



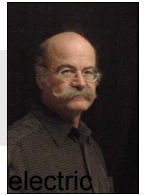
BLUE RIDGE ENVIRONMENTAL DEFENSE LEAGUE

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The LEAGUE LINE

Natural Gas, Unnatural Disaster

By Louis A. Zeller



Inside Line:

Fall 2014

Natural Gas, Unnatural Disaster

Director's Report: I Am Because You Are

Sand Mining—New Threat to NC

BREDL on Nation's Map - Thanks to Bungle by American Petroleum Institute Group

Beyond Dirty Tricks

Duke Internship Experience with BREDL

Using Environmental Test Results with Community Members: Helping Communities Get a Grip on Risk

Who Regulates the Regulators?

Shell Bluff Concerned Citizens Potassium Iodide Program



2014

^{10/07/14} The rush to develop natural gas resources in the Southeast may be an unfolding environmental and public health disaster of epic proportions. Explosions, fires and accidents can steal the headlines, but the greater calamity may be the silent progression of disease and death caused by the invisible contamination of the air, water and soil. This is an unnatural, man-made, and, therefore, preventable tragedy.

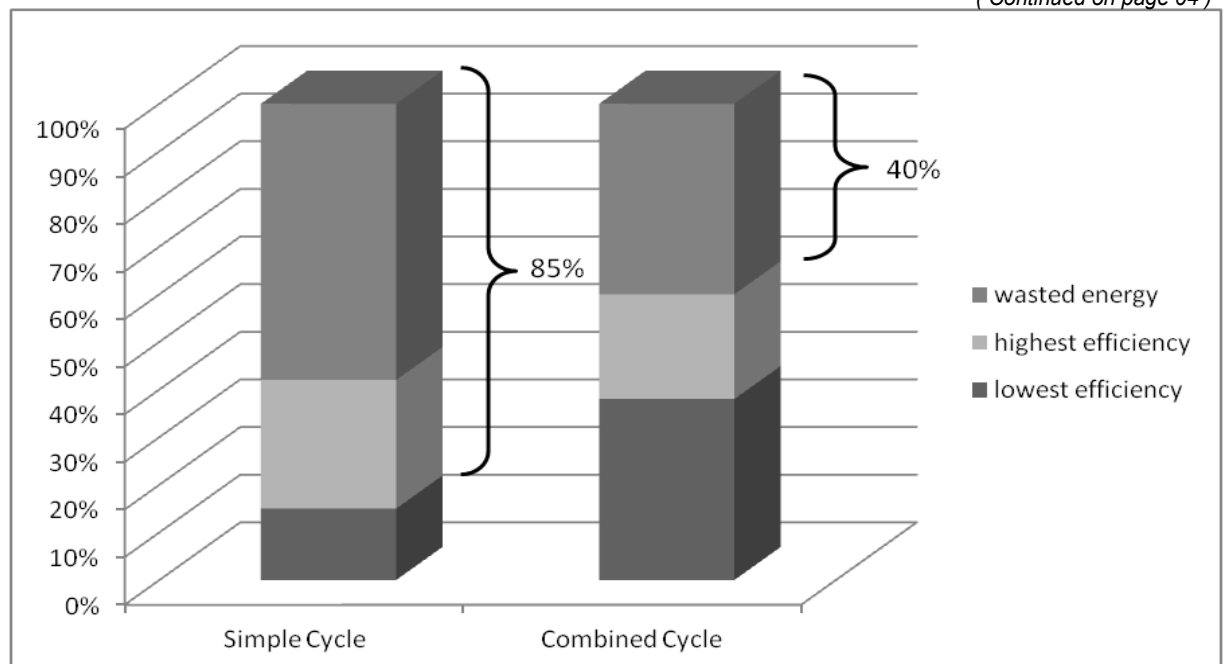
For years the Blue Ridge Environmental Defense League has investigated, publicized and organized on the invasive and destructive method of natural gas extraction known as hydraulic fracturing or "fracking." Nationwide, the growth of fracking has been phenomenal, increasing by 259% in just four years to over ten trillion cubic feet of natural gas per year ¹. Altogether, over 29 trillion cubic feet of gas is extracted annually from all sources in the US, including coal beds, oil wells and traditional gas wells. But drilling is just the beginning of the story. Once the gas is removed from the earth, it is transported in trucks, compressed and delivered by pipelines to be burned for heat and power. At each stage in this process, pollution is

created. And compressor stations and electric power plants are two major pollution sources which are often overlooked.

Combustion Turbines Generate Electricity and Pollution

At the Richmond County Energy Complex in Hamlet, North Carolina, Duke Energy Progress operates seven combustion turbines permitted to burn either fuel oil or natural gas to generate 2,000 megawatts of electric power. But turbines are remarkable for their lack of efficiency in converting chemical energy to mechanical energy. More than 50 percent of the turbine's power output is consumed by the turbine itself to aid combustion. ² Two types of turbines are simple-cycle and combined-cycle. The simple cycle has a thermal efficiency of only 15 to 42 percent. Combined cycle units add a heat recovery steam generator to boost efficiency to between 38 and 60 percent. So, at best 40% of the fuel burned produces no electric power; at worst 85 % of the fuel burned produces no electric power. Of course, air pollution and global warming gases are created whether power is produced or not.

(Continued on page 04)





BREDL Logos

BREDL's original nuclear waste logo first appeared in 1984 in the Skyland Post. As BREDL's scope expanded to reach other kinds of issues, this logo was eventually replaced. In the 1990's, BREDL adopted an image designed by founding co-president, Susan Sharpe, which appeared for several years in the Environmental Times. The current logo was selected from a design contest by students at ASU in 1987, and was revised in 2000, and again in 2014 for the thirtieth anniversary. The theme of clean water has been central to each BREDL logo, and the circle is representative of the earth, and unity.



BREDL Executive Committee Board Members Through the Years

Since its founding on March 15, 1984, BREDL's Board of Directors has had scores of dedicated members who donated their time and effort in service to the organization. Within the board, the Executive Committee has special responsibility. It has evolved over the years but has always reflected the diversity and unity of the Blue Ridge Environmental Defense League, our greatest strengths. Members of the executive committee are listed below chronologically, with the dates that they joined. Some have continued to serve for many years, providing continuity, wisdom and the invaluable benefit of experience. Without them, we would not be who we are today. **Thank you.**

1984: Bernard Goss, Janet Marsh, Linda Taylor, Truiett Weaver, Patty Wheeler, Lynn Worth, Bill Mock, Bettie Pendergraft, Bill Francis, Catherine Dungan, Joan Mock, Marea Weaver, and Michael Dungan

1986: Perry Struss, Virginia McLeod

1989: Elmer Hall

1992: Tony Napoli, Susan Sharpe, Rick Maas, Mike Arnold

1993: Tom Mathis, Marion Wallin, Ann Evans, Richard Crowe

1994: James A. Johnson, Sam Tesh, Marion Wallin, Pam Jopson, Carol Bradley-West, Jean Colston, Claude Ward, Fred Dye

1995: Betty Tesh, Marge Cahill, Regina Tatum

2000: Mark Barker

2004: Elizabeth O'Nan, Daisy O'Nan

2009: Pat Hill

2010: Sandy Kurtz

2012: Rev. Willie Tomlin

Janet Marsh, Strategic Advisor

BREDL Staff Members Through the Years

In 1986, the League hired its first paid staff. Our practice has been the hiring of people already working as volunteers in their own communities. Almost all have been community organizers, learning the craft by doing. The following staff members have worked for BREDL through the decades, contributing their strengths, talents, energy, and abilities to each campaign. The list indicates the beginning of their respective employment periods and their office locations.

