



July 29, 2011

Santa Barbara County  
Board of Supervisors  
105 East Anapamu Street, Suite 407  
Santa Barbara, California 93101

**RE: Hydraulic Fracturing**

Dear Chair Gray & Members of the Board:

The **Environmental Defense Center** (EDC), on behalf of the **Carpinteria Valley Association** (CVA), **Get Oil Out!** (GOO!) and the **Los Padres Sierra Club** (Sierra Club), offer the following comments for your August 2, 2011, hearing on hydraulic fracturing (or “fracking”).

CVA is a non-profit public interest group comprised of area residents who participate in issues that affect the community of Carpinteria, including land use issues and issues affecting water use, habitats, open spaces and the quality of life in Carpinteria. GOO! is a non-profit corporation whose mission is to protect the natural environment and beauty of the Santa Barbara Channel from the adverse effects of oil development. Sierra Club encompasses everything from National Forest Wilderness areas of the San Ynez Mountains to the Channel Islands National Park in the Santa Barbara Channel. Sierra Club’s activities range from traditional concerns with forest management and wilderness to the urban and growing problems with land use and energy development. EDC is a non-profit public interest law firm that represents community organizations in environmental matters affecting California’s south central coast.

We urge your Board to regulate fracking and its incidental processes and waste products to the maximum extent authorized by the Santa Barbara County Land Use and Development Code (LUDC), and the Petroleum Code. The County should prepare a Program Environmental Impact Report (PEIR) to study the potential impacts associated with fracking, and to avoid and mitigate those impacts to the maximum extent feasible. Please implement all of the tools at your disposal as the local land use permitting authority, to protect our communities, our air quality, our surface waters and our groundwater. In addition, please support pending and future, federal and state legislation aimed at regulating the fracking process. We provide some background information and offer more specific recommendations below.

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## I. BACKGROUND

A letter from Venoco, Inc. to the Monterey County Planning Department states: “Hydraulic fracturing is among various techniques commonly used in the oil and gas industry.”<sup>1</sup> Venoco describes hydraulic fracturing as one of a number of “stimulation techniques.”<sup>2</sup>

The Code of Federal Regulations (CFR) Section 146.3 defines “well stimulation” as “several processes used to clean the well bore, enlarge channels, and increase pore space in the interval to be injected thus making it possible for wastewater to move more readily into the formation, and includes . . . (5) hydraulic fracturing.”

Fracking accomplishes “well stimulation” through the high-pressure injection of a chemical soup. Although “well stimulation” techniques have been applied for decades in the United States, a 1998 study concluded that less than one percent of all US “enhanced oil recovery (EOR)” comes from “chemical EOR.”<sup>3</sup> Fracking may account for a much higher proportion of EOR activities in 2011, but it is a relatively new process.

Santa Barbara County Petroleum Code Section 25-4 defines “enhanced recovery” as “any such operation where the flow of hydrocarbons into a well are aided or induced with the use of injected substances including but not limited to the introduction of or subsurface injection of water and . . . chemical substances and any other substance or combination thereof.”

Fracking poses substantial and diverse threats to human health and the health of our environment. For example, the primary byproduct of fracking is wastewater. It is estimated that between 15-80 percent of the fracking fluids originally injected into a formation can be recovered (this of course means that between 20-85 percent of the wastewater remains underground).<sup>4</sup> This water is termed “flowback water,” as it is the water that flows back up the well after the fracking process. Flowback water is not only contaminated by fracking chemicals, some of which are known to be hazardous, but also by any potentially toxic or radioactive metals and materials that it picks up while flowing through the geological formation. Shale rock formations in particular are known to contain “a suite of toxic metals, including uranium, barium, chromium, zinc, and arsenic.”<sup>5</sup> Due to its hazardous nature, flowback water must be managed and disposed of very carefully. Thus far, options for disposing flowback water include: injecting the fluid underground, transporting the fluid to a wastewater treatment facility, discharging the

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<sup>1</sup> Letter from Venoco, Inc. to Monterey County Planning Department (March 17, 2011) at 1.

