basis in the emissions profile. The mercury reduction requirement for the range of fuels is considered technically and economically feasible based on reductions proposed by permit applicants not specifically pursuing a clean energy project. The TCEQ also adopted the baseline emission that is in HB 469, for sulfur dioxide from fuel other than sub-bituminous coal which requires 99 percent reduction on an annual basis in the emissions profile. The sulfur dioxide reduction requirement for the range of fuels is considered technically and economically feasible based on reductions proposed by permit applicants not specifically pursuing a clean energy project.

The other components in the emissions profile required by the Health and Safety Code appear technically and economically feasible. While some fuel types have an advantage by being inherently low-emitting

for certain pollutants, the overall emissions profile does not appear to significantly favor one fuel type or another. However, a CCS component has never been an enforceable requirement in any issued air quality permit.

No new developments have changed the TCEQ's view from the September 2010 report that increasing the allowable emission rate or decreasing the percent reduction of any pollutant in the profile is not warranted at this time. In February 2012, the EPA promulgated a rule, Mercury and Air Toxics Standards (MATS), for electric generating facilities. MATS will require significant control of some of the same pollutants in the emission profile. If this rule survives likely court challenges, it may affect the recommendations in the next report. Until more examples of actual operation of advanced pollution control and CCS occur, it is difficult to point to a demonstrated basis for changes to the requirements.

The September 2010 TCEQ report anticipated two projects to analyze that have since been delayed or cancelled. Delaying or cancelling solid fuel-fired electric generating facilities appears to be a national trend due to low natural gas prices and regulatory uncertainty involving solid-fuel fired electric generating facilities.

Projects that were relying on a federal legislation to put a financial price on carbon dioxide are not profitable without such a system. Some permitted units may still proceed with construction of the electric generating facility but without CCS. Carbon dioxide can be sold for enhanced oil recovery to offset the expense of capturing carbon dioxide but it appears no facility will capture the minimum percentage of carbon dioxide emissions as required by the Health and Safety Code.

Adequacy of Incentives

Based on the lack of commercially demonstrated clean energy projects it is difficult to determine whether the incentives are adequate. There are a multitude of competing factors that impact the economic decision-making to construct a clean energy project. State incentives are only one of these factors. Others include the price of coal compared to other fuel sources, the regulatory environment, technical considerations, and many others. It is impossible to separate the impact of the state incentives from the effect of these other forces. It should also be noted that the Comptroller's franchise tax credits may not be issued prior to September 1, 2013, per Tex. Government Code, Section 490.352(e).

Conclusions

The TCEQ has not identified information from facilities, within Texas or the United States, to base recommended changes to the emission profile required for clean energy projects per Sections 120.001(2)(B) and (C) of the Natural Resources Code and Texas Health and Safety Code Sections 382.003(1-a)(A), (B) and (C). Specifically, there is an absence of information from commercially demonstrated electric generating facilities regarding carbon dioxide capture and sequestration. Thus, a recommendation to adjust the minimum percentage of carbon dioxide to be captured and sequestered for the facility to qualify as a clean energy project or advanced clean energy project would not be supportable until a later date.

LETTER SUBMITTED BY REPRESENTATIVE DAVID SCHWEIKERT



February 3, 2014

The Honorable Howard A. Shelanski
 Administrator, Office of Information and Regulatory Affairs
 Office of Management and Budget
 725 Seventeenth Street, NW
 Washington, DC 20503

Dear Dr. Shelanski:

On September 17, 2013, the Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers (Corps) jointly sent a draft proposed rule defining the scope of waters protected under the Clean Water Act (CWA) to the Office of Management and Budget (OMB) for interagency review. The Waters Advocacy Coalition (WAC or Coalition)¹ met with James Laity of OMB's Office of Information and Regulatory Affairs (OIRA) on December 23, 2013, to express our concerns with the draft proposed rule. As explained in our meeting with Mr. Laity and set out in more detail below, the draft proposed rule fails to comply with important regulatory requirements, relies on a flawed economic analysis, and is purportedly based on a scientific report that has not been peer reviewed.

In light of these concerns, OMB should return the draft proposed rule to the agencies and require them to address the substantive issues and procedural flaws before any proposed rule is released for public comment. Publishing a proposed rule that is lacking in so many critical respects would severely limit the public's ability to meaningfully comment or otherwise participate in the rulemaking process. Moreover, and most importantly, any proposed rule should adhere to the two relevant Supreme Court holdings in *SWANCC* and *Rapanos*. Those decisions decisively put the agencies on notice that Congress imposed limits to federal jurisdiction in this area. EPA must respect those limits. Any rule establishing federal jurisdiction that goes beyond those holdings contravenes congressional intent and undermines two distinct rulings by the U.S. Supreme Court.