1986: Janet Marsh, Pat Fournier, Glendale Springs NC

1986: Sandy Adair, Boone NC; Virginia Hunt, Spruce Pine NC; Bob Gessner, Mars Hill NC; Lou Zeller, Marshall NC

1988: Ginny Lindsay, Jefferson NC

1990: Denise Lee, Wadesboro NC

1992: Therese Vick, Rich Square NC

1994: Carol Bradley-West, Cherokee NC

1997: Claude Ward, Burgaw NC

2000: Don Moniak, Columbia SC; Catherine Mitchell, Charlotte NC

2001: David Mickey, Winston-Salem NC

2002: Charles Utley, Augusta GA

2003: Bonnie Ward, Burgaw NC

2007: Sue Dayton, Saxapahaw NC

2009: Ann Rogers, Roanoke VA

2009: Beverly Kerr, Graham NC

2011: Therese Vick, Raleigh NC

2013: Kate Dunnagan, Greensboro NC

2013: Cary Rodgers, Peachland NC

A quarterly publication of:
**Blue Ridge Environmental Defense League
(BREDL)**

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Shengyuan Su, Gwen Frisbie-Fulton

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Mark Barker

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Associate Director / Communications Coordinator

Beverly Kerr

Environmental Justice Campaign Director

Rev. Charles Utley

Sustainable Economic Development Coordinator

Therese Vick

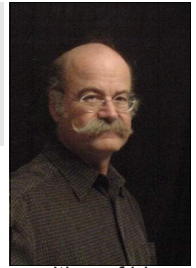
Development Director

Kate Dunnagan

NC Environmental Justice Coordinator

Pastor Cary Rodgers

October 2014
Louis A. Zeller,



I Am Because You Are

The destruction of the earth's environment is the human rights challenge of our time. Over the 25 years that climate change has been on the world's agenda Global emissions have risen unchecked while real world impacts have taken hold in earnest. Time is running out. We are already experiencing loss of life and livelihood due to intensified storms, shortage of fresh water, spread of disease, rising food prices, and the creation of climate refugees. The most devastating effects are visited on the poor, those with no involvement in creating the problem. A deep injustice.

Just as we argued in the 1980s that those who conducted business with apartheid South Africa were aiding and abetting an immoral system, today we say nobody should profit from the rising temperatures, seas and human suffering caused by the burning of fossil fuels. We can no longer continue feeding our addiction to fossil fuels as if there is no tomorrow. For there will be no tomorrow.

We are on the cusp of a global transition to a new safe energy economy. We must support our leaders to make the correct, moral choices. Freeze further exploration for new fossil sources. We cannot maintain a livable temperature and

climate for humanity if we burn more than a fraction of the fossil fuels already discovered. Hold those responsible for climate damages accountable. Change the profit incentive by demanding legal liability for unsustainable environmental practices. Encourage governments to stop accepting funding from the fossil fuel industry that blocks action on climate change. Divest from fossil fuels and invest in a clean energy future. Move your money out of the problem and into solutions.

There is a word we use in South Africa that describes human relationships: Ubuntu. It says: I am because you are. My success and my failures are bound up in yours. We are made for each other, part of one family, the human family, with one shared earth.

God bless you.

These are the words of Archbishop Desmond Tutu delivered at the United Nations Climate Summit held in New York City on September 23, 2014. Archbishop Tutu is an Anglican cleric known for his leadership in ending the racial inequity and economic injustice of apartheid in South Africa. In 1975 he rose to prominence in the anti-apartheid movement. In 1984 he was awarded the

Nobel Peace Prize in recognition of his work. In 1993 apartheid ended and a year later South Africa elected Nelson Mandela as president.

The Blue Ridge Environmental Defense League's energy policy states: "Global warming is a planetary crisis which demands concerted, substantial and meaningful action." Therefore, it is imperative that we reduce greenhouse gases, principally carbon dioxide and methane. BREDL is dedicated to preventing or curtailing the use of all fossil fuels—coal, oil and natural gas—in our region, to reducing emissions, strengthening climate resilience, and mobilizing political will.

Reflecting on the incredibly difficult struggle to end apartheid, Archbishop Tutu said, "Despite all of the ghastliness in the world, human beings are made for goodness. The ones that are held in high regard are not militarily powerful, nor even economically prosperous. They have a commitment to try and make the world a better place."

We are called upon to do this for the benefit of present and future generations.■



Photograph: Omer Saleem/EPA: Children play in flood water in Pakistan

(continued from pg 1)

Adding insult to injury, Duke Energy Progress asked that best available control technology for sulfur dioxide not be installed at this facility. The state complied with Duke's request because the company turned down cost recovery available under the NC Clean Smokestacks Act (G.S. 62-133.6). In 2012, the Richmond County Combustion Turbines facility released into the air the following pollutant totals:

Richmond County Combustion Turbine Annual Emissions, Tons (2012)³

| SO2 | NOX | VOC | CO | PM10 | Total HAP | Formaldehyde |
|-------|--------|-------|--------|--------|-----------|--------------|
| 22.11 | 514.96 | 63.50 | 657.11 | 205.81 | 37.72 | 25.88 |

Actual emissions, as opposed to permitted emissions, may vary from year to year, but the record shows that 1,463 tons of pollution, including over 25 tons of formaldehyde, were emitted by this plant in 2012. In fact, during the last four years the overall level of pollution has nearly tripled. From 2008 to 2012, actual emissions of pollutants has increased by 115% for nitrogen oxides, 145% for sulfur dioxide, and 146% for formaldehyde.

Cary Rodgers, the League's North Carolina Environmental Justice Organizer, works with residents of Hamlet living near Duke Energy's power plant. He reports that they are awakened at three o'clock in the morning by loud noises and the air around their homes is filled with bitter tasting smoke. To combat this nuisance, they formed a League chapter, Concerned Citizens of Richmond County. On September 17th, CCRC and the Blue Ridge Environmental Defense League filed a legal challenge to the state air permit under Clean Air Act Section 505. We are demanding that the EPA offset the disproportionate impact of pollution on this community and mandate a corresponding level of resources and technology to correct the ongoing environmental injustice in Hamlet. The EPA has 60 days to respond.

