BLUE RIDGE ENVIRONMENTAL DEFENSE LEAGUE













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Winter 2012

Hydrofracking Law By Louis Zeller, Legal Director, Jan 2012



"We're burning the furniture to heat the house. In shifting away from coal and toward natural gas, we're trying for cleaner air, but we're producing massive amounts of toxic wastewater with salts and naturally occurring radioactive materials, and it's not clear we have a plan for properly handling this waste."*

Between 2005 and 2009 the oil and gas industry used 780 million gallons of hydraulic fracturing products—not including water—on wells in the United States. The most common compounds used are methanol—a hazardous air pollutant, isopropyl alcohol—a central nervous system depressant, 2-butoxyethanol—a toxin, and ethylene glycol—antifreeze. Wastewater can be radioactive: 116 wells have been found to have radium or other radioactive materials 100 times federal drinking water standards; a few had wastewater 1000 times above acceptable levels.

Federal Law

Federal standards regarding hydrofracking can be summed up in one word: lacking. Hydraulic fracturing is not regulated by national environmental laws. Although Part C of the Safe Drinking Water Act (SDWA) is designed to protect underground drinking water sources from contamination caused by underground injection of fluids, fracking is exempt from the Underground Injection Control Program. Class II UIC wells for oil and gas for "enhanced recovery" may inject brine, water, steam, polymers, or carbon dioxide into oilbearing formations to recover residual oil and some natural gas. But, unless diesel fuel is used, hydrofracking wells are exempt. (continued pg 8)

> **C** 2012

Impacts of Hydraulic Fracturing on the Environment and the Rural Landscape By Therese Vick, Community Organizer

North Carolina is threatened by a dangerous practice with negligible benefits except for those corporations that stand to reap the profits from the exploitation of our natural resources. Our air, water, and land will all be negatively affected by the practice known as "hydraulic fracturing"- better known as "fracking." Fracking is the process by which natural gas is extracted using "unconventional methods": drilling down through the earth from hundreds, to thousands of feet, then drilling horizontally for long distances, and injecting thousands to millions of gallons of water laden with undisclosed toxic chemicals (fracking fluid) into the shale in order to release the gas. Diminished quality of life, unfair leases that leave homeowners open for foreclosure and loss of insurance, land value decreases, strains on public services, negative effects on agriculture and on tourism can all be expected when the "Land Man" comes to call. (continued pg 8)





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BREDL: Who and what we are

In March 1984, fifty citizens of Ashe and Watauga Counties met in the Mission House of Holy Trinity Church in Glendale Springs, North Carolina. Teachers and farmers, home- makers and merchants listened to the report of the Episcopal Church Women on the US Department of Energy's siting search for a high-level nuclear waste dump in the rain-rich east.

Recognizing that the North Carolina mountains were a region at risk, the assembled group organized the Blue Ridge Environmental Defense League (BREDL) to protect their own backyard and those of other threatened communities.

Grassroots organizing was a cornerstone of our early all-volunteer organization. One of our first multi-county boards of directors adopted our credo, which embodies our mission statement:

BREDL Credo

We believe in the practice of earth stewardship, not only by our league members, but by our government and the public as well. To foster stewardship, BREDL encourages government and citizen responsibility in conserving and protecting our natural resources. BREDL advocates grassroots involvement in order to empower whole communities in environmental issues. BREDL functions as a "watchdog" of the environment, monitoring issues and holding government officials accountable for their actions. BREDL networks with citizen groups and agencies, collecting and disseminating accurate, timely information. BREDL sets standards for environmental quality, and awards individuals and agencies who uphold these standards in practice.

Moving into the future

Since then, the Blue Ridge Environmental Defense League has grown to be a regional community-based, nonprofit environmental organization. Our founding principles - earth stewardship, environmental democracy, social justice and community empowerment - still guide our work for social change. Our staff and volunteers put into practice the ideals of love of community and love of neighbor, which help us to serve the movement for environmental protection and progressive social change in Maryland, Virginia, North Carolina, South Carolina, Georgia, Alabama and Tennessee.

Grassroots Campaigns

Nothing creates hopefulness out of helplessness like a successful grassroots campaign -and our chapters have a history of winning. For twenty-eight years Blue Ridge Environmental Defense League chapters have protected their communities by stopping dangerous facilities and promoting safe alternatives.

In the 1980's and 1990's, BREDL prevented a multi-state ThermalKEM hazardous waste incinerator, a southeastern nuclear waste dump and a national nuclear waste dump. In the 2000's, our coordinated grassroots citizens' campaigns have had further victories. We won a legislative victory with the passage of the NC Solid Waste Act, effectively blocking at least four multi-state mega-dumps. Our Person County chapter convinced their Board of Commissioners to reject expansion of the Republic Services landfill. Our Cascade, Virginia chapter shut down a huge hazardous waste incinerator. After twenty-one years of determined effort, our Matthews, NC Chapter shut down one of the dirtiest medical waste incinerators in the country, Biomedical Waste of NC (BMWNC). We eliminated mercury waste from the Stericycle incinerator, shut down a tire incinerator in Martinsville, won the landmark environmental justice court decision in Greene County, NC. Further, with our chapters we have protected air quality by blocking scores of asphalt plants, four medical waste incinerators, a PVC plant and a lead smelter, and passage by local governments of eight polluting industries ordinances. Our work on nuclear power and coal plants laid the groundwork for our new Safe Energy Campaign. Victories over twenty-four mega-dumps have resulted in our affirmative Zero Waste Campaign. Guided by the principles of earth stewardship and environmental justice, we have learned that empowering whole communities with effective grassroots campaigns is the most effective strategy for lasting change.

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100% GENUINE RECYCLED PAPER



League Line Director's Report ~ by Louis A. Zeller The Occupation of 2012



We are in the midst of a great social change. How that change happens depends on the things we do, the actions we take, and the institutions we build.

Within memory, similar momentous changes have occurred. Events, once inconceivable, happened and became the norm. The British Empire and the French Empire dissolved. A whole continent was freed of colonial rule. The Soviet Union, an empire by another name, ended not with a bang but a whimper. The implacable hatred of the Cold War ended. Decades of oppression were toppled by popular uprisings in the Philippines, South Africa and elsewhere by determined, peaceful means. We went to the Moon, an epochal event catapulted from fiction to reality by a convergence of technological and political maturity. Today, North Africa and the Middle East are undergoing an unforeseen transformation, spurred by the leverage of technological advance and youthful resolve.

Much is made of America's shortcomings, political, economic and otherwise. But we are free to act. The people occupying Liberty Plaza know this. And our actions should reflect our highest ideals: peace, freedom and love. However, peace is more than the absence of war. Freedom is more than a selfish desire to do whatever one wants. And love is more than taking care of your family. On a global scale, individualism and competition may be less helpful than understanding and cooperation. But how do we chart the right path?

We speak of these things in words not taught by human wisdom but taught by the Spirit. ¹

What this passage implies is: *You know what you know.* The voice within which tells us right from wrong. And if something is wrong for one person, is it not wrong for a group of people? Is it right to sacrifice the health of a neighbor to improve your lot in life? Of course not. Is it acceptable for a group of people—a corporation—to do so? No? Then why are corporations permitted to oppose pollution regulations? Are corporations truly persons? Do they breathe the same air we breathe and drink the same water? In the early decades of our republic, Chief Justice John Marshall described corporations as follows: ² "A corporation is an artificial being, invisible, intangible, and existing only in contemplation of law. Being the mere creature of law, it possesses only those properties which the charter of creation confers upon it, either expressly or as incidental to its very existence."

Over the years, these artificial corporate beings have sought and been granted the rights enumerated in the Constitution, the natural rights of the people which are "endowed by their Creator." But the rights of corporations are not natural; they are endowed by us. That is, their capacities, powers and their very existence are granted by human law. In 1886, the US Supreme Court decided that a business corporation is a person entitled to the protection of the Equal Protection Clause of the Fourteenth Amendment.³ In 1898, the court concluded that the property of a corporation was also protected. ⁴ Additional court cases greatly expanded their rights to manipulate legislation in 1978⁵ and elections in 2010.⁶ But privileges so granted may also be withdrawn by law.

