



February 28, 2014

Testimony of the Connecticut Petroleum Council in Opposition to HB-5308
Hydraulic Fracturing/ Hazardous Waste Bill

The Connecticut Petroleum Council---whose members include many companies that drill wells and hydraulically fracture for oil, natural gas and propane---strongly opposes HB-5308, which requires DEEP to regulate oil & gas wastes as hazardous waste. Oil & gas wastes, long categorized as “special wastes,” are already regulated by a strict combination of federal/state rules; imposing an additional layer of hazardous waste rules is scientifically unjustified, prohibitively expensive, and unnecessarily burdensome.

It is unlikely that oil and gas wastes would be treated in Connecticut because of the current moratorium on high-volume hydraulic fracturing in New York, our distance from the portion of upstate New York that contains the natural gas-rich Marcellus Shale, and the fact that much of the waste stream is now being treated on-site. Still, the possibility exists wastes could be treated here at a date far down the road, once the moratorium is lifted, so we want to address HB-5308.

Reasons for Objections

- EPA has already ruled that wastes from the exploration & production of oil and gas wells are not hazardous wastes, because they do not rise to that level. EPA says that it “issued a regulatory determination stating that control of E & P wastes under RCRA Subtitle regulations is not warranted.” Instead, they are regulated as “special wastes,” a category used for many common wastes such as cement kiln and mining wastes. Usurping EPA’s technical experience on this topic---without any scientific findings to the contrary---is technically unjustifiable. No state has ever classified oil and gas wastes as hazardous wastes. See attachment on water (90%), sand (9.5%), and additives (0.5%) in the waste stream.
- All oil and gas “special wastes” are heavily regulated under both federal and state rules and every oil and natural gas well is individually permitted. “Special wastes” from those wells are *not* unregulated as some have suggested. See Attachment showing regulation under federal rules. Actual physical inspections of well sites take place in addition to paperwork requirements. Some permits may require up to 20 different plans (e.g. waste water plan, storm water plan, spill prevention plan); many plans require approval by a Professional Engineer (P.E.) See Attachment showing 7 different waste-related permits required just in Pennsylvania. See also the Attachment on API industry-recommended practices, HF-1 (wells), HF-2 (water), HF-3 (surface impacts).

- If Connecticut passes this bill, once again we will have a two-tier regulatory system---with differing federal and state rules---a major source of contention within the business community here. There is no need to go further than the already-stringent EPA rules.
- This bill discourages recycling and reuse---a longtime priority of the Environment Committee and the Connecticut General Assembly. In Pennsylvania, about 90% of the water used in HF is being recycled, thereby reducing the waste stream, truck traffic and operating costs. Oil & gas wastes, so long as they remain categorized as “special wastes,” can be recycled---frequently on site---but if classified as hazardous waste, treatment options---including recycling---are quite limited. EPA says less than 4% of hazardous wastes are recycled, so it greatly benefits the environment to retain the “special waste” designation and continue current recycling activity.
- Treating common oil & gas wastes as hazardous wastes instead of special wastes will substantially increase the cost of treating them. Ultimately it is natural gas customers who pay for that. One major energy producer in NY calculated projected cost increases at an *additional* \$5.5 million per well, and possibly as much as \$15 million, if oil & gas wastes were re-categorized as hazardous waste in that state.
- Classification as a hazardous waste would eliminate and discourage new technologies related to re-use and recycling by requiring that all wastes be transported and disposed of in hazardous waste facilities. New technologies are constantly being evaluated and should be encouraged. Some of them will bring new jobs.
- This bill is prejudicial to the oil & gas industry and its customers because it singles out the waste stream from just that industry and excludes all others, even though the industry has an excellent track record managing its own waste stream. In analyzing waste in NY, DEC determined there were no chemical issues inconsistent with construction and demolition (C&D) disposal requirements and thresholds in both water-based and/or oil-based wastes.
- Finally: How can Connecticut reconcile passage of last year’s Comprehensive Energy Strategy---which relies heavily on natural gas from the Marcellus Shale (NY) to convert 280,000 customers to natural gas---with such severe restrictions on treating the wastes coming from that very fuel source? How can state policy advocate for enormous amounts of additional natural gas, yet treat the waste stream from that gas as hazardous waste when after extensive analysis the EPA itself has found no reason to do so? Hydraulic fracturing has made natural gas supply plentiful, helped reduce sulfur, PM and mercury emissions, reduced greenhouse gas emissions, and reduced foreign fuel imports. We recommend leaving the current system as is---because it works!

Thank you for considering our testimony. Please contact us if you have questions or comments.

Stimulation

The fracturing mixture consists primarily of fresh water mixed with some sand and a small proportion of common chemicals.