Compressor Stations: Pipelines of Pollution

A major source of air pollution from natural gas pipelines is compressor stations. Spaced about 50 to 100 miles apart, they keep the gas moving along the pipeline from production site to end use. Natural gas is received via upstream pipeline, is compressed, and then pumped into the outlet pipeline for transmission downstream. Power for these compressors is provided by internal combustion engines which use natural gas as a fuel source. These engines release huge amounts of air pollution including sulfur dioxide (SO₂), nitrogen oxides (NO_x), volatile organic compounds (VOC), carbon monoxide (CO), particulate matter (PM₁₀), and hazardous air pollutants such as benzene and formaldehyde. Our ongoing review of compressor stations in Virginia reveals high levels of air pollution and wide variations from site to site, all sanctioned by the Virginia Department of Environmental Quality's Air Division. The table below lists a representative sample of actual annual emissions from compressors across the Commonwealth:

Air Pollutants Emitted from Natural Gas Compressor Stations, Tons/year⁴

| Tons/year | SO2 | NOX | VOC | CO | PM10 | Formaldehyde |
|--------------|------|--------|-------|--------|------|--------------|
| Loudon | 0.9 | 34.4 | 7.1 | 27.4 | 2.0 | <0.1 |
| Orange | 2.0 | 2275.6 | 206.3 | 1190.1 | 9.7 | 60.9 |
| Pittsylvania | 0.3 | 1720.5 | 171.3 | 387.8 | 18.8 | 26.5 |
| Page | <0.1 | 23.0 | 3.1 | 16.2 | <0.1 | 1.2 |
| Greene | 0.1 | 53.7 | 21.9 | 60.3 | 4.1 | 5.9 |
| Petersburg | <0.1 | 74.3 | 3.4 | 12.1 | 1.0 | <0.1 |
| Appomattox | 1.9 | 575.4 | 145.3 | 228.0 | 31.2 | 57.0 |
| Dickenson | 0.1 | 95.5 | 28.7 | 58.5 | 10.6 | 12.1 |
| Totals | 5.3 | 4852.4 | 587.1 | 1980.4 | 77.4 | 163.6 |

<0.1 indicates pollutant emissions below 200 pounds/year

The size of the compressor, the demand, its location and the applicable requirements shape the wide variations in emissions. For example, the Loudon County Compressor Station operated by Columbia Gas Transmission utilizes eight turbines burning natural gas, rated at 1,350 horsepower each, and one larger 4,390 hp unit. Loudon County is a "non-attainment" area for ozone, requiring tighter control of NO_x and VOC. The Transcontinental Gas Pipeline Corporation's Compressor Station No. 165 in Pittsylvania County uses internal combustion, reciprocating engines, ten rated at 2,100 horsepower each and one at 3,400 hp. Pittsylvania County is an "attainment area" for all pollutants, allowing less stringent pollution control. (This compressor is also the eastern terminus of the proposed Mountain Valley Pipeline.) There are no add-on pollution control devices on either of these compressors.

Formaldehyde emissions are commonly associated with the burning of natural gas, and compressors release huge amounts of this hazardous air pollutant. The negative health effects of airborne formaldehyde occur at very low levels. Exposure to as little as 0.1 to 2 parts per million causes irritation of the eyes, nose and throat. At 5 to 10 ppm, people experience cough, tightness of the chest and eye damage. At 20 ppm breathing becomes difficult, at 30 ppm there is severe injury to the lungs and 100 ppm is immediately dangerous to life.

The Piedmont Natural Gas–Wadesboro Compressor Station in North Carolina operates eight natural gas-fired reciprocating internal combustion engines, each rated at 4,735 horsepower. This medium sized compressor is one of the two moving gas along the company’s 128 mile pipeline from Charlotte to Wilmington. Our review of the state air permit reveals the pollution levels in the table below and shows an astounding level of greenhouse gas emissions.

| Pollutant | Emission rate tons/year |
|----------------------------------|-------------------------|
| Particulates (2.5, 10 and total) | 12.46 |
| SO ₂ | 0.73 |
| NO _x | 183.86 |
| VOC | 35.05 |
| CO | 21.98 |
| CO ₂ e | 203,824.65 |
| HAP total | 12.51 |
| HAP formaldehyde | 8.78 |

On October 3rd, the Blue Ridge Environmental Defense League and chapter Pee Dee WALL filed a Clean Air Act Section 505 petition with the EPA because we believe the state permit allows excessive air pollution levels and places a disproportionate burden on low income and minority populations.

The Wadesboro compressor station site is located in a county with a majority of African American residents and a high level of people below poverty level. The latest census data reveal Anson County is 48.5% black, 48.2% white. In Anson County 22.2% of the people are below poverty level, compared to the statewide level of 16.8%. A study led by a researcher at Duke University’s Nicholas School of the Environment found significant relationships between race, poverty and excessive levels of air pollution.⁵ This study provides an indicator of elevated risk to public health in Anson County, particularly in Wadesboro which, in addition to the Piedmont Natural Gas compressor station, is the location of several other large industrial sources of air pollution.

Accidents Happen

Pipelines are subject to accidents, spills and explosions. Natural gas is 90% highly flammable methane (CH₄). Four years ago a 30-inch natural gas pipeline caused a massive explosion with flames 1,000 feet high in San Bruno, California, destroying 38 homes and killing eight people. The explosion created a 40-foot deep crater 160 feet long. The

National Transportation Safety Board’s investigation of the disaster linked the cause to “a company that exploited weaknesses in a lax system of oversight and government agencies that placed a blind trust in operators to the detriment of public safety.”⁷ The problem is nationwide because of a general lack of qualified inspectors and oversight. According to the federal Pipeline and Hazardous Materials Safety Administration, during the last twenty years there have been 944 serious pipeline accidents involving a fatality or an injury requiring hospitalization.

Global Markets, Global Impacts

Today, the largest consumer of natural gas in the United States is the electric power industry at 9 trillion cubic feet, followed by industrial, residential and commercial users. In general, coal-fired electric power is giving way to natural gas, which nearly eclipsed coal in 2012. But both are fossil fuels. As demonstrated in this report, pollution emitted by natural gas facilities, extraction and delivery systems will erase any environmental benefit.

Industry representatives tout natural gas as an environmental improvement and an economic advantage. The head of Exelon said “The advent of shale gas has been a game changer. Having plentiful, cheap gas is great for the economy and for industry.”⁸ But natural gas commerce is part of a global market, a factor which governs who gets the financial benefit and who gets the pollution. There was a 68% rise in US natural gas exports from 2008 to 2012 (from 0.9 to 1.6 trillion cubic feet), and a corresponding 27% drop in net imports (from 3.9 to 3.1 trillion cubic feet). For example, from 2009 to 2013, US imports from Canada fell by 858 billion cubic feet; meanwhile, US exports to Canada increased by 350 billion cubic feet and to Mexico by 293 billion cubic feet.⁹ Is your electric bill shrinking? How much is clean air and water worth? Energy independence via natural gas is a chimera “snorting out the breath of the terrible flame of bright fire.”¹⁰

Yes, shale gas may be seen as a game changer. But natural gas is not cheap; that is, not unless the burdens of extraction, transport and use are transferred from corporate titans to the communities where the wells, pipelines, storage tanks and export terminals are located. At the recently concluded UN Climate Summit, Archbishop Desmond Tutu said, “The destruction of the earth’s environment is the human rights challenge of our time.” Rising levels of greenhouse gases—carbon dioxide and methane—require a halt to the burning of all types of fossil fuel: coal, oil and natural gas. ■

¹ Unless otherwise noted, gas production figures in this report are from the US Energy Information Administration’s 2012 Annual Report available at www.eia.gov

² US EPA Air Pollution Emission Factors, AP-42, Stationary Gas Turbines, Section 3.1.2 Process Description

³ Emissions data source: North Carolina Division of Air Quality Permit No. 08759T17, issued July 18, 2014

⁴ Emissions Data from Air Permits currently issued by the Virginia Dept. of Environmental Quality, located at www.deq.virginia.gov

⁵ Making the Environmental Justice Grade: Relative Burden of Air Pollution Exposure in the US,” Miranda ML *et al*, *Int. J. Environ. Res. Public Health* (2011)

⁶ *San Jose Mercury News*, September 12, 2010

⁷ Food & Water Watch Factsheet, <http://documents.foodandwaterwatch.org/doc/NatGasPipelines.pdf>

⁸ Chris Crane, president and CEO of Exelon, at the Resources for the Future Policy Leadership Forum, May 13, 2014

⁹ Sources: BP Statistical Review of World Energy 2014, IEA Gas Medium Term Market Report 2013, accessed at <http://cdn.powermag.com>

¹⁰ *Iliad*, Homer

Sand Mining - New Fracking Threat to North Carolina

By Therese Vick



The Boston Action Research project, affiliated with the Civil Society Institute, recently released a report ¹ on the problems associated with “frac sand” mining, particularly in the Upper Midwest. However, this map shows that North Carolina, and other parts of the South, are at great risk of the extraction of frac sand and its associated environmental and public health problems.