Today's corporations outweigh ordinary citizens a thousand-to-one with superhuman power and amoral purpose. This did not happen by itself. Corporations organized themselves in a conscious, strategic manner to attain dominance. The last forty years have been pivotal. In the wake of the environmental advances of 1970-the Clean Air Act, the National Environmental Policy Act, the Environmental Protection Agency-future Justice of the Supreme Court Lewis Powell wrote a memo advising the US Chamber of Commerce to mobilize against this "attack on the American free enterprise system." 7 The memo advised, "This is the lesson that political power is necessary; that such power must be assiduously cultivated; and that when necessary, it must be used aggressively and with determinationwithout embarrassment and without the reluctance which has been so characteristic of American business." The campaign unfolded quickly. Within a decade the number of corporations with registered lobbyists in Washington, DC increased fourteen-fold, from 175 to 2,500. Similar campaigns were waged in state capitals. For example, in 1988 the Manufacturers and Chemical Industry Council of North Carolina was formed to target

environmental policies. Not only environmental laws were targeted. Powell's memo also railed against "inequitable taxation." As a result, the 1970 tax rate on corporate income was 40% higher than today's. ⁸

The lesson here is that we too must organize. We must work strategically and with determination. The change is underway and we have the opportunity to shape it.

"Think about the kind of world you want to live and work in. What do you need to know to build that world?" ⁹

The Blue Ridge Environmental Defense League's goals-eliminating pollution, cleaning up contamination, ending deadly forms of energy, stopping global warming, protecting public health, abolishing corporate personhood-all this is possible through the actions of a free people engaged in making their communities better places to live, and not settling for anything less than what we would want for our own families. Not risk management. Not acceptable pollution limits. No, we would have no less than 100% dedication to health and wellbeing for those we care about, and no less for those whom we have never met and never will. This is revolutionary. And this is what we must do.

"And these things, buried, hidden, and disowned in so many of us, are shouted out loud, believed in, affirmed by a growing multitude of young people who seem too healthy, intelligent, and alive to be wholly insane, who appear, in their collective strength, capable of making it happen." ¹⁰

- ⁴ Smyth v. Ames, 169 U. S. 466 (1898)
- ⁵ First Nat'l Bank of Boston v. Bellotti, 435 U.S. 765 (1978)

 ⁶ Citizens United v. Federal Election Commission, 558 U.S. 08-205 (2010)
⁷ Memo from Lewis F. Powell, Jr. to Mr. Eugene B. Sydnor, Jr., Chairman, Education Committee, U.S. Chamber of Commerce, August 23, 1971
⁸ Urban Institute and Brookings Institution,

¹ Corinthians 2:13 (NRSV)

² *Dartmouth College v. Woodward,* 4 Wheat. 518, 636 (1819)

³ Santa Clara County v. Southern Pacific R.

Co., 118 U. S. 394 (1886)

http://www.taxpolicycenter.org

⁹ Peter Kropotkin, 1842-1921

¹⁰ *The Greening of America,* Charles A. Reich, New York: Random House, 1970 ■

Chapter Update: Concerned Citizens of Shell Bluff

Rev. Dr. Joseph E. Lowery Rallies Environmental Justice Campaign

On January 7, 2012, at a church within view of Georgia Power's Plant Vogtle nuclear power plant, civil rights veteran Rev. Dr. Joseph E. Lowery spoke about the issues affecting the people this region.

Dr. Lowery is well-known advocate for environmental justice issues. In a statement for the organization he founded, Georgia Coalition for the People's Agenda, he said, "The disproportionate impact and siting of environmental hazards in and near communities of color is well documented. This pattern persists and we work with local communities to help ensure enforcement of environmental regulations protective of human health and the environment."

Rev. Charles Utley, Blue Ridge Environmental Defense League's Environmental Justice Coordinator, said, "We are very pleased to have Dr. Lowery here today. His wisdom and his experience are like a guiding star for the residents of Shell Bluff." Rev. Utley reminded the assembly of the Japanese nuclear meltdown and added, "After the disaster that took place in March, all Americans should be asking the question: Why should we be investing in such a dangerous adventure when there are other alternatives?"

Bobbie Paul, executive director of Georgia WAND, spoke of the need for unity, saying, "ALL Georgians will be affected and should be concerned because no nuclear reactor is safe. Fukushima has taught us that the unthinkable can happen so now is the time to stop this nuclear madness before it stops us." Georgia WAND is organizing a series of meetings opposing nuclear power.

Rev. Dr. Joseph E. Lowery is a minister in the United Methodist Church and leader in the American civil rights movement. He became the third president of the Southern Christian Leadership Conference, after Rev. Dr. Martin Luther King and his immediate successor, Rev. Dr. Ralph David





Abernathy, and participated in most of the major activities of the African -American Civil Rights Movement of the 1960s.

The Georgia Coalition for the People's Agenda has been active on air quality, water and waste issues for many years and works closely with Georgia environmental organizations helping to ensure a focus on environmental justice.

The meeting drew many supporters from the Atlanta area who arrived in a bus chartered by Georgia Women's Action for New Directions. Georgia WAND is an independent grassroots, womanled organization that seeks to direct women's voices into a powerful movement for social change. WAND was established in 1982 by Helen Caldicott, long-time anti-nuclear activist.

The Concerned Citizens of Shell Bluff was organized by Rev. Utley in response to the proposed nuclear power plant expansion at Plant Vogtle. He pastors an independent Baptist church in Shell Bluff and has long been an advocate for environmental justice issues. He joined the Defense League's staff in 2002.■

New Industries Invade Small Southern Cities and Georgia

By Charles Utley, BREDL Environmental Justice/SRS Campaign Coordinator



Environmental issues continue to move across the Southeast invading communities with their contamination and greed. Small towns and their way of life are being drastically changed. The small town life. like the families of Mayberry on the Andy Griffith show, those days are gone forever. The outdoor life with fertile ground to plant free of soil contamination is getting harder to find. Local communities that knew the feeling of being contaminationfree and pollution-free have now become the new icon for industries to move into. These small cities and towns realize the need for jobs, but fail to ask the question, "What else will these industries bring with them?" Biomass incinerators are burning tires and trees, and will incorporate the burning of trash if we are not careful.

If we fail to act, the quality of life will dissipate, academic achievement in small children will be hindered and the elderly will suffer disproportionate health effects. These are just a few of the many unseen byproducts that will come with the package that is being sold to people. There is more to it than economic prosperity; it will have health and environmental impacts as well.

Jefferson County is such a place. New industries are seeking to build their plants to spread their unwanted pollution on the people of Wadley and Louisville, GA. The city governments are accepting the promises of economic growth and prosperity. However, we know that residents who take a stand against these industries are singled out for their actions. We must remember that they are constantly faced with threats of unemployment and isolation, a fact making people afraid to speak out against these industries that appear as giants in their eyesight.

Therefore, we must support them in their struggles by assisting them as they continue to lift up their voices to speak out against these environmental injustices. Although, the residents who are taking a stand in Louisville and Wadley are few in number, the fight will continue against polluting industries. We must encourage the silent majority to join with the few for justice to be done for all.

Environmentalists all over the world continue to answer this question with a resounding *enough is enough!* As other communities open their doors to assist these new developing communities, we must stay the course and do our part to stop these massive invasions. The greed of these companies to impose themselves on the small community throughout the Southeast must come to an end.

I plead with you, as BREDL and other organizations throughout the world continue to band together strengthening one another to keep Environmental Justice our focus for 2012, that each of you will join with us and do the same.

