

Earth Day Letter from Chemung County Jail to Environmental Leaders, from Sandra Steingraber

by [Raising Elijah by Sandra Steingraber \(Notes\)](#) on Monday, April 22, 2013 at 11:07pm

April 22, 2013

TO: FRED KRUPP, Environmental Defense Fund

FRANCES BEINECKE, Natural Resource Defense Council

MICHAEL BRUNE, Sierra Club

PHILIP JOHNSON, Heinz Endowments, and

Other fellow leaders in the environmental community:

While confined in the Chemung County Jail, here in the southern tier of upstate New York, I have had to think deeply and long about the environmental community's response to the boom in natural gas extraction from shale via hydraulic fracking, which is now sweeping the nation, from west to east. I write to share with you my insights regarding the split within our community over whether to embrace a regulatory approach to fracking, or to press for bans and moratoria.

I'll begin by explaining why I am in jail. Last month, on the west shore of Seneca Lake, I stood with other local residents on a driveway owned by Inergy, LLC.

In so doing, we blockaded a gas compressor station site and prevented a company truck, carrying a drill head in its truck bed, from going where that truck wanted to go. When we refused to disband, we were arrested and charged with trespassing. When three of us further refused, at our arraignment on April 17th, to pay the resulting fine, we were each sentenced to 15 days in jail. I am writing to you on day 6 of my incarceration.

As the nation's largest energy storage and transportation company, Inergy provides the infrastructure for fracking – including within states like New York, where high-volume, horizontal fracking is not allowed. Missouri-based Inergy has

purchased more than 500 acres of lakeshore property along the banks of our state's largest and deepest lake. Seneca Lake is so large and deep that it creates its own temperature stabilizing microclimate, which provides the necessary ecological conditions for our state's world-class Riesling grapes. Wineries flourish on the hillsides about both banks of the Finger Lake. Inergy is interested in neither the wine grapes nor our unique climate. It does not care about Seneca Lake's designation as the Lake Trout Capital of the world, nor the tranquil views that draw tourists and fill summer cottages. Nor, more basically, with the fact that Seneca Lake is the drinking water source for 100,000 people.

Inergy's interest is, instead, focused on the landscape below the surface – namely the abandoned caverns left over from a century of solution salt mining that lie 1,500 feet beneath and beside the lake shore. Inergy's plan is to repurpose these salt caverns to serve as storage for billions of barrels of fracked gases, which will be brought to Seneca Lake by rail and by truck from other states. However, these fuels will not be stored in barrels. The caverns themselves will serve as the receptacle for the pressurized, liquefied, explosive gases.

The Seneca Lake 12 – as we arrestees call ourselves – fear that Inergy's planned storage facilities pose serious risks, including calamitous ones. As journalist Peter Mantius reports in *DC Bureau*, salt caverns represented only 7 per cent of the nation's 407 underground storage sites for gas in 2002, but, between 1972 and 2004, they were responsible for all ten catastrophic accidents involving gas storage. In Belle Rose, Louisiana, the 14-acre sinkhole that is now making headlines was caused by the collapse of a gas-filled salt cavern. As a result, surface and groundwater have been contaminated and an entire community faces relocation.

In addition to the risk for outright catastrophe, we Seneca Lake 12 object to the heavy industrialization of the pristine Finger Lakes region that we call home. Along with the 24-hour light pollution from the industrial lighting of the drill rigs and the 24-hour noise from the compressors, this facility will fill our scenic highways with fleets of diesel trucks and send train cars of hazardous, flammable cargo over our rickety rail trestles. A 60-foot flarestack will send carcinogens and ozone precursors into our air. (My home is 15 miles downwind; my eleven year old has a history of asthma.) Our deepest concerns are for the water. Inergy's hillside pits have already leaked, salt geysers have already spewed, lake side vegetation has already died and, in spite of the fact that Inergy's discharges of effluent chemicals into the lake have been out of compliance for the past twelve consecutive quarters, Inergy applied for and received from the State of New York a permit to discharge 44,000 additional pounds of chloride into the lake. Every single day.

In a larger way, our act of civil disobedience - for which I now wear an orange jumpsuit and reside in a six by seven foot cell – is directed at the practice of shale gas extraction itself. This is why, with our arms linked, we unfurled a banner with the words, “Our Future is Unfractured.” Clearly, a massive build-out of fracking’s infrastructure – the storage facilities; the pipelines, the compressors and condensers; the access roads; the underground injection wells for the disposal of fracking waste; the ethylene “crackers” that turn the byproducts of wet gas into ingredients for the petrochemical industry – is a necessary precondition for fracking to occur. As it boasts in its communiqués to investors and clients, Inergy intends to serve the Marcellus shale gas boom by turning the Finger Lakes region into the Northeast’s storage and transportation hub for the vaporous gases so obtained. Thus, taking a stand against infrastructure projects that aid and abet fracking not only draws attention to the public health and environmental harms created by the projects themselves but also signals objection to fracking and, even more fundamentally, to the further entrenchment of fossil fuel dependency in a time of climate emergency.