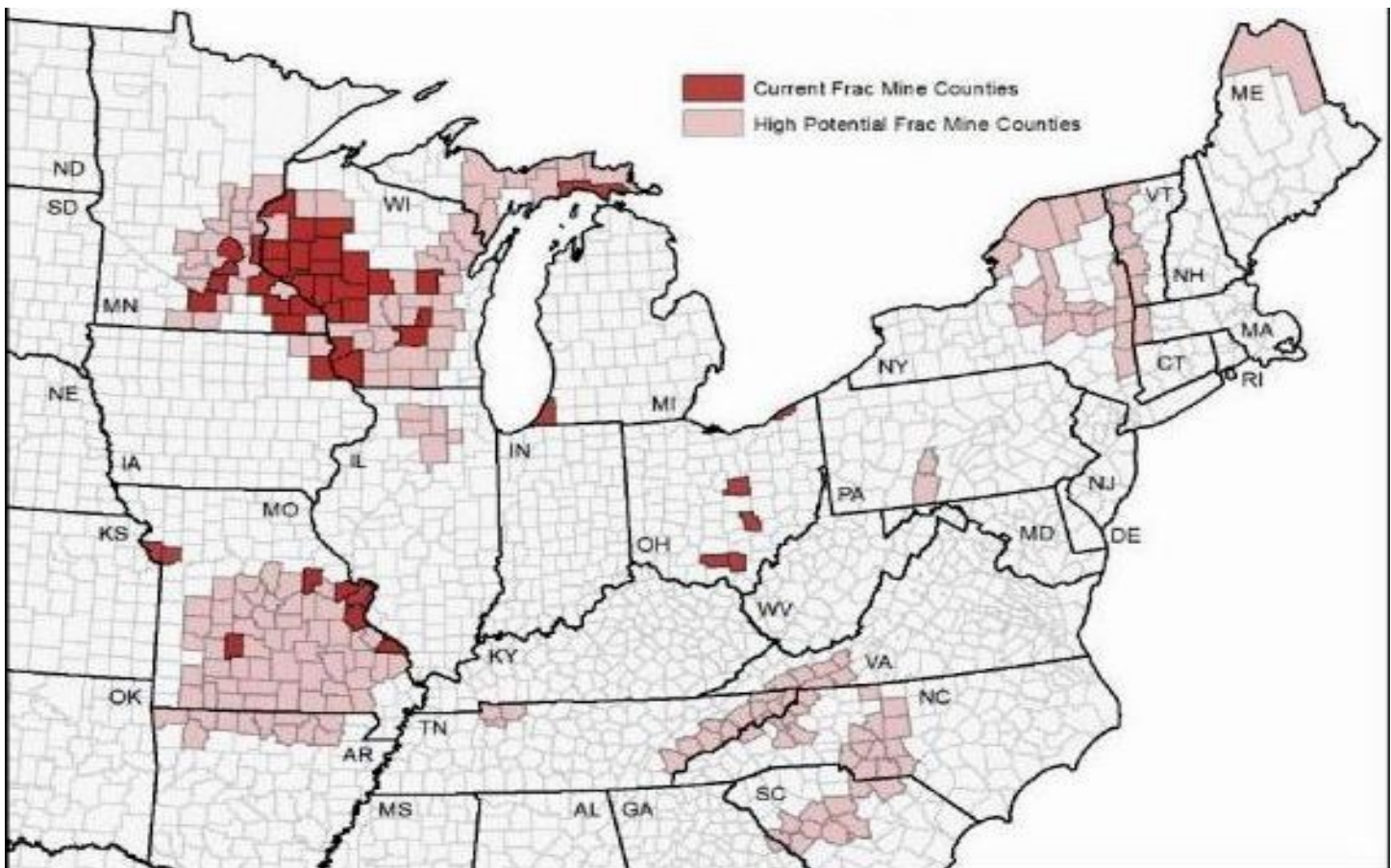
What Is Frac Sand?

Fracking uses very large amounts of a special sand. This silica sand is uniform in shape and able to

withstand great pressures underground in order to prop open the cracks in the tight shale so that the gas or oil can flow freely. Additionally, the oil and gas industry has determined that using more sand increases the productivity of a well. The development of frac sand mines has grown at a frenetic pace in the past few years- affecting air, surface and groundwater, quality of life, property values, and local government issues such as the ability to control the industry and road impacts.

“Mining is a disruptive process. You are not going to protect the environment and mine it simultaneously. They are mutually exclusive activities” (Steven Wilson, Minnesota Department

of Environmental Quality) (Blackman, 2011).



Current and Potential Frac Sand Mining Counties in the United States

The Process

Mining frac sand involves excavation (sometimes with dynamite) washing, drying, sorting and storage.

Chemicals are added to help separate the different grain sizes which can then be screened out. Although polyacrylamides- the chemical used most widely in the process-are not known to be toxic, small amounts of unpolymerized acrylamide, a known neurotoxin can be present in the washed sand. This means that the polyacrylamides must be monitored at each step of the process.

The Problems

• Air Quality

When inhaled the fine particles of frac sand can be deposited deep within the lungs of workers and people living nearby. PM_{2.5}, very small particles which negatively affect health are released into the community by the mining, the wind, and transportation. Silica sand can cause “silicosis” a chronic lung disease. Silicosis can develop without any symptoms at first. It can take 10 or more years for the disease to manifest, however, higher levels of exposure can result in its earlier appearance. Recent investigations by the National Institutes of Health (NIOSH) and the Occupational Safety and Health Agency (OSHA) show that fracking workers are over-exposed to silica sand.³

• Water Use and Water Quality

As mentioned earlier, sand mining takes large volumes of water, and the practice can create cones of depression which can disrupt groundwater flow. Groundwater can also become contaminated. Additionally, surface waters can be impacted by erosion and run-off from the mines, and road construction necessary for the industry to operate. Of concern, emerging research indicates that pollutants generally associated with acid mine runoff— such as arsenic, cadmium, aluminum, lead, manganese, and copper are being found in sand wash pits.

• Quality of Life and Social Disruption

- o Declines in property value
- o Shrinking tax revenue from the decline in property values
- o Damage to roads and bridges
- o Increased traffic
- o Noise
- o Disruption of community
- o Local government’s attempts to control the industry often met with lawsuits⁴

Why North Carolina

Demand for frac sand is high- even higher than projections. The counties in North Carolina identified by the report as having a “high potential for frac [sand] min[ing]” are: Ashe, Watauga, Avery, Mitchell, Madison, McDowell, Burke, Stokes, Guilford, Randolph, Davidson, Rowan, Mecklenburg, Cabarrus, Stanly, Montgomery, Union, Anson, and Richmond. As the demand for more frac sand increases, and the pushback from Midwestern states continues to grow, North Carolina could be targeted by yet another dirty industry. With the “business-friendly” atmosphere of the North Carolina Department of Environment and Natural Resources (DENR), there is little hope that regulation of the industry would be stringent.

