

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

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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.

*Note: Information pertaining to the Railroad Commission of Texas' history and regulatory functions was compiled by Railroad Commission staff and can be found on the Commission's website.