"Band together strengthening one another to keep Environmental Justice our focus for 2012"

The History of the North Carolina Air Toxics Program

By Louis Zeller, Science Director

Jan 2012 In the 1980's North Carolina established regulations for the reduction of toxic air pollutants-chemicals which are irritants, acute or chronic toxicants, or carcinogens. The change was prompted by rising levels of public concern about pollution and health. The NC Environmental Management Commission was empowered by state law and executive order to control toxic air pollution. ¹ This authority flows from North Carolina policy which states that "water and air resources of the State belong to the people" and that "Standards of water and air purity shall be designed to protect human health, to prevent injury to plant and animal life, to prevent damage to public and private property. to insure the continued enjoyment of the natural attractions of the State, to encourage the expansion of employment opportunities, to provide a permanent foundation for healthy industrial development and to secure for the people of North Carolina, now and in the future, the beneficial uses of these great natural resources." 2

In 1985, the NC Division of Environmental Management ³ began to develop a program to reduce toxic air pollutants. At the request of DEM, the NC Academy of Sciences developed a method of establishing acceptable ambient levels of air toxins for the protection of public health. The North Carolina Air Toxics Program evolved from this study. The program's guidelines were based on the categorization of pollutants by toxicity at ambient levels; that is, the actual level in the air we breathe.

The principal requirement of the TAP regulation was that facilities "shall not emit any listed toxic air pollutant in such quantities that may cause or contribute beyond the premises (adjacent property boundary) to any significant ambient concentration that may adversely affect human health." ⁴ This law included a list of regulated pollutants and specific AALs, or acceptable ambient levels, for periods of 1-hour, 24-hour or annual averaging periods.

The NC Academy of Sciences recommended a combined technology and risk assessment based system for setting each toxic air pollutant level. For known carcinogens, the level was an additional risk of one-in-a-million, for probable carcinogens, one in 100 thousand. For irritants and toxicants, the level was no-observed-effects -levels.

of the economic impacts of state regulations limiting the emission of toxic air pollutants. ⁵ The study selected 325 of the 3000 permitted air pollution sources across the state and found that 26% emitted air toxics above trace amounts but that only 3% would experience significant economic impacts if required to meet the new limits. The study was conservative and targeted the most likely sources of toxics for this study; in other words, a smaller percentage of emitters and significant economic impacts would be found overall.

In 1990, the Scientific Advisory Board on Toxic Air Pollutants (SAB) was established. The role of the SAB was to evaluate chemical toxins and recommend AALs based on its analysis of scientific, peer-reviewed health studies.

Under pressure from major industry groups, in 1995 the NC General Assembly directed the Environmental Review Commission, a legislative body, to reevaluate the existing TAP program and to eliminate possible overlap or duplication with the 1990 amendments to Title III of the Clean Air Act which regulates hazardous air pollutants.⁶ The federal law sets maximum achievable control technology, or MACT, standards for 187 air toxins. a list which includes all but 21 NC TAPs. However, the toxins regulated by North Carolina but unregulated by the Clean Air Act include irritants, toxicants and carcinogens such as nitric acid, mercury vapor and hexachlorodibenzo-p-dioxin. The ERC's Air Toxics Working Group—with representatives from industry, government, law firms and environmental groups-investigated ways to "reduce the regulatory burden permittees face" in meeting the state standards. In short, industry representatives sought to eliminate state regulation of as many TAPs as possible, whether they were regulated by the federal Clean Air Act or not. But some members of the Working Group held firm, stating:

"The AALs implemented by the North Carolina Air Toxics Program are specifically designed and established to protect human health. Federal MACT standards, in contrast, merely implement currently available technology in selected industries emitting large quantities of HAPs nationally. The MACT standards are not based upon a measurement of hazardous air pollutant concentration outside the premises of the permittee's facility, as the North Carolina AALs are."7 The Working Group did recommend altering the process by which AALs are evaluated, with DENR referring chemicals for study, the SAB providing risk assessment and the Environmental Management Commission responsible for risk management. Risk assessment is the measurement of hazard presented by a chemical or physical agent. Risk management is the decision making process for reducing risk to a given level. Over the years the original list of 116 TAPs has been reduced to 97, but the program remains largely intact.

North Carolina's health-based air toxics rules and the federal MACT are neither duplicative nor equivalent. The Environmental Protection Agency's method of setting maximum achievable control technologies to reduce toxins does not do what North Carolina's health-based AAL standards do. Federal regulations do not protect public health as well as North Carolina's because a pollution source 100 yards away from a community will have a vastly greater impact than the same pollution source 200 yards, 500 yards or 1000 yards away. For this reason, regulating pollution levels strictly by setting technology standards can never provide the same level of protection as controlling the actual amount of pollution in the air. North Carolina's acceptable ambient levels take into account the distance of smokestacks from property lines and from people's homes.

² Article 21, Water and Air Resources, Part 1. Organization and Powers Generally, Control of Pollution, § 143-211, Declaration of public policy

³ The NC Division of Environmental Management was later reorganized to become the NC Department of Environment and Natural Resources with divisions for air quality, water quality, etc.

⁴ NC regulation 15A NCAC 2D.1104, "Toxic Air Pollutant Guidelines." The current language is identical to that in the Radian Corporation report cited in footnote 2.

⁵ Assessment of the Economic Impacts of North Carolina's Proposed Air Toxics Regulation–Final Report, Radian Corporation, Research Triangle Park, NC, April 27, 1988

⁶ NC General Assembly Studies Act of 1995, Part XVIII, Chapter 52, 1995 Session Laws–House Bill 898

⁷ Final Report to the North Carolina Environmental Management Commission, Air Toxics Working Group, A Study Directed by the Environmental Review Commission Pursuant to the Studies Act of 1995

In 1988, North Carolina commissioned a study

¹ NC General Statute § 143-215.107, Air quality standards and classifications

Fast Forward to 2012: A is for Arsenic

By Therese Vick, Community Organizer

"If you poison us, do we not die?"

-Shylock, in William Shakespeare's The Merchant of Venice

Arsenic has been much in the news lately, recently found in eggs, chicken and apple juice. A quick search on Google news turns up dozens of results. However, the arsenic story of most concern to North Carolinians, an example of the assault on North Carolina's health-based air toxics regulations is not being reported on. To see a snapshot of what is ahead for North Carolina's air toxics standards, one has only to look at what has been occurring at the state level regarding this well-known poison and carcinogen; increasingly shown to have alarming endocrine disrupting effects.

On Thursday, October 13 2011, the North Carolina Division of Air Quality (DAQ) published the North Carolina Science Advisory Board's (SAB) "Draft Risk Assessment for Arsenic and Inorganic Arsenic Compounds" to their website for public comment. The SAB recommends increasing North Carolina's current acceptable ambient level⁸ (AAL) for arsenic "9-fold." ⁹ The North Carolina Science Advisory Board (SAB) on Toxic air Pollutants "was chartered by the Secretary of the Department of Environment and Natural Resources to make recommendations to the Environmental Management Commission (EMC) to *minimize the potential health* hazards resulting from toxic air pollution."¹⁰ The charter itself defines this responsibility further:

Section II. Functions

(2) The Board shall have the following duties:

(e) To recommend airborne concentrations of toxic air pollutants in a "range of risks" to the Director of the Division of Air Quality and to the Environmental Management Commission (EMC) for regulation that will **minimize adverse health responses in the exposed citizenry** and to advise the EMC of the scientific basis of these recommendations...¹¹

The SAB is comprised of six members, all with toxicological, epidemiological and/or medical backgrounds. The current members are: Thomas B. Starr, Ph.D. Chair Woodhall Stopford, MD, MSPH Elaina M. Kenyon, Ph.D., DABT Ivan Rusyn, MD, Ph.D. Helen Cunny, Ph.D., DABT D Dorman, DVM, Ph.D., DABVT, DABT

BREDL submitted comments opposing the SAB's recommendation pointing out arsenic's toxic effects as well as asking the question, "What industry (or industries) are behind the impetus" (to change the acceptable ambient level of arsenic). ¹² This recommendation was scheduled to be voted on by the Board November 30, 2011 at the 161st meeting, which was held by teleconference. Because of BREDL comments, it was decided to postpone the decision until the January 2012 meeting. During the public comment portion of the teleconference BREDL staff person Therese Vick asked where this request initially came from. Dr. Starr answered that the request had come from the North Carolina Division of Air Quality. It was explained that certain areas in North Carolina "routinely exceed the current AAL for arsenic."^{13, 14} The "2009 Annual Air Toxics Report" states that: "...median arsenic concentrations measured across the state in 2009 exceed the AAL for arsenic by 3-4 times." 15

This admission was shocking—DAQ was acknowledging that rather than investigating ways to bring these areas into compliance with the current, more protective standard, they were *proposing to change the standard instead*. Even members of the SAB pointed out that the lower bound of the proposed AAL was "coincidentally close to the measured concentrations at monitoring sites around NC."¹⁶

<u>"</u>This is developing into a very bad habit! I don't know if I can explain it to you. It's not only against the law, it's wrong!"