What we can do

We must remain vigilant and organized to face this new threat to public health and the environment. Be proactive with local governments in order to have protective measures in place is one of the best ways to get ahead of what could be an explosion of sand mining. BREDL can help with organizing, planning and strategy.

¹ Chapman, Emily et al. “Communities at Risk: Frac Sand Mining in the Upper Midwest.” *Boston Action Research- A project of Civil Society Institute*. 25 September 2014. <http://www.civilsocietyinstitute.org/media/pdfs/092514%20CSI%20BAR%20frac%20sand%20mining%20report%20FINAL2%20-%20EMBARGOED.pdf>.

² Worthington, Karen, MS, RN, COHN-S et al. “Silica Hazards from Engineered Countertops.” *NIOSH Science Blog*. 11 March 2014. <http://blogs.cdc.gov/niosh-science-blog/2014/03/11/countertops/>

³ “Worker Exposure to Silica during Hydraulic Fracturing.” *NIOSH-OSHA Hazard Alert*. 06 2012. https://www.osha.gov/dts/hazardalerts/hydraulic_frac_hazard_alert.html

⁴ In Wisconsin, there have been legislative attempts to prevent local ordinances, moratoria, or other actions to limit sand mining

BREDL on the Nation's Map-

Thanks to Bungle by

American Petroleum Institute Group



By Sue Crotts

On September 12th my husband, Lonnie, Therese Vick, Community Organizer and Healthy Communities Sustainability Coordinator with the Blue Ridge Environmental Defense League, and I departed from our mountain home in western North Carolina to attend the fourth and final North Carolina Mining and Energy Commission's public hearing on proposed rules to regulate unconventional gas extraction through hydraulic fracturing, also known as fracking. Fracking, an environmentally devastating industry, was legalized in North Carolina in June of 2014.

The hearing was held at Western North Carolina University in Cullowhee to allow residents of the west to participate in the public comment process for legal rulemaking. We arrived in the parking lot shortly after 4:00 pm, the recommended sign in time for speakers. Therese pointed to a shiny new white bus and told us, "They're here. They were in Sanford and Raleigh, but they didn't show up in Wentworth, where a lot of them are from." "They" were the NC Energy Coalition, sponsored by the American Petroleum Institute.

After we hung some banners with anti-fracking and pro-sustainable energy messages amidst a large crowd of anti-fractivists who had assembled for the press conference, we made our way in to tables to sign up to speak. Then we made a bee line to the front of the auditorium to get a seat with good visibility to film speakers and Mining and Energy Commissioners. I love to document all types of events to share through Facebook social media.

I chatted with a woman sitting near us as the crowd of about 550 people slowly rolled in to fill the main floor of the large auditorium. After a bit I said to Therese, "I think I'll go outside and see what's happening." As soon as I stepped outside, a woman, Betsey Ashby from the Swain County Coalition Against Fracking, was speaking with a group of young men. The disturbed tone of her voice caught my attention. I walked closer and listened to hear a discussion about people coming from a homeless shelter. I asked Betsey if I could film her. She said yes and I turned on my phone video camera. Betsey kindly asked the young men if they minded being filmed. Several said yes, I could film them.

One of the young man stepped forward and said, "I'm gonna put my name out there. My name is Christian Bradshaw I'm from Winston-Salem and this is my buddies um and we feel like um yeah we did not know about none of this". Betsey asked "Did this guy just show up and ask you, what did he say, do you want to wear some shirts and a hat or something like that?"

At that moment, a man some years older than the young men, also wearing a turquoise blue Shale Yes t-shirt, whom I refer to as "the handler", stepped up to our circle. Christian saw him then looked straight at the camera and answered Betsey's question in a slow, monotone voice, "Oh, were just pretty much out here, supporting the needs, of energy." A young man covering his face and holding Christian's shoulder had looked quickly at the handler, then gave a

thumbs up. Another man, sporting a pro-marijuana shirt, looked anxiously at the Shale Yes handler then rolled his eyes back at me.

Betsey asked the handler, "And who are you with?" The handler replied, "I'm just listening." As Betsey put her face up close to read the handler's name tag, I zoomed in and caught him turning it over so we could not read his name. He asked the young men, "Why don't we go in and have a seat? The men said "yes, yes", but I continued the interview, asking Betsey, "And now for the rest of the story please?"

Betsey replied, "Oh, well the rest of the story is that several of these gentlemen I'm talking to don't know anything at all about fracking and they're here..." "They're here to learn," the handler interrupted. Betsey continued, "They're here in the Shale Yes t-shirts that these gentlemen just evidently went out and gathered people and gave them hats and t-shirts."

I asked Betsey, "Did you say they came from the homeless shelter?" Betsey said, "Yeah", and asked the young men "Did you come from - were you at a shelter somewhere?" The handler quickly answered for the young men, "these men came from Winston Salem". Betsey finished his sentence, "and don't know anything about fracking". Christian spoke up as if reciting, "I'm here to learn, understand, and enhance my learning about all this stuff."

The handler said to the young men, "Shouldn't we go inside instead of talk about t-shirts?" Betsey replied, "I think we ought to focus on the fact that you are trying to look like you have more support than you do." This time the handler stumbled over his words, unable to manage a coherent response. Betsey went on, "When you have to go out and put people in T shirts who don't even know what fracking means. Don't even know the definition of the word..." As the group of men finally headed inside, one yelled "legalize marijuana" while another gleefully pointed to his own "Keep on the Grass" t-shirt. Betsey's voice trailed off... "This is ridiculous!"

In a matter of minutes the video clip was posted to Facebook, then downloaded the next morning to You Tube. That morning and in the days following, Therese provided the BREDL video clip to multiple media outlets. John Boyle of the Asheville Citizen Times was one of the first to break the story- "The Energy Coalition" [sponsored by the American Petroleum Institute] "says its mission is to provide the public with factual information and offer an in-depth look into oil and natural gas industry in North Carolina." The ACT reporter continues,

"Algenon L. Cash, chairman of the N.C. Energy Forum, sent a one-sentence response when asked about the incident by email." ... "There was a homeless person, who, once we identified, we politely asked him to leave."

The news spread over several days on internet media reports and via Facebook and Twitter. At least 7 other publications ran the story about the American Petroleum Institute's offshoot's use of unknowing people experiencing homelessness to bolster their appearance of having supporters. Several articles were from national sources and one publication was issued from Russia. The story was also aired on National Public Radio. Lots of public comments were generated in response to on-line reporting and some readers pointed out that they were contacting their elected officials about this outrageous attempt to deceive the public and exploitation of people experiencing homelessness. When Therese commented on Facebook, "Sue Crotts is a ninja videographer", I replied, "Yes, my name is Grammy."

I am a BREDL volunteer, fighting fracking in our state because I intend to leave a clean, healthy and sustainable environment to my grandchildren and all future generations. You can read the ACT Article and watch the BREDL video at:

<http://www.citizen-times.com/story/news/local/2014/09/15/energy-group-bus-homeless-support-fracking/15693253/> and you can watch the September 12th MEC hearing, which has excellent anti-fracking comments, at <http://m.youtube.com/watch?feature=share&v=zSIFyBWeZYc>.