<sup>2</sup> *Id.* at 2.

<sup>3</sup> *Enhanced Oil Recovery Scoping Study*, EPRI, Palo Alto, CA: 1999. TR-113836, available at [www.energy.ca.gov/process/pubs/electrotech\\_opps\\_tr113836.pdf](http://www.energy.ca.gov/process/pubs/electrotech_opps_tr113836.pdf).

<sup>4</sup> U.S. EPA. (2011) *Hydraulic Fracturing*, available at <http://water.epa.gov/type/groundwater/uic/class2/hydraulicfracturing/index.cfm>.

<sup>5</sup> Marsa, Linda. (May 2011). Fracking Nation. *Discover*, 32(4), 62-70.

fluid to surface waters, or recycling the fluid by using it again in another fracking treatment.<sup>6</sup>

## **II. PREPARE A PROGRAM ENVIRONMENTAL IMPACT REPORT**

Per staff's recommendation, the County should prepare a PEIR to identify environmental impacts and related mitigation unique to fracking. As noted by staff, New York State has embarked upon a similar review process which may serve as a model for the County.

## **III. ENFORCE LUDC PROVISIONS**

Santa Barbara County regulates oil and gas development under Article 35.5 of the LUDC, "Oil and Gas, Wind Energy, and Cogeneration Facilities." For many zoning areas, particularly within the coastal zone, drilling and production activities require a land use permit (35.82.110), a conditional use permit (35.82.060), an Exploration Plan and a Production Plan; see Table 5-2 (p. 5-31).

Permitting and approval of oil and gas within the "inland area" is more relaxed than in the coastal zone in several respects: (1) separate permitting and approval is required for exploration and production in the coastal zone, while an operator may seek one approval for a "Oil Drilling and Production Plan" in the inland area; (2) operators need only a land use permit (no conditional use permit required) in zoning areas encompassing much of the inland area, AG-II, M-2, and M-CR; (3) broad exemptions from the requirement to prepare a drilling and production plan are available in the inland area if the operator is operating within a state designated field, see 14 Cal. Code Reg. 1722(k), and meets other criteria (35.52.050(C)). However, the exemption is not available if the project is located within 100 feet to the top of the bank of a watercourse, is located on prime agricultural lands, disturbs mapped locations of endangered or other sensitive species, or uses fresh groundwater for water flooding or steam injection.

In response to learning that Venoco is fracking outside of Los Alamos without prior notification, SBC has developed an "Oil and Gas Supplement" as part of the Filing Requirements under Section 35.53.030. The Supplement requests several categories of information, including "a description of any secondary and enhanced recovery method." SBC requests this information pursuant to 35.53.30.D.7, "Alternative Filing Requirements for Land Use Permit applications—Inland Area," under the subcategory "other reasonable information as deemed necessary by the Department."

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<sup>6</sup> Waxman, H. A., Markey, E. J., & Degette, D. (April 2011). *Chemicals Used in Hydraulic Fracturing*. p. 2, available at [http://www.conservation.ca.gov/dog/general\\_information/Documents/Hydraulic%20Fracturing%20Report%204%2018%2011.pdf](http://www.conservation.ca.gov/dog/general_information/Documents/Hydraulic%20Fracturing%20Report%204%2018%2011.pdf).

#### **IV. ENFORCE THE PETROLEUM CODE**

“A permit from the Petroleum Administrator must be obtained for drilling a new well or re-entering a well previously abandoned, prior to commencing said operation.” Santa Barbara County Petroleum Code § 25-5(a). The Petroleum Administrator is “authorized to impose any reasonable conditions, which in his/her judgment are necessary to eliminate or substantially mitigate any significant adverse impact on the environment as related to the permit application.” *Id.* at § 25-6(a). The Petroleum Code is intended “to protect the health, safety, public welfare, physical environment and natural resources of the county by the reasonable regulation of onshore petroleum facilities and operations.” Pet. Code § 25-2(a).