> -Mortimer Brewster-Arsenic and Old Lace

Because of these troubling admissions, BREDL staffer Therese Vick began investigating the history behind the reevaluation. After a review of DAQ documents and several web searches, it

became clear that the impetus behind the requested change was likely coming from influences outside of NC DENR. For example, in the "PSD Preliminary Review modification 300 construction/operation permit (Draft Revision 8, July 2011 -Assistant Secretary)" for Carolinas Cement Company LLC (aka Titan Cement) located in Castle Hayne, North Carolina, the modeled arsenic levels are at 30% of the AALaccording to the company's own modeling and after pollution control. The amount of arsenic potentially emitted into the air of the surrounding community is significant and dangerous. In the Draft Revision, DAQ attempts to diminish the potential concern over these levels by saying "Finally, the Scientific ¹⁷ Advisory Board is considering adjusting the Arsenic AAL.¹⁸ As troubling as 30% is, it pales in comparison to the almost 48% of the AAL modeled in an earlier draft.¹⁹

"Even the Cat's in on it!"

- Mortimer Brewster Arsenic and Old Lace

Industry is certainly following this proposed change very closely, and their relationship with the DAQ is inappropriate at best. Trinity Consultants, a North Carolina environmental consulting firm posted this on their website:

> "For a variety of emission source(s), particularly combustion sources, the arsenic AAL has often been problematic in TAP air dispersion modeling. In some cases, affected facilities have had to improve pollution control systems, increase stack heights or place operational limits to demonstrate compliance with the arsenic AA(L)." ²⁰

At the November 2010 meeting of the SAB, Brendan Davey, DAQ staff from the Asheville Regional Office, remarked that "there are a few combustion sources in the Asheville region that are having difficulty complying with the AAL for arsenic given current regulations", and

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Hydrofracking Law

(continued from pg 1)

In fact, the exemption in the SDWA excludes "underground injection of fluids or propping agents (other than diesel fuels) pursuant to hydraulic fracturing operations..." In 2011, the US EPA initiated rulemaking for the limited fracking done using diesel, but the Independent Petroleum Association of America is challenging this potential federal requirement.

Oil and gas extraction is largely exempt from the Emergency Planning and Community Right to Know Act, Title III of the 1986 Superfund Amendments and Reauthorization Act. The 2011 Fracturing Responsibility and Awareness of Chemicals Act, also known as the FRAC Act, would amend the Safe Drinking Water Act to regulate the injection of fluids for hydraulic fracturing, but the law languishes in legislative limbo.

In 2011 the EPA proposed air pollution standards for volatile organic compounds, air toxics and methane with the goal of reducing ozone and global warming emissions from the oil and natural gas industry. The final rule is expected to be issued on April 3, 2012. But a Cornell University study concluded that methane venting from hydrofracking flowback— hydraulic fluid pumped out of the well after fracking is done—could offset any greenhouse gas gains made by switching from coal to natural gas, erasing any global warming advantage. Methane is much more powerful global warming agent than carbon dioxide.

State Laws

States may regulate hydraulic fracturing along with other oil and gas production and many are doing so. For example, some states require disclosure of chemicals injected in the fracking process including biocides, corrosion inhibitors, highly toxic 2butoxyethanol-a widely used surfactant and foaming agent, and many other hazardous chemicals. With the federal FRAC Act on the back burner, Montana, Wyoming, Michigan, Texas, Arkansas and West Virginia have adopted rules requiring disclosure of chemicals used by hydrofracking operations. However, these disclosure regulations also provide for trade secret protections, thwarting public access to the information. For example, Wyoming regulators have agreed to keep secret 146 hydraulic fracturing chemicals since its disclosure rules went into effect.

In North Carolina, oil and gas regulation 15A NCAC 05D .0101 establishes rules for the drilling, completion or abandonment and development of any well drilled for the production of oil or gas. In 2011 the NC General Assembly Session Law 2011-2761 established an oil and gas study to investigate hydrofracking exploration and extraction and the potential environmental and economic impacts.

Some states, realizing that fracking involves significant water use and release, are developing water withdrawal and discharge reporting requirements. For example, Michigan regulators estimate that a single fracking operation would use as much water as nearly ten acres of corn during an entire growing season. Groundwater contamination caused by fracking is largely unaddressed in most states.

Fracking moratoriums have been attempted in several states but only New York managed to put a statewide ban into law. However, sixty municipal governments have enacted local bans, but a ban in Morgantown, WV was struck down last year by the state court.

*John H. Quigley, Secretary of the Pennsylvania Department of Conservation and Natural Resources (until January 2011) quoted in "Regulation Lax as Gas Wells' Tainted Water Hits Rivers", New York Times, February 26, 2011, by Ian Urbina

Impacts of Hydraulic Fracturing

(continued from pg 1)

The North Carolina General Assembly is pushing fracking, and has directed the Department of Environment and Natural Resources (DENR) and other agencies to conduct a study on the practice, due to the Legislature by May 2012. 1 DENR held a series of meetings soliciting public comment during the fall of 2011, and changed the scope of the study in December 2011. ² Additionally, DENR requested that the non-profit State Review of Oil and Natural Gas Environmental Regulations (STRONGER) evaluate North Carolina's existing regulations against their national guidelines. The STRONGER committee is comprised of stakeholders interested in hydraulic fracturing, including industry and public interest representatives. These meetings were held in late October 2011, and results are anticipated in January 2012. ³ No matter how many studies or reviews are conducted on hydrofracking, the negligible and often exaggerated benefits are not worth the risks.

Degraded Groundwater and Surface Water Quality

Most of us are familiar with the problems that methane from hydraulic fracturing is causing nearby residents. It is not difficult to find videos of water that is literally burning. ⁴ "Fracking" fluid is a toxic cocktail which contains water, proppants (usually sand), and dozens of toxic compounds which are injected deeply

into the earth to help release natural gas.5 Each time a well is fracked; up to 5000 gallons of chemicals are injected into the earth. After the well has been fracked, some of the "produced water" will eventually flow back to the surface. The flowback or "produced water" may now also contain arsenic, barium, and radium226, a water-soluble radioactive material.6,7 This toxic and now radioactive fluid is stored in open pits or tanks and can be taken to underground injection wells or wastewater treatment plants where it is eventually discharged to surface water, potentially contaminating the receiving body. 8,9 However, up to 85% of the chemical laden fluid can remain in the ground. Over the life of each well, this can amount to over 30,000 gallons. 10 Because this activity is exempted from the Safe Water Drinking Act, and industry at the time of this writing is not compelled to provide information about what chemicals they use in their fluid, the danger to our drinking water is significant.

Water Use

Hydraulic fracturing uses thousand to millions of gallons of fresh water each time a well is fracked, rendering it unusable for drinking- as much as 13,000,000 gallons.¹¹ Combined with contamination of ground and surface water, fracking will have devastating consequences on North Carolina's precious water supply- reducing the availability of safe water to drink and inhibiting future growth.

Degradation of Air Quality

Area air quality will be impacted by emissions from the evaporative pits, the drilling itself, compressor stations, transport pipelines, equipment operation and the large number of trucks needed to serve a fracking operation. The US EPA has proposed new rules regulating volatile organic compounds (VOC's) and other ozone forming pollutants, methane, and air toxics such as benzene.12 However, it remains to be seen how protective the regulations end up, and how long it will take for them to go into effect. In the meantime, communities across the United States are suffering the deleterious effects from pollution. In one area of Wyoming, smog from fracking has been found to be worse than in Los Angeles. 13 A 2009 community health survey performed by Earthworks' Oil and Gas Accountability Project in Texas described odor events up to 24 times per month.14 More and more is being discovered about the enormous amounts of pollutants being spewed into the air from hydraulic fracturing operations. The Chesapeake Bay Foundation made this video showing what is occurring at well sites:

http://weblogs.baltimoresun.com/features/ green/2011/11/infrared_video_shows_air_pollu.html.