Beyond Dirty Tricks

By Gwen Frisbie-Fulton

The North Carolina Energy Coalitions' hiring and bussing of "supporters" to a fracking hearing is plain and simple a dirty trick.

These shady tactics erode any remaining credibility and erase any doubt as to NCEC's role as a propaganda generator. But their actions are problematic beyond the obvious deceit: they are inherently exploitative.

It is not exploitative because people experiencing homelessness are a frail lot that need special protection. On the contrary, they are phenomenally resourceful and resilient—but have been societally backed into a

corner. It is precisely this corner where the NCEC sought them out: a corner where you are unable to turn down a job--an honest day's labor for those taking it, but not by those giving it.

The offering of day labor and unlivable wages to someone experiencing homelessness is not merely short-sighted, it is abusive. Posing piecemeal labor to those who can't afford to say no...work that does *absolutely nothing to change their situation* ... is purposefully manipulating their precarious situation. NCEC's utilitarian approach and objectification of these real human lives is illustrative of their approach to our communities and to the environment.

NCEC appears to be very much aware that the crux of their success is to find communities that have been backed into a desperate corner.

Everything about fracking is akin to exploitative day labor. The science of fracking is poorly thought out and serves only the most immediate gratification with no planning nor heed for the future. Fracking feeds on communities that must make hard choices...forcing us to choose between putting food on the table now, or having drinkable water tomorrow. Not only should we call foul on NCEC's tactics, but we should also pay attention the brash exploitation that appears to be par for the course in the fracking game.



Gwen Frisbie-Fulton is an activist and mother in Greensboro, North Carolina. Gwen is the Director of Marketing and Development at the Interactive Resource Center, a day resource center for individuals experiencing homelessness, where she daily sees the effects that structural poverty has on both individual lives and on our communities.

The Stanback Internship Program is made possible by the generous support of Mr. & Mrs. Fred Stanback. The program is a partnership between the Nicholas School and targeted environmental organizations. The purpose of the program is to provide students with significant work experience in grassroots conservation, advocacy, applied resource management or environmental policy.



My Internship Experience with BREDL By Shengyuan Su

My internship project, “Fracking 911”, was based on the potential environmental and human health risks that could be brought by criminal penalty provisions in the newly passed Senate Bill 786 (Energy Modernization Act) for regulators, first responders, and medical professionals in North Carolina. Due to the legal protection for “trade secrets”, some chemical information that determines the effectiveness of will not be published to the public. Emergency responders and others who inappropriately disclose the “trade secret” information in the fracking fluids could be charged with a Class 1 Misdemeanor, according to SB 786. This provision triggered widespread controversy, not only among researchers in educational institutions and environmental groups, but also local residents and medical professionals.

Therefore, the Fracking 911 project aimed to critically, comparably and comprehensively evaluate the rationality of the chemical disclosure rules in SB 786, inform local emergency responders of their potential legal risks, and study how well the emergency planning and response system of the State is prepared for the potential of fracking.

Based on the above background and purposes, Therese Vick, who was my internship supervisor, guided me to study deeply on environmental and

human health impacts resulting from fracking through interviewing local communities and participating in public meetings, to compare the chemical disclosure rules between states with fracking activities using literature and law review, and to design online surveys for local emergency responders acquiring the emergency training information in the State and analyzing their reflections in regards to the criminal disclosure penalties.

Through studying the provisions and language in the chemical disclosure rule and related penalty policy in the S. 786, I learned how the oil and gas industry was protected using the excuse of trade secrets, and how those chemicals could negatively impact public health and the environment around the drilling areas. The trip to Lee County interviewing local residents who could be potentially affected by fracking activities in NC let me have a better understanding of the split estate and forced pooling issues brought by fracking. In Lee County, I heard the people in the community for the first time, which visualized the environmental impacts of fracking for me.

In addition, by talking with experts on the fracking issue, including a member of the Mining and Energy Commission, and reading many papers, my policy analysis skill was improved a lot, and I learned how to

reach out to people who could possibly answer my questions and engage them on what I was studying. Furthermore, the experience of designing the Google online survey and cold calling emergency responders asking for information enabled me to practice my communication skills and analysis skills as well.

At the end of the internship, I participated in two public hearings on fracking in NC, which provided me a great chance to apply what I have studied and learned during the internship to the real world. When hearing the moving and encouraging speeches of local residents who care so much about the environment, I felt that what I endeavored to do in the summer internship was so worthy in that at least the study results could be used as strong arguments and evidence for them. And assisting with organizing campaigns and educational meetings enabled me to know lots of very nice, and wise people who were striving for their environmental rights.

All in all, I really appreciate all the help and guidance from every staff member in BREDL. And I felt I was accepted, tolerated and recognized by BREDL staff and members, without whom I could not have such an educational and happy summer experience. ■

Using Environmental Test Results with Community Members: Helping Communities Get a Grip on Risk

By Lou Zeller

Fall 2014

The legal limit for dioxin in drinking water is 0.00003 µg/L.

Many people confronted with this figure would find it incomprehensible. Environmental and health information is often presented in a language foreign to ordinary experience. So, how does one communicate information vital to understanding the risk faced by residents of a community contaminated with one of the most toxic substances on the planet?

On September 24th I presented a workshop at the annual meeting of Partnerships for Environmental Public Health at the National Institute of Environmental Health Sciences in Research Triangle Park, NC. The workshop drew about 40 people, public health specialists from academia, government agencies and public interest groups. The workshop's opening question used the dioxin number as a springboard: How do we effectively communicate technical information to the public, the media and elected officials?

Statistics for Action is both a general methodology and a specific resource. *SfA* helps people

understand terms, units, and concepts in environmental data, understand risks to health from environmental contamination, communicate data, stories, and concerns to decision-makers and others in the community, and use the information to bring improvements in their communities.

When people are concerned about the contamination of soil, water or air and the impact on public health, they must often rely on their own initiative to provide answers. Community-based participatory research can provide information on whether pollution is making people sick. The next step is to make use of the information to solve a problem. The solution may be clean up, shut-down, or community evacuation.

Workshop participants examined and experienced the methods of community-based research to familiarize them with *Statistics for Action*. The workshop provided examples of resources designed especially for adults with no technical background to use in environmental monitoring. Participants were presented with case studies and performed exercises developed by TERC's

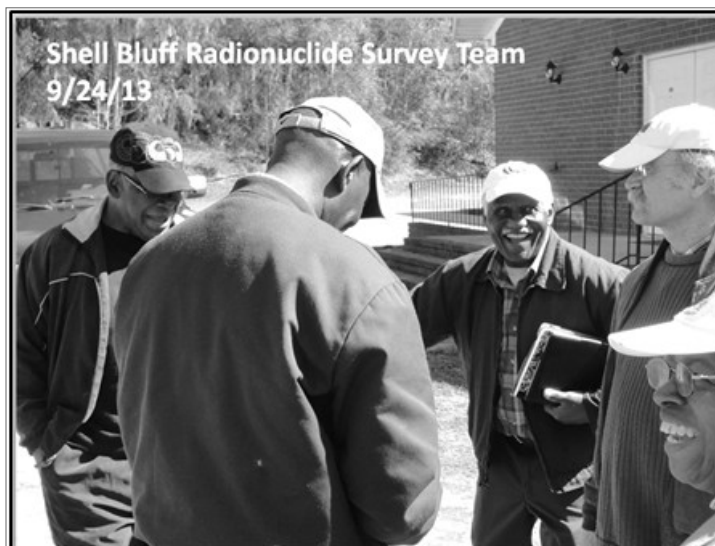
Statistics for Action program: 1) Background Levels-Explore and 2) Assessing Conditions Using Maps. The case studies included citizens groups organized by Blue Ridge Environmental Defense League in Shell Bluff, Georgia and Browns Ferry, Alabama. We focused on the methods developed for "Advancing Environmental Justice at the Nuclear Crossroads" in Shell Bluff and the results published in "Radioactive Emissions and Health Hazards" in Browns Ferry, projects done in collaboration with BREDL chapters. A spontaneous round of applause at the end of the workshop left me with a good feeling that the collaboration of BREDL and TERC is the right thing in the right place at the right time.