Petroleum Code Section 25-30(b) allows the Petroleum Administrator to “impose reasonable conditions” on “enhanced operations . . . when operations involve the use and handling of hazardous materials that could endanger surface waterways or subsurface fresh water strata.” The Petroleum Administrator “may require proof that [enhanced] recovery operations will not constitute a nuisance or damage the surface or subsurface freshwater strata.” Pet. Code § 25-30(e).

The definition of “enhanced recovery” in Petroleum Code Section 25-4 clearly covers fracking, as fracking is specifically an “operation where the flow of hydrocarbons into a well are aided or induced with the use of injected . . . chemical substances.”

The Petroleum Code provides an important avenue for County regulators to shift the burden of proof to operators, establishing a more precautionary approach.

#### **V. PURSUE NOTICES OF VIOLATION (NOVS)**

On May 26, 2011, the County issued two NOVs to Venoco for the fracking conducted at its two wells within the Careaga Canyon oil field near Los Alamos. The County should pursue all of the legal remedies available in this instance.

#### **VI. SUPPORT FEDERAL LEGISLATION**

Numerous federal laws address oil and gas drilling generally. The practice of fracking, however, is provided with some exemptions under federal law. Please support efforts to tighten federal standards.

For example, the Safe Drinking Water Act (SDWA) mandates regulation of underground injection activities in order to protect groundwater resources. SDWA Sec. 1421, 42 U.S.C. § 300h. In the 1990s, EPA took the position that this authority did not apply to fracking, claiming that it only applied to oil and gas operations whose “principal function” was storing fluids underground.

In 1995, the 11th Circuit Court of Appeals rejected EPA's position and ruled that coal bed methane fracking constituted underground injection and must be regulated. *Legal Env't Assistance Foundation v. EPA*, 118 F.3d 1467 (11th Cir. 1997).

In the 2005 Energy Policy Act, which arose out of Vice President Cheney's Energy Task Force, Congress amended the definition of "underground injection" under the SDWA to specifically exclude "the underground injection of fluids or propping agents (other than diesel fuels) pursuant to hydraulic fracturing operations related to oil, gas, or geothermal production activities." § 300h(d)(1)(B)(ii).

Under the 2005 amendments, oil and gas companies can now inject anything other than diesel in association with fracking operations without fear of violating the SDWA.

Legislation first introduced in 2008 by Rep. Diana DeGette (D-Colo) would reverse the SDWA exemption included in the 2005 Energy Policy Act (reamending definition to include fracking). In this Congress, the bill has been introduced as H.R. 1084, the Fracturing Responsibility and Awareness of Chemicals Act of 2011, and a companion bill, S. 587, has been introduced in Senate by Robert Casey (D-Pa). Rep. Capps is a co-sponsor of H.R. 1084 and Senators Feinstein and Boxer are co-sponsors of S. 587.

## **VII. SUPPORT STATE LEGISLATION & RULEMAKING**

### **A. PENDING LEGISLATION**

AB 591 (Wieckowski) is the primary legislative vehicle this session attempting to address fracking. As originally introduced, the bill contained fairly strong provisions requiring chemical disclosure and would have also strengthened the required Division of Oil, Gas and Geothermal Resources (DOGGR) processes for approving drilling.

On June 1, 2011, AB 591 passed out of the Assembly by 50-23 vote. However, the current iteration of the bill is badly watered down. In its current form, AB 591 only requires disclosure of chemicals 60 days *after* drilling is *completed*. In addition, the bill's language strengthening DOGGR procedures by requiring affirmative approval of an operator's application to drill (under current law, the operator must simply file a notice of intent) has been eliminated

We therefore urge your Board to support AB 591 as it was originally written, and per the County Legislative Committee's June 27 discussion.

### **B. DOGGR RULEMAKING**

California state law governing oil and gas operations is located at Division 3 of the Public Resources Code Sections 3000-3865. Chapter 1 of this Division, "Oil and Gas

Conservation,” §§ 3000-3460, contains general provisions of the Code, including those governing DOGGR’s administration of oil and gas development and production in the state.