Toxic and Radioactive Waste Products

Hydraulic fracturing has the potential to concentrate the Naturally Occurring Radioactive Materials (NORM). The handling of the now radioactive waste products increases the likelihood of human exposure. ¹⁵ Another troublesome issue is how, or even if, waste products-unusable piping and other equipment, cuttings, and other substances from the drill bore can be disposed of safely. They can be contaminated from exposure to fracking fluid and may be radioactive. ¹⁶ Dr. Marvin Resnikoff, physicist and principal at Radioactive Waste Management Associates states, "According to our calculations using a program called Microshield, pipes with gamma activity equal to 50 microR/hr, will have radium-226 and radium-228 concentrations greater than 1300 pCi/gram and 300 pCi/gram, respectively. In comparison, cleanup standards for Superfund sites require a cleanup if contamination is greater than 15 pCi/g 6 inches below the surface. Thus, if these unlicensed pipes are released to school districts, they can be cut up for playground equipment, and high concentrations of radium can be strewn on the ground." ¹⁷ Some counties and municipalities have banned fracking wastes from being disposed of within their jurisdictions.18

Public Health

There are stories from all around the country detailing people who are experiencing health effects from fracking. ¹⁹ One such story comes from Dish Texas, where Mayor Calvin Tillman left town out of concern for his family's health. His children were suffering nosebleeds, and when his 5-year old son woke up with a very severe nosebleed and his house "looked somewhat like a murder scene" he decided he'd had enough and left. Many people are unable to leave and are virtual prisoners of their own homes.²⁰ In Erie, Colorado, residents are complaining of asthma, dizziness, migraines and gastrointestinal upsets. These kinds of health problems are being reported my neighbors of fracking operations around the country.

Earthquakes, Spills, Fires, Explosions

From beginning to end, the process of hydraulic fracturing is fraught with danger. ^{22, 23} Incidences of worker exposure, fracking fluid spills, explosions and fires are in the media almost daily. ^{24, 25} In March 2011, thousands of gallons of fracking fluid leaked after a well exploded. The toxic liquid flowed across farmland and contaminated a nearby creek.²⁶ Fracking has also been shown to cause earthquakes. The Oklahoma Geological Survey recently released a report detailing the possibility of hydraulic fracturing triggering dozens of earthquakes in the south-central part of the state. These findings were considered so urgent that the report was

released in draft form. ²⁷The most recent evidence of seismic activity being induced by fracking processes comes from Ohio. Recent earthquakes there have been blamed on underground injection well disposal of "produced water." ²⁸ At the recent North Carolina meetings of the STRONGER review committee, Dr. Nathan Taylor, of The North Carolina Division of Land Resources plainly stated that fracking does cause "small quakes."²⁹

Quality of Life and Economic Concerns

Disruption of Rural Life

Shale gas extraction not only effects the environment, it affects peace of mind. The infrastructure needed to support gas drilling is disruptive and can be devastating to a rural agricultural community. ³⁰ A rude awakening can come to landowners who own their land- but do not own their mineral rights. They often have no say about what occurs and no economic benefits from drilling activities. Homeowners and landowners may be liable for damages they have no control over and receive no benefit from. ³¹ Of further concern, even those who receive royalties or bonuses for their mineral rights or for allowing drilling on their land may be defaulting on their mortgages, most of which prohibit hazardous activities and are in danger of foreclosure. 32 Property values have also been shown to nosedive. 33

Increased truck traffic with its inherent problems is another detrimental effect of hydrofracking activities. Trucks hauling water to the sites, trucks hauling the fracking fluid, trucks taking the produced water away from the well sites. The potential for accidents and spills go up exponentially from fracking operations. Of additional concern is the deterioration of air quality from increased diesel fumes, and the wear and tear on area roads. An August 2011 report prepared by the New York Department of Transportation estimated that fracking activities could contribute to over \$220 million in additional road maintenance costs. ³⁴

Global Warming

Those who wave the flag hailing hydraulic fracturing as the answer to society's addiction to foreign oil are misinformed at best and spreading misinformation at worst. In 2010, the top three uses of crude oil were for petroleum products: Gasoline 47%, Diesel Fuel 17%, and Jet Fuel 7%. ³⁶ Natural gas does not, and will, not replace these fuels in the near term, if ever. A May 2011, a peer-reviewed paper written by Cornell University researchers found that: "The [greenhouse gas] footprint for shale gas is greater than that for conventional gas or oil when viewed on any time horizon, but particularly so over 20 years. Compared to coal, the footprint of shale gas is at least 20% greater and perhaps more than twice as

great on the 20-year horizon and is comparable when compared over 100 years." ³⁶

No Fracking is Safe Fracking

Hydraulic fracturing is not a solution for the economy, dependence on foreign oil, or global warming. It is a false choice, with severe consequences for public health, the environment and quality of life. The current study being conducted by DENR is an attempt to convince the public that fracking "can be done right." There is only one way that hydrofracking can be safe for NC, by not allowing it at all. ■

¹ DENR Study

 $^{\rm 2}$ Revised Outline of the Oil and Gas Study Under Session Law 2011 -276, December 6, 2011

- ³ http://www.strongerinc.org/index.asp
- ⁴ Can You Do This With Your Tap Water?
- ⁵ Hydraulic Fracturing

"Burning Questions- What's What, When it Comes to Water?"
"Physicist Warns of Fracking's Radioactive Side Effects"
"Burning Questions"

9 "Regulation Lax as Gas Wells' Tainted Water Hits Rivers"

"In New Gas Wells, More Chemicals Can Remain Underground"
"Texas second Oil Boom Costs Precious Water"

¹² US EPA: Proposed Amendments to Air Regulations for the Oil and Gas Industry Fact Sheet

 $^{\rm 13}$ "Wyoming Air Pollution Worse than Los Angeles Due to Gas Drilling"

 $^{\rm 14}$ Results of Health Survey of Current and Former Dish/Clark, Texas Residents

 $^{\rm 15}$ "Fracking at Marcellus Shale Site: Hydraulic Fracturing Increases Radionuclide's"

¹⁶ "Naturally Occurring Radioactive Materials (NORM) in Produced Water and Oil-Field Equipment- An Issue for the Energy Industry"

¹⁷ Radioactive Waste Management's Fall 2011 Newsletter

- 18 Bans and Moratoria
- ¹⁹ "Horizontal Fracking- Unacceptable Risks"

²⁰ "Mayor Calvin Tillman Leaves Dish Texas Fearing 'Fracking' Effects on Children's Health"

²¹ "Fracking Fury Reaches Fever Pitch in Erie"

²² "Pennsylvania Fracking Spill: Natural Gas Well Blowout Spills Thousands of Gallons of Fracking Fluid"

23 "Fraccidents across the United States"

24 "Alberta Gas Well Explosion Injures 13"

²⁵ "20-30 Families Displaced After Pipeline Explosion"

 $^{\rm 26}$ "Chesapeake Energy Stops Fracking Until Cause of Well Explosion is Determined"

27 "Examination of Possibly Induced Seismicity from Hydraulic Fracturing in the Eola Field, Garvin County, Oklahoma"

28 "Was that another Fracking earthquake?"

²⁹ Meetings were held between NC DENR and the STRONGER committee in October 2011. The meetings were conducted so that STRONGER could review North Carolina's existing regulatory framework. Dr. Taylor made the comment during the October 26, 2011 meeting, which I attended. Therese Vick

 $^{\rm 30}$ NC Council of Churches Rural Life Committee Supports Ban on Fracking

³¹ "Homeowners and Gas Drilling Leases- Boon or Bust?"