After the meeting, Liam O'Fallon, coordinator for the Partnerships for Environmental Public Health program at NIEHS, wrote,

"There was a distinct spirit of collaboration and enthusiasm among meeting attendees who shared ideas about communication strategies, environmental health literacy, and how to move the field forward."



Statistics for Action (SfA) is a partnership between environmental organizations like BREDL and [TERC](#), a not-for-profit organization in Cambridge, MA, with a mission to provide quality teaching and learning in math and science.



NC Mining and Energy Commission

Experiences BREDL and Friends in Action

During Fracking Hearings



By Kate Dunnigan

At the MEC hearing in Sanford on August 22, BREDL chapter members from PD WALL and EnvironmentalLee co-hosted a press conference with Clean Water North Carolina and other members of the Frack Free NC Alliance.



Left: Denise Lee, chair of Pee Dee Water, Air, Land and Lives (PD WALL) addresses the crowd at the press conference at the Wicker Center in Sanford. Lee's talk focused on the threat posed to landfill communities across the state by the dumping of fracking waste. **Below:** A mock drill pad created by BREDL chapter EnvironmentalLee of Lee County.



Above: Two of BREDL's 2014 Stanback Interns from the Duke University Nicholas School of the Environment, Shen-gyuan Su and Wenhan Qiu, represented BREDL at the rally outside of the MEC hearing in Sanford.

Right: BREDL Community Organizer, Therese Vick, interviewed by Time Warner Cable news at the press conference in Sanford. The MEC hearings were covered widely in TV and news articles across the state, bringing much needed media attention to the anti-fracking movement.



This summer, activists and concerned residents of North Carolina demonstrated their outrage over the fracking legislation and draft regulations proposed by the NC Mining and Energy Commission (MEC), the agency created to write the rules to govern fracking activities in the state. During August and September, the MEC held an open public comment period as well as a series of four public hearings in Raleigh, Sanford, Reidsville and Cullowhee, for the purpose of collecting public feedback and testimony on the draft rules that were released by the state earlier this year. At each of the four hearings, BREDL chapter members and staff held press conferences, rallies, gave testimonies and recorded photos and videos that captured the spirit and urgency of the movement. BREDL has requested that the MEC hold additional hearings in NC, to ensure sure that everyone who wishes to speak directly to the Commission has the opportunity to do so.



Above: August 25 press conference at the MEC hearing, at Rockingham County High School in Reidsville. Hundreds came to speak against fracking .

Below: No Fracking in Stokes BREDL members held a rally at the MEC hearing in Reidsville, calling on Governor McCrory to place a ban on fracking, protecting air, water, and property rights of North Carolinians.



Left: On September 20, BREDL held a letter writing open house day in Greensboro, NC at a local teahouse to collect comments before the September 30th deadline. The open house drew a steady crowd of Guilford and Rockingham County residents who were able to write their letters by hand or electronically, using the resources and information made available by the local BREDL group.



Right: BREDL hosted a table on environmental justice at the International Peace Festival held by First Friends Meeting House in Greensboro on September 21. Kate Dunnagan, Community Organizer and Development Director, displayed BREDL materials and distributed information to encourage people to submit comments on fracking to the MEC before the deadline. Thank you to First Friends for inviting BREDL to the event and to the volunteers who helped to make it possible.



Who Regulates The Regulators?



By: Pastor Cary Rodgers

[45/state-house-targets-](#)

[environmental.html#storylink=cpy\)](#)

The “foxes” are in the hen house at DENR and they are there to deregulate and change the psychological culture of employees of DENR to do their bidding without much resistance. In other words, “just do what you are told or else.” This is real. For example, according to a wral.com article entitled, “At NC environmental regulator, loyalty to McCrory will run deep”, author, Taylor Dukes investigation reveals that “more than 100 state environmental regulators who will implement upcoming legislative decisions on natural gas drilling, offshore oil exploration and changes to air and water quality rules will soon do so as “exempt” employees who can be fired without cause or appeal.” (<http://www.wral.com/at-nc-environmental-regulator-loyalty-to-mccrory-runs-deep/12755208/#VroJJul73xzqMhI9.99>) This is an outrage that this is allowed to happen. You can imagine that many employees at DENR are fearful of losing their jobs.

The pressure is on at DENR and its current deregulation philosophies from the leadership are being felt on the environmental justice front lines as BREDL continues to fight for North Carolina communities from the harm of big polluting industries such as Duke Energy. For example this summer DENR approved a permit for Duke Energy's Richmond County Combustion Turbines in Hamlet, NC to expand and increase the hours of it's polluting turbines from 2000 hours to over 8000 hours. This approved permit allows for a 36 percent increase of cancer causing pollutants such as sulfur dioxide, nitrogen oxides, carbon monoxide, sulfuric acid, ammonia, formaldehyde, and benzene. Executive Director of BREDL, Lou Zeller's investigation reveals that even before this permit was approved from 2008 to 2012 when Duke switched from diesel fuel to natural gas at the Richmond plant the overall level of pollution has nearly tripled. Zeller reports that the actual emissions of pollutants increased by 115% for nitrogen oxides, 145% for sulfur dioxide, and 146% for formaldehyde.

Earlier this year I was privileged to participate in a training on Title V, the Clean Air Act, that the Environmental Protection Agency (EPA) in Raleigh, NC conducted for citizens and environmental justice groups. During one of our sessions a very profound question was addressed to one of the EPA employees, “who regulates the regulators?” I don't remember the many words that the EPA employee used to frame an answer that would not detract from the importance of the EPA and state regulators, but the bottom line answer was that we are responsible. Yes, you, I and every tax paying citizen are responsible for regulating the regulators.

There is no doubt that there are many good and honest workers that work in regulatory agencies of the EPA and the state, but we must remember that their immediate bosses are elected officials at the state and federal levels. If the majority of the elected officials feel that air, water, and lives are more important than money they pass laws that protect its citizens and make sure that the environmental regulating agencies enforce those laws. If the majority of the elected officials feel that profits and jobs are more important they pass laws that mainly benefit corporate profits and promote environmental deregulation. They feel that regulation is a job killer and that business is unable to thrive in a regulated environment. They appoint department heads of regulatory agencies to make sure their agenda is successful. This is the challenge that the citizens of North Carolina face right now.

The current NC state government administration, led by Governor Pat McCrory, has made it clear that his administration will focus on profiting businesses instead of environmental regulation. He has said in many media outlets that the (“fracking”) law will spur economic development and create jobs throughout all sectors of the economy. This is the reason why he has pushed state legislators to pass a fast track law in which he signed this past summer to allow the dangerous business of “fracking” for natural gas in North Carolina even before the rules for fracking have been finalized.