The Draft Rule Does Not Comply with Executive Order 12866

For years, we have advocated for a rulemaking to clarify how jurisdictional determinations are to be made because the issues are complex and the rulemaking process requires the agencies to comply with important regulatory requirements. Executive Order (EO) 12866 assigns OIRA the responsibility of coordinating interagency review of rulemakings to ensure that proposed regulations are consistent with the EO's principles, which include considering alternative forms of regulation, minimizing the potential for uncertainty, and assessing costs and benefits. So far, EPA and the Corps have ignored these requirements.

¹ The Coalition represents a large cross-section of the nation's construction, housing, mining, agriculture, manufacturing, and energy sectors, all of which are vital to a thriving national economy. Projects and operations in these sectors are regulated in one manner or another by the CWA.

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Under EO 12866, “[i]n deciding whether and how to regulate, agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating.” Despite this requirement, the agencies appear not to have considered any regulatory alternatives to the approach outlined in the draft proposed rule. The agencies have not considered, for example, whether certain features (e.g., ditches) could be regulated in some manner other than as “waters of the United States.” Nor have the agencies considered whether state regulation is sufficient for any of these classes of waterbodies, such that federal regulation is duplicative or unnecessary.² These are just some examples of regulatory alternatives that the agencies should assess as part of this rulemaking process.

In addition, EO 12866 provides, “[e]ach agency shall draft its regulations to be simple and easy to understand, with the goal of minimizing the potential for uncertainty and litigation arising from such uncertainty.” Contrary to this requirement, the draft proposed rule leaves many key concepts unclear or undefined. For example, the draft rule asserts jurisdiction over waters or wetlands located within a “floodplain” area, but it does not provide any specific flood interval (e.g., 10-year, 100-year, or 500-year floodplain) and instead leaves it to the agencies’ “best professional judgment” to determine which flood interval should be used. In addition, the rule defines “tributary” as “a waterbody characterized by the presence of a bed and banks and ordinary high water mark, which contributes flow . . .,” but does not define “ordinary high water mark,” a concept that the Corps has recognized is poorly understood and applied inconsistently in the field.³ Such vague definitions and concepts will not provide the intended regulatory certainty and will likely result in litigation over their proper meaning.

EPA’s Economic Analysis for the Draft Proposed Rule is Highly Flawed

EPA’s economic analysis for the draft proposed rule, *Economic Analysis of Proposed Revised Definition of Waters of the United States* (Sept. 2013), fails to provide a reasonable assessment of costs and benefits as required by EO 12866. Economist David Sunding, the Thomas J. Graff Professor at the University of California-Berkeley’s College of Natural Resources, has identified several major flaws with EPA’s economic analysis.

First, the EPA analysis relies on a flawed methodology for estimating the extent of newly jurisdictional waters, which systematically underestimates the impact of the draft proposed rule’s new definition of “waters of the United States.” EPA evaluated FY 2009-2010 requests for jurisdictional determinations, a period of extremely low construction activity due to nation-wide depressed economic investment and activity, as the baseline to estimate the incremental acreage impacted, which results in artificially low numbers of applications and affected acreage that are not representative. Furthermore, EPA’s calculation of the percent increase in jurisdiction that would result from the draft proposed rule is based solely on a review of jurisdictional

² The Clean Water Act clearly and explicitly contemplates state jurisdiction over waters not included in the Act (*cf.*, 33 USC 1251(b): “It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution....”)

³ Matthew K. Mersel, U.S. Army Corps of Engineers, *The Ordinary High Water Mark: Concepts, Research, and Applications* (March 20, 2013), *available at* http://aswm.org/state_meetings/2013/mersel_matthew.pdf.

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determination and permitting requests. But this calculation does not account for situations in which landowners did not request a determination or engage in the regulatory process, and therefore introduces additional bias into the analysis by failing to use an appropriate representative sample of those waters that may be subject to jurisdiction under current regulations.

Second, EPA's calculation of incremental costs is deficient. EPA's analysis is focused on costs associated with the section 404 program and largely ignores the cost impact of the changes for other CWA regulatory programs due to lack of data. It also excludes several important types of costs, such as costs associated with permitting delays, impact avoidance, and minimization. In addition, EPA's analysis of section 404 costs relies on permitting cost data that are nearly 20 years old and are not adjusted for inflation.

