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Oil and Gas Industry Exemptions

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Safe Drinking Water Act

Many of the nearly 270,000 oil and natural gas wells drilled in the West since 1980 have employed hydraulic fracturing, a process that involves the underground injection of tens of thousands to six million gallons of water per well. The water is laced with toxic chemicals and sand or other material known as "proppant." The fluid creates fractures in underground formations and the proppant holds these fractures open, allowing oil and gas to flow up the drilling pipe (EPA Fracturing Final 2004 ES-11, Schein 2008, Burnett and Vavra 2006). EPA considered hydraulic fracturing as exempt from the Safe Drinking Water Act following the act's passage in 1974 (LEAF v. EPA 1997, EPA Fracturing Final 2004). The act sets standards and requires permits for the underground injection of hazardous substances so that these materials do not endanger Underground Sources of Drinking Water (SDWA 2008).

According to 2005 Congressional testimony by the Interstate Oil and Gas Compact Commission, a group that represents governors from oil and gas producing states, hydraulic fracturing is used in 90 percent of all oil and natural gas wells drilled in the U.S. (IOGCC Carrillo 2005).

Hydraulic fracturing has recently been associated with water contamination and human health problems. Last summer, the federal Bureau of Land Management documented benzene contamination in water wells in Sublette County, Wyoming, the site of one of the nation's largest natural gas fields. Hydraulic fracturing is common in Sublette County (Lustgarten 2008). It was not clear what caused the contamination, but benzene is injected underground in hydraulic fracturing, and the extraction process also causes naturally occurring deposits of benzene to surface (Hess 1998, EPA Final 2004 4-11). What makes the situation so alarming is that there is no other likely source for the benzene in rural Sublette County other than natural gas operations.

Also last year, a nurse in Durango, Colorado almost died after being exposed to hydraulic fracturing chemicals (Hanel 2008).

In a draft 2002 report, EPA reported that at the point of injection, nine hydraulic fracturing chemicals violated water quality standards (EPA Fracturing Draft 2002). This assertion was edited out before the final report was published. The published report did note that fracturing fluids are likely to remain underground and are "likely to be transported by groundwater supplies" (EPA Fracturing Final 2004).

In a 1997 case involving hydraulic fracturing of coalbed methane (CBM) wells, the 11th Circuit Court of Appeals ruled that the Safe Drinking Water Act's underground injection standards applied to hydraulic fracturing. EPA conducted a study and, in a report that was heavily criticized by an internal whistle-blower and others, concluded that "the injection of hydraulic fracturing fluids into CBM wells poses little or no threat" to drinking water (EPA Fracturing Final 2004 ES-16). The agency suggested that it was up to states with primary authority to enforce the Safe Drinking Water Act to set standards for any hydraulic fracturing that might threaten underground sources of drinking water

(EPA Fracturing Final 2004 ES-17). In 2005, Congress exempted most hydraulic fracturing from the Safe Drinking Water Act but said the act would apply to fracturing with diesel fuel (SDWA Exemption 2005).

Resource Conservation and Recovery Act

The nearly 270,000 oil and natural gas wells drilled in the West since 1980 have enjoyed an exemption from the federal Resource Conservation and Recovery Act (RCRA), passed in 1976 to establish a cradle-to-grave hazardous waste management program (RCRA History). The law sets standards for disclosure and safety in handling hazardous waste, for reducing such waste and for developing non-toxic alternatives (RCRA 2008). In 1988, the EPA and Congress agreed not to apply RCRA to oil and gas wastes, overriding objections from some officials at EPA after the agency had documented 62 cases in which oil and gas wastes had caused damage. Two EPA officials told the Associated Press that the exemption was granted due to industry pressure, a charge that EPA administrators denied (Dixon 1988).

Drilling generates significant volumes of hazardous and toxic waste. Some of the major sources are: hydraulic fracturing fluids in which toxic additives are mixed with large volumes of water; drilling mud, a mixture of clay (bentonite) and water mixed with other toxic additives; and produced water (naturally occurring underground water coming from an oil or gas producing zone that can contain toxic hydrocarbons). The mud is usually stored in a large earthen pit that generally serves as the repository for all the other wastes when the well is drilled and put into production (EPA 2000, OGAP 2005).