To this end, there are many fracking infrastructure projects near my home in upstate New York where I might have chosen to plant my flag as a first-time civil disobedient. In Horseheads, there is a storage depot for fracking chemicals headed for the gas fields of Pennsylvania. In Painted Post, a processing facility for fracking sand. Near the jail where I am housed here in Elmira, a landfill accepts radioactive drill cuttings from out-of-state operations. So, why protest at a compressor station site? The answer, for me, is highly personal. My son Elijah was born in a birth center on a hill overlooking Seneca Lake, just down the road from the new compressor station. The west shore of Seneca – where I walked when in labor – is a charmed place for me. And the burial of explosive hydrocarbon gases beneath it is, for me, a desecration.

But particulars aside, it’s the generic, cumulative, systemic and ubiquitous impacts of drilling and fracking operations and their associated infrastructure projects across the nation that is the first topic I want to raise with you in this letter.

Fracking, and the multitude of corollary activities that enable it, is turning this nation inside out. Consider that, by weight, the new number one commodity sent beyond its borders by the State of Wisconsin – which does not even engage in fracking – is silica sand. (Prized for its ability to withstand the lithostatic pressure of the earth without crumbling, grains of silica sand are shot into the shards of shale during fracking operations in order to prop the cracks open, so that the oil or gas can flow out of them.) In other words, Wisconsin is now exporting itself. The sand counties of Aldo Leopold are being loaded onto barges, trucks, and railcars headed for the fracking fields of America. Hills, bluffs, coulees: they are all going. Big parts of formerly rolling Wisconsin are now, thanks to frack sand mining, as flat as Illinois. In the process, surface water is silted, groundwater is threatened, and air fills with silica dust – a known lung carcinogen and a known

cause of the disabling disease silicosis. Meanwhile, in Pennsylvania, drilling and fracking operations fragment millions of acres of intact, interior forests – along with the ecosystem services they provide. Nationally, thanks to fracking, energy extraction has become the number one land use; the U.S. has more acreage leased for oil and gas than planted in wheat or soy.

Against this backdrop of epic transformation of the landscape and mass industrialization of rural America, the policy discussions about fracking emerging from your respective organizations are remarkably narrow and conciliatory. Partnering with industry, Environmental Defense Fund focuses on calculating methane emissions rates from well pads and, together with the Heinz Endowments, promulgating voluntary standards for fracking based on “best practices.” The dubious notion of “sustainable shale” aside (by what definition of “sustain” can any non-renewable fossil fuel be described, let alone the methane bubbles trapped inside the Marcellus Shale, whose recoverable reserves have been re-estimated sharply downward by geologists and are now believed to provide only six years worth of U.S. gas usage), the Center for Sustainable Shale fails to consider the devastating collateral damage created by all the corollary activities that necessarily accompany shale gas extraction: strip-mining for sand, clear cutting of forests, and destruction of productive farmland are just three. While you consider industry best practices such as green completion, recycling of fracking fluid, and strict engineering standards for well casings, you entirely ignore the massive amounts of steel and cement – miles and miles of it for every well – that must be manufactured, transported, and entombed in the Earth for the one-time, short-term, un-recyclable use of shale gas extraction (in the case of the Marcellus Shale, a one-time use for six years of gas).

Should Governor Cuomo decide to pursue full development of shale gas via high-volume horizontal hydrofracking, the amount of steel alone that would be buried in New York State will exceed, by 2.5 times, the entire tonnage of the U.S. Navy Fleet (as calculated by Cornell engineer Tony Ingraffea). To my knowledge, no one has estimated the amount of steel and concrete consumed by the fracking industry on a national basis for use as well casings and casing strings. Consider, however, that the production of both materials is fossil-fuel intensive and that, on a worldwide scale, cement manufacturing alone is responsible for six percent of total greenhouse gas emissions. Those same resources – and the jobs they provide– could be directed toward the construction of renewable energy infrastructures and the smart grid they require.