Table salt



Laundry detergent



Thickener in cosmetics



Washing soda, detergent, soap



Food additive



Deodorant

0.5% CHEMICAL ADDITIVES

90% WATER

9.5% SAND

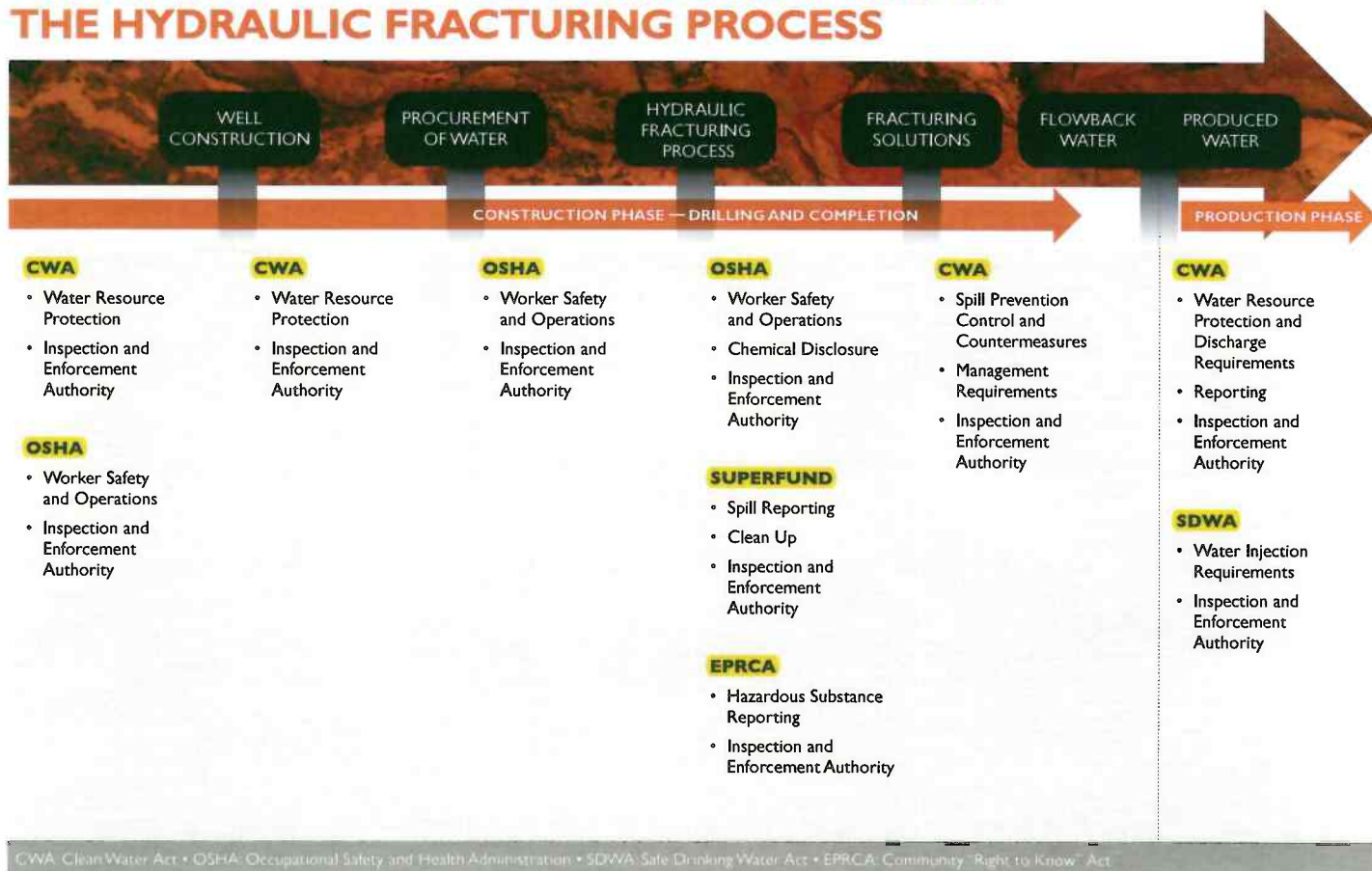
Compound	Purpose	Common Application
Acids	Helps dissolve minerals and initiate fissure in rock (pre-fracture)	Swimming pool cleaner
Sodium Chloride	Allows a delayed breakdown of the gel polymer chains	Table salt
Polyacrylamide	Minimizes the friction between fluid and pipe	Water treatment, soil conditioner
Ethylene Glycol	Prevents scale deposits in the pipe	Automotive anti-freeze, deicing agent, household cleaners
Borate Salts	Maintains fluid viscosity as temperature increases	Laundry detergent, hand soap, cosmetics
Sodium/Potassium Carbonate	Maintains effectiveness of other components, such as crosslinkers	Washing soda, detergent, soap, water softener, glass, ceramics
Glutaraldehyde	Eliminates bacteria in the water	Disinfectant, sterilization of medical and dental equipment
Guar Gum	Thickens the water to suspend the sand	Thickener in cosmetics, baked goods, ice cream, toothpaste, sauces
Citric Acid	Prevents precipitation of metal oxides	Food additive; food and beverages; lemon juice
Isopropanol	Used to increase the viscosity of the fracture fluid	Glass cleaner, antiperspirant, hair coloring

Source: DOE, OWPC: Modern Gas Shale Development in the United States: A Primer (2009).