These wastes should be stored in lined waste pits but are often dumped on the ground or in unlined pits. Even lined pits can leak, contaminating nearby water. (Epstein and Selber 2002, NMOCD Pit Testing 2007). The New Mexico Oil Conservation Division has identified more than 400 cases statewide of groundwater contamination from oil and gas waste pits (Prukop 2008, Farmington 2008). A 2007 NMOCD study found that rips and tears in pit liners were a common problem. Sampling from 37 pits found 17 substances, including arsenic, benzene, cadmium and mercury, that violated water quality standards (NMOCD Pit Testing 2007).

In June 2008, the New Mexico Oil Conservation Division implemented a rule requiring that waste pits be lined and registered with the state and that companies find alternatives when groundwater is within 50 feet of the surface. The rule set forth detailed standards for managing oil and gas wastes (NM Pit Rule 2008). New Mexico governor Bill Richardson recently directed the NMOCD to modify several provisions of the pit rule in response to complaints from some companies that the provisions were burdensome and might cause them to leave New Mexico. (Brunt 2009).

Emergency Planning and Community Right to Know Act (TRI)

Thousands of the nearly 270,000 wells drilled in the West since 1980 are exempt from the federal Emergency Planning and Community Right to Know Act of 1986. The act requires companies to report the release of significant levels of toxic substances to EPA's Toxics Release Inventory (TRI). The Oil and Gas Accountability Project, a reform organization, has said that the law would likely apply to benzene, toluene and xylene, chemicals often used in oil and gas drilling (OGAP Exemptions 2008).

A 2008 report by EWG and the Paonia, Colorado-based Endocrine Disruption exchange found that Colorado's natural gas industry uses at least 36 chemicals listed under the TRI (EWG and TEDX 2008, TRI Chemicals 2008).

The industry typically guards its drilling chemicals as trade secrets. In 2008, in LaPlata County,

Colorado, nurse Cathy Behr almost died from contact with the clothing of a worker she had treated. The worker's clothes were permeated with a chemical fluid called Zeta Flow used in natural gas drilling. The company that made the fluid refused to identify it, citing trade secrets to the nurse's physician even as he was laboring frantically to save her life. The doctor had to guess how to treat Behr, who was suffering from liver failure, respiratory failure and heart failure. She later recovered (Hanel 2008).

Even if the toxic release law applied to the oil and gas industry, individual wells might not report their discharges because current rules, watered down in 2006, set a floor of 2,000 pounds of total releases per facility. The previous threshold had a lower limit of 500 pounds (EWG Stolen Inventory 2008, CFR TRI Threshold 2008).

The Colorado legislature enacted limited disclosure of toxic chemical discharges in its recent sweeping overhaul of oil and gas drilling standards. Among other provisions, the state will require companies to keep records of chemical products used at each well when 500 pounds or more of the substance is injected into the well or stored for injection at the well site. But the nature of those chemicals will largely be hidden, with some exceptions for state officials and medical personnel (COGCC 2008).

Clean Water Act

Companies have drilled thousands of the nearly 270,000 wells in the West since 1980 under an exemption from the Clean Water Act that sets standards for stormwater discharge despite the potential for significant runoff from thousands of well pads, pipelines and other infrastructure. In 1987, Congress added amendments to the Clean Water Act requiring EPA to develop a permitting program for stormwater runoff. These amendments exempted oil and gas exploration, production, processing or treatment operations, and transmission facilities. However, the EPA considered the standards to apply to construction facilities. Beginning in 1992, the EPA required stormwater permits for oil and gas construction facilities of five acres or more. In the 2005 Energy Bill, Congress extended the exemption to all oil and gas construction facilities (Clean Water Act 2008, EPA NPDES 2006, W&WNews 2006).

In New Mexico, anglers fishing the trout waters of the San Juan River below Navajo Dam have seen a dramatic decline in the quality of fishing over the last seven years. This four-mile stretch of the San Juan was once rated as a world-class trout fishery that was estimated to bring approximately \$40 million to the region each year. But anglers say that fishing has dwindled in part due to sediment runoff impacting the river that has coincided with a dramatic increase in oil and gas development and infrastructure. Over the past 30 years, companies have drilled close to 20,000 wells in San Juan County and Rio Arriba County that straddle the San Juan River. Hundreds of wells and associated networks of roads and pipelines are located within three major drainage areas that flow into this stretch of the river (Bryan 2009). Application of the Clean Water Act could help reduce the runoff from oil and gas activities.