32 "Homeowners and Gas Drilling"

 $^{\rm 33}$ "While Faraway Lenders Grapple With Fracking, a Word from a Local Appraisor in the Trenches"

 $^{\rm 34}$ "Fracking Truck Traffic Could Take Heavy Toll on New York Roads, Report Warns"

35 "What are the products and uses of petroleum?"

 $^{\rm 36}$ "Methane and the green-house gas footprint of natural gas from shale formation" \blacksquare



NUCLEAR UPDATES

By Louis Zeller, January 10, 2012

Public Petition Forces Reassessment of US Nukes BREDL Targets Browns Ferry

Driven by a nationwide grassroots campaign to *Freeze Our Fukushimas*, on January 3, 2012 the NRC published its decision to review critical components of nuclear power plants in the US, features which failed at similar reactors in Japan. The Commission will assess the failure of emergency power for nuclear waste storage pools and the breakdown of systems which were supposed to prevent radiation release.

In response to the March 11th earthquake and tsunami in Japan, Beyond Nuclear launched a national coalition effort to permanently suspend operations at all 23 General Electric Mark I Boiling Water Reactors in the United States, the same reactors which failed at Fukushima. Since submitting the original petition for emergency enforcement in April, Beyond Nuclear has attracted over 8,000 co-petitioners, including Blue **Ridge Environmental Defense** League. In support of the campaign, BREDL submitted testimony to the NRC which focused on the Browns Ferry nuclear plant operated by Tennessee Valley Authority in Athens, Alabama.

The GE Mark I reactors should never have been licensed. A typical nuclear reactor containment building is a massive structure made of concrete and steel to withstand the high pressures and temperatures generated during an accident. To reduce construction costs, some reactors utilized pressure suppression systems, such as baskets of ice designed to reduce heat or vent systems designed to release radioactive steam to the atmosphere. GE Mark I uses a vent system. Decades ago, nuclear engineers questioned the reliability of pressure suppression systems, but banning them would have halted approval of the plants then under construction. Ultimately, NRC allowed these systems because, "Reversal of this hallowed policy at this time could well be the end of nuclear power." ¹ In 2011 the GE Mark I pressure suppression system failed with catastrophic results at Fukushima.

Specific problems at Browns Ferry cited in BREDL's petition include 1,400 tons of irradiated fuel in pools covered by sheet metal buildings above the plant. In case of a tornado, these metal panels would blow off. Also, water in the fuel pools is circulated by electric pumps. If offsite power and electric back-ups fail, the fuel would heat the water, turning it to steam. A recent study indicates that a high-level radioactive waste fire at Fukushima Daiichi Unit 4 in Japan did occur, causing large-scale releases of radioactive cesium-137 directly into the environment. The NRC has now accepted the petitioners' requests to review these systems.

¹ Memo of September 25, 1972 by Joseph M. Hendrie, a nuclear engineer who was later appointed to the Nuclear Regulatory Commission. ■

LINKS TO DOCUMENTS

January 3, 2012, "Receipt of Request for Action," Federal Register, p. 143

http://www.gpo.gov/fdsys/pkg/FR-2012-01-03/pdf/2011-33649.pdf

December 13, 2011, NRC Nuclear Reactor Regulation Director's Decision

http://www.beyondnuclear.org/ storage/mark-1-campaign/mk-1-2206/ fof_nrc_fdd_1213201113_ML11339A 078.pdf

October 7, 2011, Blue Ridge Environmental Defense League 10 CFR § 2.206 Request for Action to Suspend GE Mark I Boiling Water Reactors Operating Licenses due to Flawed Primary Containment and Unreliable Back-up Electric Power Systems for Cooling Spent Fuel Pools at Browns Ferry

http://www.bredl.org/ pdf3/111007_BREDL_Testimony_re_ BrownsFerry.pdf

April 13, 2011 Beyond Nuclear Petition for Emergency Enforcement Action

http://www.beyondnuclear.org/ storage/mark-1-campaign/mk-1-2206/ bn_2206_ge_bwr_041320111.pdf ■

Chapter Update: School and Church Outreach Campaign Neighborhood Environment Watch (NEW)

An outreach to organizations, especially churches and schools, has grown from a BREDL Chapter formed in 2006 around a hot dip galvanizing plant. NEW Chapter members challenge citizens and especially young people to become aware of local environmental issues and to take action to heal the earth.

Recently, NEW member, Beverly Kerr lead a Youth Ministry meeting of 122 students in Alamance County. NEW suggested this youth group form a youth leadership committee to help organize and plan fun ways to raise money for environmental campaigns.

In 2006, neighbors formed the NEW BREDL chapter to protect themselves from polluting industry. NEW regularly attends planning board and county commissioner meetings to speak of air pollution, noise, chemical smell, traffic issues and the constant health concerns from the galvanizing process. Lab analysis of soil samples confirm concentrations of heavy metal and soil conditions that clearly indicate a significant



risk to human health. When NEW presented this information to the State Toxicologist, Dr. Ken Rudo, he recommended further testing of the soil to determine the level of health risk. He further cautioned people to stay away from the contaminated area.

NEW has researched the galvanizing process and calls for the enclosure of the wide open air plant and the filtering of the emissions.

NEW works towards relief from South Atlantic Galvanizing and also to help Alamance County decision makers realize the importance of proper placement and regulation of polluting industries.

NEW Chapter uses SfA "Smart Moves"

to help students better understand, analyze, and communicate about the environmental issues impacting their lives.



Beverly Kerr, NEW Chapter member, presents Statistics for Action (SfA) math exercises to students to demonstrate how youth can tell others about environmental problems and impacts. SfA partners with BREDL to help others understand and solve pressing environmental problems.

Visit SfA website for environmental "Smart Moves" : http://sfa.test5.terc.edu/index.html

Statistics for Action is made possible by funding from the National Science Foundation



Statistics for Action and BREDL can help you

- * Plan how to tell others about an environmental problem, using effective strategies to communicate with numbers
- * Stop a potentially dangerous proposal from moving forward
- * Understand environmental test results or predictions for environmental impact
- * Check for errors or oversights in sampling and testing
- * Learn how community members can have an impact during environmental testing, hazardous waste cleanup

* SfA website: http://sfa.test5.terc.edu/index.html



Preventing Uranium Mining from Taking Place in Pittsylvania County, VA

Goals of BREDL Chapter PRIDE: Piedmont Residents in Defense of the Environment

In the summer of 2010, BREDL adopted a chapter by the name of Piedmont Residents in Defense of the Environment (PRIDE). This group's goal is to prevent uranium mining from taking place in Pittsylvania County, VA.

The president of PRIDE, Karen Maute, runs an email list providing articles and information of interest to those concerned about the industry proposal to mine uranium in Virginia. We at BREDL are amazed at the depth, breadth, volume, balance, completeness, and consistently high quality of the information that comes to us from Karen's email list.

Examples of the types of information recently shared through Karen's list include:

- A link to a WDBJ-7 interview with a 7th generation Pittsylvania County farmer, Byron Motley, whose well water may be made unusable and his farm condemned if the mining project should move forward
- Links to several different studies that have been conducted to assess the opportunity and risk of conducting uranium mining in Pittsylvania County's water-rich environment, including studies by the National Academy of Science, Chmura Economics and Analytics, Fairfax County

Water Authority (the utility providing drinking water to the Northern Virginia communities of Fairfax, Loudoun, and Prince William and the City of Alexandria), RTI (commissioned by the Danville Regional Foundation), and even a study by BREDL (available on our website)

- * Numerous editorials and letters to the editor both pro and con the proposal to mine uranium in Virginia, published in the Danville Register & Bee, the Chatham Star Tribune, the Roanoke Times, the Washington Post, the Richmond Times-Dispatch
- * A link to a story about the proposed mine that appeared in Virginia Business
- Copies of full-page advertising that appeared in the Chatham Star Tribune promoting the mine and paid for by the mining company, Virginia Uranium, Inc.
- * An announcement of a "Keep the Ban" benefit concert in Floyd, VA

Karen's dedication and discernment are an asset to the BREDL organization and to all Virginians.