McCrory, a former 28 year executive for

Duke Energy, and his administration have been restructuring the state's environmental regulatory agency, Department of Natural and Environmental Resources (DENR) to line up with its goals of deregulating the regulators for the benefit of big polluting industries such as Duke Energy, NC largest utility.

For example, in December 2012 McCrory appointed John E. Skvarla, III a former corporate executive to head DENR as part of his new Cabinet and administration. Skvarla said in an interview with investigative reporter Jon Camp of ABC News 11 in Raleigh, NC, “DENR is the number one obstacle to economic growth in the state of North Carolina for a long time.” He ended, “My job is to put the rules in place, whichever way the government says we're going to do it.” (<http://abc11.com/archive/9063088/>) Referring to DENR environmental regulations Skvarla says, “I think there are regulations that could be considered over-regulation,” in a WRAL.com report. He also explained how the majority of NC legislators are uncomfortable with DENR (<http://www.wral.com/denr-sec-skvarla-on-fracking-climate-change-and-working-with-business/11942947/#dzQCEpCLcOI3tHgW.99>). It is apparent from Skvarla's statements and actions that he wants industry and the current NC legislators to be “comfortable” with DENR.

McCrory also appointed Mitch Gillespie to be Skvarla's assistant. Gillespie is a seven term NC legislator and business owner. He is also the one who introduced the “Fracking” bill to the state legislator when he was a senator.

According to Craig Jarvis' report from the newsobserver.com, it reveals that Gillespie receives money from political action committees that are linked to Duke Energy, PSNC Energy and the Asphalt Pavement Association. Also the reports says that Gillespie admits that as a business owner that he will benefit from environmental deregulation at DENR. Referring to DENR regulations, Gillespie says, “It's been a major issue for me and my life,” he said. “It's cost me tens of thousands of dollars over the years.” (<http://www.newsobserver.com/2012/06/24/21553>

What was the response when BREDL and its local chapter, Concerned Citizens of Richmond County tried to address these issues with DENR. They first rejected our call for a public hearing. Then when members of CCRC traveled to a division of DENR, the Department of Air Quality to investigate the public records of the activities between DENR and Richmond County Combustion Turbines, some of the employees tried to minimize the pollution risk. In an email correspondence obtained by BREDL as public record, John Evans, Supervisor Permits Section, of the Division of Air Quality said in an email to Donald van der Vaart, Section Chief, Permitting NC DENR, Division of Air Quality on September 13, 2012, "Duke Energy has 5 existing simple cycle gas-fired turbines at their Richmond County facility. They are asking to relax the existing hours of operation limitation from 2000 hours per year (current) to 8760 hours." He continues, "This request triggers PSD review for several pollutants." At the end of the email referring to DENR's Environmental Equity Initiative he says, "The policy does state that DENR will address environmental equity issues in permitting decisions for projects potentially have a disparate impact on communities protected by Title VI of the Civil Rights Act." The current granted permit has ignored these equity issues that Evans mentioned in his email. In other public DAQ records obtained by BREDL, before this permit was granted to Duke, EPA saw several red flags that DAQ allowed or ignored in Duke's request. EPA made several comments to DAQ that Duke needs to correct before issuing the final permit to make sure they are in compliance with Title V (Clean Air Act) and other

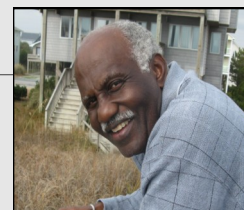
environmental laws. They were ignored and DAQ issued the permit to Duke anyway. BREDL and its chapter CCRC has filed a legal petition to the EPA against NC DENR for failure to regulate the powerful Duke Energy and protect public health. The petition calls EPA to reject the permit that was granted to Duke.

Another example of DENR's failure to regulate is revealed in a recent permit that their Division of Air Quality granted to Piedmont Natural Gas. The permit allows Piedmont to expand its natural gas compressor station in Wadesboro, NC. BREDL's investigation reveals that the permit has fatal flaws that will cause excess air pollution levels. For example DAQ grossly underestimates the nitrogen oxide pollution levels emitted by this facility. Also DAQ again ignores the environmental justice obligations under the Administrative Procedure Act. BREDL has also filed a legal petition to EPA asking them to reject this permit.

The infrastructure of deregulating the regulators is being laid right before our eyes for the purpose of more corporate profits. Corporations win at the expense of the health of our communities. We must keep the pressure on our regulators to enforce our current environmental laws. If we let up, the results will be devastating to our communities. We also must continue to organize our local communities and educate them on several environmental issues so they can be empowered to influence change locally and statewide to develop environmental laws and enforcement measures that will protect their water, air, health, and property. ■

Shell Bluff Concerned Citizens Potassium Iodide Program

By Rev. Charles Utley



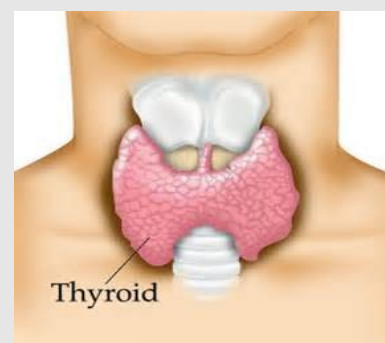
The Shell Bluff Concerned Citizens, with the assistance of a generous SfA Grant, will seek to provide approximately 200 residents in the Shell Bluff area with Potassium Iodide Tablets. This program will target residents living within a 5 mile radius of the Plant Vogtle site, located near Waynesboro, GA. There are several major components to the program that includes vital information concerning the use of Potassium Iodide. There will be several sites to distribute the Potassium Iodide and to provide answers to questions. These sites will include churches and points of interest such as local stores in the target area.

The program will also consist of a media campaign to include newspapers, radio and various forms of direct outreach. We feel that it is important that every possible avenue be used to get the word out to reach citizens in our community.

Community meetings will gather cohorts who will share in this project, establish contact information and assist in case of a nuclear emergency. Life size charts of the Thyroid Gland will be used to give a clear picture of the function and protection of this gland.

The overall objective of this project is to provide the education and tools needed to become better trained and equipped to protect populations at risk for inhalation or ingestion of radioiodines.

Blue Ridge Environmental Defense League believes in the philosophy of providing the necessary tools for survival and training for those who live in harms way of Plant Vogtle Nuclear Power Plant. We realize that this is not a one-time fix all project, but a catalyst to equip the residents with the necessary knowledge and tools needed. ■



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T-shirt- \$15 (sizes L, XL)

Quote by Janet Marsh Zeller says, *"One person speaking alone may not be heard, but many people speaking with one voice cannot be ignored."*

BREDL offers special merchandise in honor of our 30th anniversary. Order on our website at www.bredl.org/bredlshop.htm or by calling Kate Dunnagan at (919) 417-4939.

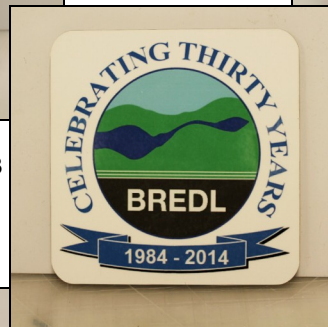
All prices include shipping fees. Thank you for supporting Blue Ridge Environmental Defense League.



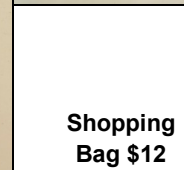
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