Clean Air Act

Thousands of post-1980 wells were exempted from the Clean Air Act, which limits emissions of nearly 190 toxic air pollutants, including many emitted by oil and gas companies (Mall et al. 2007, Clean Air Act 2008).

For major sources of air pollution, a company must install the maximum level of pollution control for hazardous emissions that is technically achievable by the cleanest facilities in an industry sector. Smaller sources of emissions grouped together that produce pollution above certain thresholds are

generally covered by the act. This aggregation requirement is designed to protect the public from smaller sources that might be relatively harmless on their own but collectively release of large quantities of toxic substances. However, drilling sites are not treated as an aggregated unit under this program (Mall et al. 2007, Clean Air Act).

The Natural Resources Defense Council has found that in Garfield County, Colorado, 460 gas wells released more than 30 tons of benzene, a known carcinogen. That amount is nearly 20 times more benzene that is released by a giant industrial oil refinery in Denver, the organization reported, yet none of the 460 oil and gas wells is subject to the major source emission standards (Mall et al. 2007).

EPA can set standards for individual small oil and gas facilities such as wells and pits if they are within a metropolitan area with a population greater than one million people. Yet much of the drilling occurs outside densely populated areas. The Denver metropolitan area, for example, is the only metro area in the Rocky Mountain West where the population exceeds one million. Drilling in all other areas of the Rocky Mountain West is exempt from the Clean Air Act (Mall et al. 2007, Clean Air Act 2008).

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

Thousands of post-1980 wells are exempt from the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) that holds most industries accountable for cleaning up hazardous waste. The act, passed in 1980 and amended in 1986, allows the federal government to respond to releases of hazardous substances that threaten human health or the environment. It created a trust fund known as "Superfund" to be used to clean up contaminated sites; the fund is financed via taxes on the chemical and petroleum industries. Congress has since abolished the taxes and pays for the fund through general revenues. As a result, the fund is too small to meet cleanup goals. Yet the liability exemption for drilling companies remains (Mall et al. 2007, CERCLA 2008).

Superfund allows Potentially Responsible Parties (PRPs) to be held liable for clean-up costs for a release or threatened release of a "hazardous substance." But the law defines this term to exclude oil and natural gas (CERCLA 2008).

Consequently, the industry has little incentive to clean up its hazardous waste and to minimize leaks and spills. In 2006, oil companies in Campbell County, Wyoming reported five spills including 265 barrels of oil that leaked from a storage tank and 150 barrels from a valve left open. (Mall et al. 2008, NRS 2008). IHS data show that Campbell County is one of the most intensively drilled counties in the West.

National Environmental Policy Act

The National Environmental Policy Act (NEPA), enacted in 1969, also exempts certain oil and gas drilling activities, obviating the need to conduct environmental impact statements (EIS) (BLM 2008).

The exemption, enacted by Congress in 2005, effectively shifts the burden of proof to the public to prove that such activities would be unsafe. In 2006 and 2007, the BLM granted this exemption to about 25 percent of all wells approved on public land in the West (BLM Budget 2009).

The activities thus exempted include:

"(1) Individual surface disturbances of less than 5 acres so long as the total surface disturbance on the lease is not greater than 150 acres and site-specific analysis in a document prepared pursuant to NEPA has been previously completed.

- (2) Drilling an oil or gas well at a location or well pad site at which drilling has occurred previously within 5 years prior to the date of spudding the well.
- (3) Drilling an oil or gas well within a developed field for which an approved land use plan or any environmental document prepared pursuant to NEPA analyzed such drilling as a reasonably foreseeable activity, so long as such plan or document was approved within 5 years prior to the date of spudding the well.
- (4) Placement of a pipeline in an approved right-of-way corridor, so long as the corridor was approved within 5 years prior to the date of placement of the pipeline.
- (5) Maintenance of a minor activity, other than any construction or major renovation or a building or facility" (NEPA 2009).

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