The advocacy of “sustainable shale” is provincial not only because it fails to consider radical alterations to land use wrought by fracking and the costly sacrifice of carbon-intensive resources, but also because it utterly ignores the ongoing fracking-driven transformation of our materials economy. Fully 30% of natural gas is used not as a source of domestic energy but in manufacturing, a big chunk of which is diverted for use in petrochemical manufacturing. Fully 5% of the world’s natural gas supply is consumed to make the petrochemical fertilizer

anhydrous ammonia. Natural gas is also the starting point for the manufacture of polyvinyl chloride (PVC plastic). The “wet gases,” such as ethane, that are blasted out of the ground with methane are used in the manufacture of other petrochemical plastics. And these are just a few examples. As you know, the U.S. chemical industry is experiencing a parallel boom in activity as a direct result of cheap, abundant shale gas.

Accelerated petrochemical manufacture brought on by fracking has profound environmental and public health consequences. Cheap, abundant agricultural chemicals undermine the local, organic food movement and keep our nation’s farm system running on the pesticide treadmill. Anhydrous ammonia fertilizer is responsible for the dead zone in the Gulf of Mexico, the destruction of aquatic ecosystems throughout the Chesapeake Bay watershed, and contamination of groundwater aquifers throughout rural America. Last Thursday’s deadly explosion at the West Fertilizer Company in Texas – which destroyed lives and homes across a vast swath of land – reveals the inherent dangers of relying on volatile petrochemicals as a source of agricultural nitrogen. Once again: natural gas is the starting point for anhydrous ammonia manufacture (say what you will about downsides of sustainable agriculture, but green manure, compost tea, and crop rotation never blew up a nursing home). In sum, the fracking boom – whether regulated or unregulated, guided by best practices or worst – further deepens the dependency of our nation’s food system on non-renewable fossil fuels at precisely the moment when we desperately need to be calling for its emancipation. In this, natural gas is not a bridge but a perilous detour.

Likewise in chemical manufacturing, fracking, by making petrochemicals cheaper and more abundant, undoes gains in toxic chemical reform, green chemistry, and green engineering. The plastics that will be created by a proposed new cracker facility in Pittsburgh from the wet gases of fracking solve a waste disposal problem of the energy industry – and make fracking more profitable – but, at the same time, add to the burden of unbiodegradable materials that we are, as individual citizens, encouraged to reduce, reuse, and recycle. Inevitably, much of this fracked plastic will end up in the oceans, adding to garbage patches and contaminating aquatic food chains. Meanwhile the cracking facility itself will add ground-level ozone (smog) to a Pennsylvania community already in non-attainment for ozone, and thus add to the community’s burden of asthma, heart attack, stroke, and preterm birth. How is this sustainable?

In my home state of Illinois – where no fracking is currently occurring – the Sierra Club and Natural Resources Defense Council has joined hands with industry to draft model regulations for fracking (which are not as strict as those that we rejected in New York). The Sierra Club’s subsequent endorsement of the fracking regulatory bill now under consideration by the State legislature has allowed pro-fracking forces in both government and industry to claim that Sierra Club has endorsed regulated fracking. In separate conversations this year with both Frances Beineke of NRDC and Michael Brune of Sierra Club, I was told that a

nation-wide ban on fracking – or even moratoria in all states – would be “unrealistic” for political reasons. What seems to me less realistic – politically – is to imagine that the oil and gas industry, which has already exempted itself from federal laws and surrounds itself with secrecy, would willfully follow any regulations or voluntary standards of any kind. Ironically, the very states that are most vulnerable to fracking for reasons of economic desperation are those least able, because of massive budget cuts, to enforce regulations and provide oversight for an industry whose wells and infrastructure will be distributed across the landscape.

Meanwhile, land in Missouri and up and down the Illinois River is being readied for sand strip mining in anticipation of fracking’s debut in Illinois, and the Shaune National Forest, a haven of biodiversity, in southern Illinois, is being opened for drilling activity. The results will neither be sustainable nor regulatable.

With fracking, the mainstream environmental community has lost its way, aligning itself with those who believe that now is not the time to embrace renewable energy and declare the fossil fuel party over.

The voices that cry “wait” and capitulate to powerful industry forces through their willingness to trade one fossil fuel for another are taking us down a perilous path. It is time to say now – grassroots groups and big green groups together – that the unholy trinity of coal, oil and gas is part of a ruinous past and; that further investments in new techniques to blast these deadly fossils from the bedrock are a waste of time, money, water, air, trees, health and farmland; and that well-intentioned attempts to regulate and police the resulting mess is a waste of human ingenuity that could be better spent re-imagining and retooling our economy and our culture for the post-carbon age. We don’t need to design filters for cigarettes – they provide only false assurances of safety and only delay the initiation of entirely new habits and attitudes. Because I have now run out of paper –

With respect and toward the unfracked future,

Sandra Steingraber