Another PRIDE member, Deborah Dix, manages three blogs all devoted to keeping uranium mining out of Virginia. Virginia Against Uranium Mining at http:// virginiaagainsturanium.blogspot.co m began in May, 2009. Nuclear Free Virginia at http:// nuclearfreeva.blogspot.com, which opposes the entire nuclear power industry, began in October, 2009. The latest blog supports the BREDL chapter and was begun in March, 2011. It at http:// prideva.blogspot.com. Deborah also manages blogs for other grassroots nonprofits. She says she devotes about four hours per day to managing the blogs - all unpaid.

Other PRIDE members besides Karen and Deborah have devoted significant portions of their lives over the past few years to the study of the environmental impacts of uranium mining. Their collective knowledge on the subject is beyond impressive. BREDL is PROUD to have PRIDE as a chapter and PROUD of this type of American citizen activism that wields a pen mightier than any sword.

> To join PRIDE President, Karen Maute's email list, send a request to her at <u>fcm@gamewood.net</u>



Uranium Industry Update

As this League Line goes to press, the Virginia Legislature convenes its 2012 session on January 10. The uranium industry has sixteen paid lobbyists working to lift the nearly 30-year moratorium on uranium mining in Virginia. On January 23rd, Virginia citizens will assemble on the grounds of the Virginia General Assembly building in Richmond, demanding that the moratorium on uranium mining be kept in place permanently.

The highly contentious issue now before the General Assembly has been decades in the making. An exceptionally rich underground deposit of uranium ore located in Coles Hill, a tiny farming community in the central part of Pittsylvania County, VA, has captivated the attention of the uranium mining industry since the mid-1970s. In 2007, the owner of the land containing the deposit. Walter Coles, created a company to mine and mill the uranium lying underneath the ground of his historic farm. His company, Virginia Uranium, Inc., is 49% owned by a British Columbia-based uranium mining firm, Virginia Energy Resources, which is investing heavily in development of the Coles Hill deposit. Mining and milling cannot proceed, however, until a statewide moratorium on uranium mining, imposed in 1982 by the Virginia General Assembly, is lifted.

In 2008, Mr. Coles convinced members of the Virginia Commission on Coal and Energy to allow his company to pay for a study by the National Academy of Sciences (NAS) detailing the risks and benefits of mining uranium in Virginia. The purpose of the NAS study, initiated in February, 2010, is to inform the General Assembly's decision on whether or not to lift the statewide moratorium on uranium mining. \$1.7 million to pay for the study was channeled from Virginia Uranium, Inc. to the Virginia Center for Coal and Energy Research at Virginia Tech, and then to the NAS. This circuitous exchange of funds was required by the NAS to address the organization's prohibition against accepting private funds to pay for their studies.

In 2010. Walter Coles stated in an interview with The New Republic that "Many of the elected delegates are waiting for the [NAS] study to give them cover to take a position on this." The same year, one of the most outspoken proponents of uranium mining in Virginia, Dr. Robert Bodnar, Professor of Geochemistry in the Dept. of Geosciences at Virginia Tech, said, "Lifting the moratorium on uranium mining will encourage mining companies to explore for uranium in Virginia, and this could lead to Virginia becoming the 'Saudi Arabia of nuclear fuel' and contribute significantly to Virginia's and the nation's economy and to national security by eliminating our foreign dependence on uranium."

In 2011, Virginia Uranium, Inc. sent Virginia legislators to Canada and France on junkets to decommissioned uranium mine sites in France and Canada, hoping to win the legislators' approbation for lifting the moratorium in Virginia. Many legislators said they could not make a decision on whether to lift the moratorium until seeing the studies that had been commissioned to assess the opportunities and risks associated with uranium mining and milling in Virginia. Two of the studies, including one by National Academy of Sciences and one by Chmura Economics and Analytics, were funded by the mining company. Others were funded independently of industry money, including a study by the Fairfax County Water Authority, the utility providing drinking water to Fairfax, Loudoun, and Prince William Counties and the City of Alexandria, and a study by RTI, which was commissioned by the Danville Regional Foundation.

At the end of 2011, the studies began coming out. One by one these studies debunked the myth that uranium mining and milling can be presumed to be done safely in Virginia. Many activists were pleasantly dumbfounded, as we had feared that the studies, especially those funded by the mining industry, would lack sufficient objectivity. This did not happen. In fact, the studies are so unambiguous in their statements about the risk associated with mining and milling uranium in Virginia that a group of Virginia General Assembly members representing the geographic areas surrounding the proposed mine site has issued a letter to the rest of the General Assembly requesting that the moratorium not be lifted during this session. One of the signers, Delegate Donald Merricks,

whose district contains the proposed mine site, said he's read the NAS and Chmura reports and is not convinced that uranium mining and milling can be achieved without a threat to the environment or the economy. Said Merrick (quotation from Richmond Times Dispatch, January 3, 2012), "Quite frankly, I just don't see anything in there that would make me feel any better about lifting the ban. The risk is real; the water is a precious resource. To me, those are serious risks before any thought of milling is even considered."

BREDL will join the Keep the Ban Coalition at Citizen Lobby Day at the Virginia General Assembly on January 23. We will deliver copies of BREDL's study on flooding at Coles Hill to members of the Virginia General Assembly, asking them to seek a sitespecific assessment of Coles Hill prior to lifting the ban and – equally importantly – prior to writing any uranium mining regulations.

The mine/mill project, if allowed to move forward, would result in permanent storage of approximately 20 million tons of radioactive mill tailings at the Pittsylvania County site. This site is highly flood-prone, encompassing three separate FEMA flood zones and numerous springs and wetlands. While the storage of uranium mill tailings has been problematic even in very arid climates, the Virginia project would be fraught with risk of radioactive leakage into above- and below-ground water. The long-term isolation of these mill tailings would, after decommissioning of the mine and mill, become the fiscal responsibility of the federal government. The cost of monitoring and maintaining the tailings would be borne by the American taxpayer for the 10,000 to 100,000 years during which the mill tailings remain radioactive - a federal taxpayer subsidy of private industry risk lasting forever.

North Carolina communities could receive contaminated water from the mill storage site through the Roanoke River drainage system. Municipal water supplies for millions of people in both Virginia and North Carolina could be at risk. Resolutions against lifting Virginia's moratorium on uranium mining have been issued by dozens of municipal governments in both Virginia and North Carolina.

BREDL's report on flooding at the Coles Hills site can be found at www.bredl.org

(continued from pg 7) Fast Forward to 2012: A is for Arsenic

that "the control technology for these emissions is insufficient..."²¹ At a later meeting, SAB member Dr. Woodhall Stopford ask why the arsenic AAL was being reviewed. He was told that "DAQ needs to have the arsenic AAL reviewed because ambient concentrations are above the AAL across the state and the DAQ has been tasked by the EMC (Environmental Management Commission) to do a combustion source evaluation because *boilers have been exempt from Toxics regulations.*"²²

At the November 16, 2011 meeting of the Air Quality Committee of the EMC, DAQ Director Sheila Holman remarked that directed by the Chairs of the Environmental Review Commission, DAQ was meeting with industry looking at the air toxics regulations. Legislative staff facilitates these meetings. BREDL submitted a Freedom of Information Act Request (FOIA) after two emails inquiring about the meetings went unanswered. DAQ has since consulted with the North Carolina Attorney General's office as well as legislative staff and will provide documents to BREDL soon.²³

"I couldn't do that. Could you do that? Why can they do it? Who are those guys?"