Third, EPA uses a flawed methodology for its calculation of benefits. The benefit transfer analysis used to approximate program benefits is not consistent with best practices in environmental economics and is poorly documented. EPA synthesizes 10 previous studies to estimate an average "willingness to pay" figure for each acre of wetland mitigation. These studies are largely irrelevant, do not provide accurate estimates of benefits, and were conducted 10-30 years ago. Several of them were never published in peer-reviewed journals. By adopting the results of these studies, EPA forces a comparison between benefits calculated for different geographies and times. These benefits are scaled up to various wetland regions without considering changes in economic trends, recreational patterns, and stated preferences. The assumption that benefits accrue to all members of the wetland region is unsubstantiated. Moreover, EPA's analysis adopts an all or nothing approach to assessing benefits, assuming that all wetlands affected by the draft rule's definitional change would be filled but for the rule's change in definition or that all would be preserved or subject to mitigation if federal jurisdiction is extended through the draft rule. These unrealistic assumptions contribute to an inflated benefits calculation.

To correct these glaring errors and omissions, the agencies should withdraw the economic analysis and prepare a revised study of the costs and benefits of the draft proposed rule.

The Proposed Rule Should Be Informed by a Final, Peer-Reviewed Connectivity Report

At the same time the agencies sent a draft proposed rule to OMB for interagency review, EPA submitted a draft scientific study, "Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence" (Draft Connectivity Report or report), to the EPA Science Advisory Board (SAB) for peer review. Although EPA has stated that the report will serve as the "scientific basis" for the rulemaking on the scope of CWA jurisdiction, the agencies sent the draft proposed rule to OMB before the science has been reviewed.

As OMB's 2004 Information Quality Bulletin for Peer Review explains, "[w]hen an information product is a critical component of rule-making, it is important to obtain peer review *before* the agency announces its regulatory options so that any technical corrections can be made before the agency becomes invested in a specific approach or the positions of interest groups have

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hardened.”⁴ Accordingly, OMB’s review of a draft proposed rule is premature until the SAB panel’s peer review of the report is complete.

The SAB panel held a public meeting on December 16-18, 2013, in Washington, DC. Over the course of the meeting, the SAB panel suggested several major adjustments be made to the Draft Connectivity Report. The SAB panel will provide a report to the EPA Administrator with these recommendations for revision. OMB should require the agencies to allow for the SAB panel to complete its peer review process and for EPA’s Office of Research and Development to revise the report as necessary, before OMB proceeds with interagency review of a draft proposed rule.⁵

OMB Should Return the Draft Proposed Rule to the Agencies

In sum, in light of these significant legal, economic, and scientific deficiencies with the draft proposed rule and its supporting documentation, OMB should return the rule to EPA and the Corps with instructions to address these critical issues.

We appreciate your attention to this important matter. If you wish to discuss any of these concerns, please contact Deidre G. Duncan, counsel for the Coalition, at (202) 955-1919.

Sincerely,

Agricultural Retailers Association
American Farm Bureau Federation
American Forest & Paper Association
American Gas Association
American Petroleum Institute
American Road & Transportation Builders Association
Associated Builders and Contractors, Inc.
The Associated General Contractors of America
CropLife America
Edison Electric Institute
The Fertilizer Institute
Florida Sugar Cane League
Foundation for Environmental and Economic Progress
The Independent Petroleum Association of America
Industrial Minerals Association – North America
International Council of Shopping Centers

⁴ Office of Management and Budget, Final Information Quality Bulletin for Peer Review (Dec. 16, 2004), available at http://www.cio.noaa.gov/services_programs/pdfs/OMB_Peer_Review_Bulletin_m05-03.pdf (emphasis added).

⁵ We do not address here the glaring shortcomings of the report itself. We have, however, submitted extensive comments on the report and draw your attention to those comments, not least of which is that in examining “connectivity,” the study draws virtually no distinction between connections that are significant and those that are not. As such, the report is an inadequate and incomplete basis for justifying an expansion of federal jurisdiction under the Clean Water Act.