Of the Code’s provisions, Public Resources Code Section 3106 is of paramount importance in relation to fracking. Section 3106 requires DOGGR to meet two primary objectives in its supervision of drilling, operation, maintenance, and abandonment of wells. These objectives are in tension (and in some circumstances, likely in conflict):

- 1) “To prevent, as far as possible, damage to life, health, property, and natural resources; damage to underground oil and gas deposits from infiltrating water and other causes; loss of oil, gas, or reservoir energy, and damage to underground and surface waters suitable for irrigation or domestic purposes by the infiltration or, or the addition of, detrimental substances”; (§ 3106(a)) and;
- 2) “To permit the owners or operators of the wells to utilize all methods and practices known to the oil industry for the purpose of increasing the ultimate recovery of underground hydrocarbons.” Further, the provision establishes as a state policy a presumption that oil and gas operators are allowed “to do what a prudent operator using reasonable diligence would do . . . including, but not limited to, the injection of air, gas, water, or other fluids [and similar practices] . . . when these methods or processes employed have been approved by the [DOGGR] supervisor.” (§ 3106(b) (emphasis added).

As detailed in the February 16, 2011, letter from DOGGR Supervisor Elena Miller to State Senator Fran Pavley, Section 3106 provides statutory authority to regulate fracking, but DOGGR has not exercised this authority.

As the primary agency responsible for protecting the state, its people and its environment from the hazards of oil production, it is incumbent upon DOGGR to analyze and regulate the practice of fracking. The County should support actions which might compel DOGGR<sup>7</sup> to embark upon the rulemaking process.

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<sup>7</sup> Also of importance, pursuant to Public Resources Code Sections 3203 and 3724, DOGGR is required to act within 10 days on a notice of intent to commence drilling. In light of this short time period for approval, actions on oil and gas permits by DOGGR fall within the “Projects With Short Time Periods for Approval” under section 15111 of the CEQA Guidelines. In order to account for both the short DOGGR timeline and the requirements of CEQA, this section provides that the lead agency under CEQA shall not deem the application complete “until such time as progress toward completing the environmental documentation required by CEQA is sufficient to enable the Lead Agency to finish the CEQA process within the short permit time limit.” An “action on an oil and gas permit by the Division of Oil and Gas within 10 days pursuant to Sections 3203 and 3724 of the Public Resources Code” is specifically cited as a permit action subject to section 15111. Therefore, CEQA contemplates full compliance with

## VIII. CONCLUSION

In a report prepared by the U.S. House of Representatives Committee on Energy and Commerce, it was determined that between 2005-2009, oil and gas producers used more than 2,500 different hydraulic fracturing products,<sup>8</sup> of which 650 contained chemicals that are “(1) known or possible human carcinogens, (2) regulated under the Safe Drinking Water Act for their risks to human health, or (3) listed as hazardous air pollutants under the Clean Air Act.”<sup>9</sup>

As the entity with primary responsibility over our communities’ health and safety, it is incumbent upon your Board to either stringently regulate or even limit the practice of fracking to the extent of the County’s local land use authority and inherent police powers.

We look forward to a continued dialogue and to your next hearing on this matter. Please feel free to contact us with any questions or concerns. Thank you for considering our recommendations.

Respectfully submitted,

/s/

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/s/

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cc: Carpinteria Valley Association  
Get Oil Out!  
Los Padres Sierra Club  
Santa Barbara County Action Network

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environmental review mandates despite the short time frame set forth for DOGGR action. To the extent the County is the lead agency under CEQA, the County should follow this Guideline and conduct full environmental review.

<sup>8</sup> Waxman, H. A., Markey, E. J., & Degette, D. (April 2011). *Chemicals Used in Hydraulic Fracturing*, available at [http://www.conservation.ca.gov/dog/general\\_information/Documents/Hydraulic%20Fracturing%20Report%204%2018%2011.pdf](http://www.conservation.ca.gov/dog/general_information/Documents/Hydraulic%20Fracturing%20Report%204%2018%2011.pdf).

<sup>9</sup> *Id.*