-Butch Cassidy to the Sundance Kid Science Advisory Board members are charged with protecting the public health of the people of North Carolina. However, conflicts of interest can occur, and some members of the current Board have their own skeletons. Dr. Thomas Starr is the NC SAB chairman. Dr. Starr has a been a paid consultant for Philip Morris^{, 24, 25} a constant critic of the US Environmental Protection Agency's dioxin reassessment ^{26,27,28,29,30} and, as recently as 2010, a consultant to the American Forest and Paper Association.³¹ Dr. Starr has also opposed attempts to regulate particulate matter (PM) on behalf of the American Petroleum Institute in testimony before the United States Senate. Dr. Starr ended his testimony with this statement: "Implementation of the new standards could well make things worse rather than better." 32 Dr. Starr is not the only SAB member with interesting connections. Dr. Woodhall Stopford was retained by the Corn Refiners Association to examine claims that mercury was found in products that contained high fructose corn syrup. Dr. Stopford found no evidence of mercury. ³³ Dr. Stopford's connection to the CRA was not disclosed at the time his report was released.³⁴

"Everything's Bigger in Texas" - Unknown

To support their rationale, the NC SAB is relying heavily on the studies used in a draft report evaluating arsenic health risk by the Texas Commission on Environmental Quality (TCEQ). SAB Chair Dr. Thomas Starr made the recommendation.³⁵ The TCEQ has come under fire for refusing to allow climate change and human health effects language in a report on Galveston Bay,³⁶ is in a "to the death" battle with the US Environmental Protection Agency (EPA) over the State Implementation Plan (SIP), ³⁷ and Texas facilities are high on EPA's national "Watch List" of high-priority polluters whose violations are not being enforced properly by state regulatory agencies. 38

A controversial figure, TCEQ's chief toxicologist, Dr. Michael Honeycutt is listed as an author on the arsenic report. ³⁹ Dr. Honeycutt has long been a critic of the US EPA, not because the federal agency isn't strict enough; indeed, Dr. Honevcutt believes just the opposite- that federal standards are too stringent. Two glaring examples: Honeycutt testified against tougher ozone and particulate matter standards in 2011,40 and discounts EPA's concern about the developmental effects of mercury, stating that, "On the contrary, the Japanese population consumes ten times more fish than the US population but only shows positive outcomes; they have lower rates of coronary heart disease and high IQ scores."41

_:Hrsenic is edible. Only once."

-Unknown

North Carolina's air toxics program is in danger, and the NC Division of Air Quality's attempt to "decriminalize" arsenic poisoning is indefensible. In order to bring industry into compliance and protect corporate profits, the Science Advisory Board was implicitly tasked with finding justification for a decision already made—to increase the acceptable ambient level for arsenic. We can no longer stomach this manipulation of science to benefit corporate greed.

8 Acceptable Ambient Level (AAL) is the ambient concentration of a toxic pollutant at the property boundary. http://daq.state.nc.us/rules/Rules/Q0709.pdf 9 Risk Assessment Arsenic: Draft Public Comment 10 Science Advisory Board on Toxic Air Pollutants 11 Science Advisory Board Charter

12 BREDL Comments Arsenic AAL 13 From Therese Vick's notes of the 161st meeting of the Director's Science Advisory Board, November 30, 2011. The minutes from the meeting have not yet been published.

14 One Hundred Fifty-Fourth Meeting of the Science Advisory Board on Toxic Air Pollutants-Proceedings of the October 27, 2010 Teleconference

15 "2009 Annual Air Toxics Report" Division of Air Quality Toxics Protection Branch October 2010 16 Comment by Dr. Ivan Rusyn, SAB member, One hundred Sixtieth Meeting of the Science Advisory Board on Toxic Air Pollutants-Proceedings of the October 11, 2011 Teleconference

17 Historical Note: The "Science Advisory Board' was known as "The Scientific Advisory Board" prior to 2004.

18 North Carolina Division of Air Quality: PSD Preliminary Review Draft Revision 8 July 2011

19 "The air toxics modeling indicated that arsenic was at 47.83% of the Significant Ambient Air Concentration (SAAC) at some locations along the facility property line." North Carolina Division of Air Quality: PSD Preliminary Review Draft Revision 9 September 2009

20 Trinity Consultants News: Increased AAL for Arsenic

21 One Hundred Fifty-Fifth Meeting of the Science Advisory Board on Toxic Air Pollutants- Proceedings of the November 17, 2010 Teleconference

22 Dr. Reginald Jordan, DAQ Toxics Protection Branch One Hundred Fifty-Sixth Meeting of the Science Advisory Board on Toxic Air Pollutants-Proceedings of the January 26, 2011 Teleconference

23 Conversation with DAQ Director Sheila Holman January 4, 2012

24 Health Effects of Exposure to Environmental Tobacco Smoke Appendix B Summary of Public Comments and Responses on the February 1997 Draft- (California) Office of Environmental Health Hazard Assessment

25 Legacy Tobacco Documents Library- Philip Morris Glossary of Names

26 Letter to Dr. Kenneth Olden, Director, National Institute for Environmental Health Sciences, February 12, 1999

27 Bo Walhjalt-"A Scientific Journal with Industrial Bias as its Specialty, December 2002"

28 Thomas B. Starr Ph.D."Significant Shortcomings of the U.S. Environmental Protection Agency's Latest Draft Risk Characterization for Dioxin-Like Compounds" June 2001

29 "Scientific Debate Continues on Dioxin Risk" 30 External Peer Review of Recommended Toxicity Equivalency Factors (TEF's) for Human Health Risk Assessments of Dioxin and Dioxin-Like Compounds November 4, 2009

31 American Forest and Paper Association re: EPA's Reanalysis of Key Issues Related to Dioxin Toxicity and Response to NAS Comments July 7, 2010

32 Testimony of Thomas B Starr, Ph.D. Principal, ENVIRON Corporation, Raleigh NC before the Senate Subcommittee on Clean Air, Wetlands, Private Property, and Nuclear Safety

33 "Assessment of Test Results for Mercury in High Fructose Corn Syrup"

34 "In These Times, January 2011"

35 One Hundred Fifty-Seventh Meeting of the Science Advisory Board on Toxic Air Pollutants-Proceedings of the March 30, 2011 Teleconference 36 Censored scientist John Anderson on how to restore sound policy-making to Texas and (maybe_ save the Texas coast

37 Correspondence between EPA and TCEQ regarding Texas Air Permitting Program 38 "Poisoned Places: Toxic Air, Neglected Communities"

39 "TCEQ-At it Again"

40 "Texas regulator critical of EPA"

41 Comments by Michael Honeycutt, Ph.D., with the Texas Commission on Environmental Quality Regarding the Primary National Ambient Air Standards for Ozone and PM, and the Utility Mact

Park Foundation Supports BREDL in 2012

We are grateful to the Park Foundation for the recent grant of \$20,000 in support of our 2012 North Carolina Organizing Campaign.

Our program's goal is to work with community people to prevent air and water pollution and to build healthy, sustainable communities.

With а poor economy, there is a slashand-burn mindset towards environmental agencies, as if clean air and water regulations enacted during the last four decades were the problem. With more budget cuts looming and increased emphasis on fast-track permitting, communities are being targeted dirty by industries: waste dumps,

incinerators and other polluting facilities.

During the next year we will expand and strengthen our league of community based chapters, organize new community groups, provide technical assistance and build community power.

The Park Foundation is dedicated to the aid and support of education, public broadcasting, environment, and other selected areas of interest to the Park family.

More recently, the Foundation's interest in environmental causes has been refined to focus on issues of freshwater, particularly in the eastern United States.





Blue Ridge Environmental Defense League PO Box 88 Glendale Springs, NC 28629



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Please Support Blue Ridge Environmental Defense League

All donations help the BREDL mission and are tax deductible. Please donate online or send your gift to: BREDL PO Box 88 Glendale Springs, NC 28629



BREDL is a regional, community-based non-profit environmental organization founded in 1984, BREDL encourages government agencies and citizens to take responsibility for conserving and protecting our natural resources. BREDL advocates grassroots involvement to empower whole communities in environmental issues.

We are a true league of grassroots chapters working in rural communities in the Southeast. For twenty-six years the same organizing principles have guided our work: public health protection, environmental democracy, earth stewardship and social justice. Our mission is to prevent harm from air and water pollution and to create sustainable alternatives for sound waste management and economic development. Protecting children's health from environmental poisons, empowering whole communities to engage in crucial decision making, and changing the balance of power to prevent injustice are key components of our work.

www.bredl.org