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Irrigation Association
NAIOP, The Commercial Real Estate Development Association
National Association of Home Builders
National Association of Manufacturers
National Association of Realtors
National Cattlemen's Beef Association
National Corn Growers Association
National Council of Farmer Cooperatives
National Industrial Sand Association
National Mining Association
National Milk Producers Federation
National Multifamily Housing Council
National Pork Producers Council
National Rural Electric Cooperative Association
National Stone, Sand & Gravel Association
Portland Cement Association
Public Lands Council
RISE (Responsible Industry for a Sound Environment)
Southern Crop Production Association
Treated Wood Council
United Egg Producers

cc: Honorable Gina McCarthy, Administrator, U.S. Environmental Protection Agency
Honorable Jo-Ellen Darcy, Assistant Secretary of the Army (Civil Works)
Honorable Barbara Boxer, Chairman, Senate Committee on Environment and Public Works
Honorable David Vitter, Ranking Member, Senate Committee on Environment and Public Works
Honorable Bill Shuster, Chairman, House Transportation and Infrastructure Committee
Honorable Nick Rahall, Ranking Member, House Transportation and Infrastructure Committee
Honorable Barbara Mikulski, Chairwoman, Senate Committee on Appropriations
Honorable Richard Shelby, Ranking Member, Senate Committee on Appropriations
Honorable Harold Rogers, Chairman, House Committee on Appropriations
Honorable Nita Lowey, Ranking Member, House Committee on Appropriations
Mr. James Laity, Office of Information and Regulatory Affairs, Office of Management and Budget
Mr. David Evans, Director, Wetlands Division, U.S. Environmental Protection Agency
Ms. Margaret E. Gaffney-Smith, Chief, Regulatory Community of Practice, U.S. Army Corps of Engineers

LETTER SUBMITTED BY REPRESENTATIVE PAUL C. BROWN

Attorney General Olens and Fellow AGs Demand that EPA Reveal De... <http://law.ga.gov/print/press-releases/2013-07-19/attorney-general-ole...>

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Attorney General Olens and Fellow AGs Demand that EPA Reveal Details of Secret Settlement Talks with Special Interest Groups

July 19, 2013

Attorney General Sam Olens and 11 attorneys general^[1] have filed a lawsuit in federal court against the Environmental Protection Agency (EPA) seeking to force the EPA to follow the law and disclose documents related to its "sue and settle" tactics.

"Sue and settle" allows the EPA to push its agenda on the American people through sweetheart deals with special interest groups," said Olens. "We deserve a government that conducts business in a transparent manner, especially when its actions have a direct impact on all of us. The refusal to produce documents related to these backdoor settlements is the latest disregard for the rule of law by the EPA."

The EPA utilizes "sue and settle" to achieve environmental policies that would otherwise be blocked by the transparent rulemaking process that is a vital part of a representative democracy. In essence, outside advocacy groups notify agencies of their intent to sue and then conduct closed-door negotiations. During these settlement talks, special interest groups dictate the agency's policy priorities and funding choices, ultimately resulting in legally binding court-approved settlements. In the process, States and other affected parties are sidelined from weighing in on policy decisions that directly impact them. In fact, affected parties often have no knowledge of the negotiations until they have become legally binding.

On February 6, 2013, Attorney General Olens and his fellow attorneys general filed a Freedom of Information Act request for communications between the EPA and special interest environmental groups concerning consent decrees that dictate how EPA is to implement the Clean Air Act's Regional Haze program in various States. The Clean Air Act is based on cooperative federalism, meaning States – not the EPA – design and implement plans for compliance with the Regional Haze program. The EPA has refused to produce the relevant documents.

The States also sought a fee waiver in their request. "Ninety-two percent of the time EPA

Attorney General Olens and Fellow AGs Demand that EPA Reveal De... <http://law.ga.gov/print/press-releases/2013-07-19/attorney-general-ole...>

grants fee waiver requests from noncommercial requesters who are supportive of EPA's policies and agendas, but denies a majority of fee waiver requests from noncommercial requesters who are critical of EPA," the complaint states. "States properly asked for specific records ... (and) EPA violated FOIA's mandate.[2]"

Olens has been an outspoken critic of the EPA's "sue and settle" approach to environmental policy. In June he submitted testimony to the House Judiciary Subcommittee on Regulatory Reform, Commercial and Antitrust Law arguing that the practice runs afoul of transparency and the important federal principles of separation of powers and federalism by circumventing the steps put in place by Congress for the rulemaking process and by excluding States from regulatory decisions in which they have historically played a vital role.

A copy of the lawsuit, filed in the U.S. District Court for the Western District of Oklahoma, is attached.

[1] Alabama, Arizona, Kansas, Michigan, Nebraska, North Dakota, Oklahoma, South Carolina, Texas, Utah and Wyoming

[2] <http://cei.org/news-releases/epa-gives-info-free-big-green-groups-92-time-denies-93-fee-waiver-requests-biggest-con>

Related Files:

Attachment	Size
 Filed FOIA Complaint and Exhibits.pdf	4.1 MB

Source URL: <http://law.ga.gov/press-releases/2013-07-19/attorney-general-olens-and-fellow-ags-demand-epa-reveal-details-secret>