After the wells on a pad are drilled, cased and cemented, a device perforates the horizontal part of the production pipe to make small holes in the casing, exposing the wellbore to the shale. Then a mixture of water (90 percent), sand (9.5 percent) and chemicals

(0.5 percent) is pumped into the well under high pressure to create micro-fractures in the shale and free natural gas or oil. Sand keeps the fractures open after the pressure is released. The chemicals are chiefly agents to reduce friction and prevent corrosion.

FEDERAL STATUTES REGULATE EVERY STEP OF THE HYDRAULIC FRACTURING PROCESS



Source <http://energyindepth.org/wp-content/uploads/2009/03/Federal-Hydraulic-Fracturing-Process.pdf>

Contrary to popular myth federal regulations provide a broad regulatory foundation for energy development in the United States. Key federal regulations governing shale development include: Clean Water Act; Clean Air Act; Safe Drinking Water Act; National Environmental

Policy Act; Resource Conservation and Recovery Act; Emergency Planning and Community Right to Know Act; Endangered Species Act and the Occupational Safety and Health Act.

State Regulation

Effective hydraulic fracturing regulation can only be achieved at the state level as state regulations can be tailored to geological and local needs. Key state regulations include: Review and approval of permits; Well design, location and spacing; Drilling operations; Water

management and disposal; Air emissions; Wildlife impacts; Surface disturbance; Worker health and safety; and Inspection and enforcement of day-to-day oil and gas operations.

For example, the following are just some of the permits required in Pennsylvania:

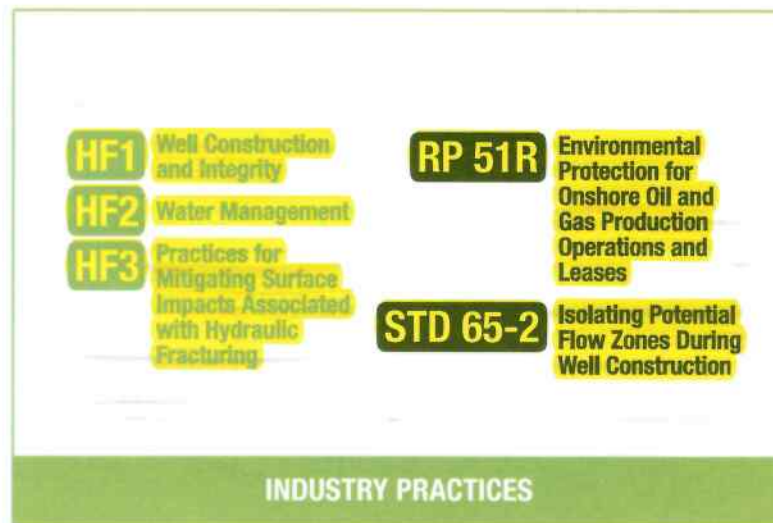
1	Well drilling permit (w/ well location plat, casing and cementing plan, PNDI for threatened or endangered species, landowner/water well owner notifications, coal owner or operator notification and gas storage field owner notification)
2	Water management plan for Marcellus Shale wells
3	Proposed alternate method of casing, plugging, venting or equipping a well
4	Bond for Oil and Gas Well(s) (individual or blanket, various bond types allowed)
5	Waiver of distance requirements from spring, stream, body of water, or wetland (to put the well closer than 200 feet)
6	Variance from distance restriction from existing building or water supply (to put the well closer than 100 feet)
7	Proposed alternate method or material for casing, plugging, venting or equipping a well
8	Approval for alternative waste management practices
9	Approval of a pit for control, handling or storage of production fluids
10	Use of alternate pit liner
11	NPDES GP-1 for discharges from stripper oil wells
12	Water Quality Management Permit for treatment facilities
13	Alternative pit liners
14	Inactive status
15	Roadspreading plan approval
16	Transfer of well permit or registration
17	Orphan well classification
18	Off-site solids disposal
19	Residual waste transfer stations and processing facilities
20	Transportation of residual waste
21	Road use permit – construction of access to state roadway
22	Road use bond (PennDOT or municipality)
23	Surface use permit (if in the Allegheny National Forest)
24	PASPGP-3 or PASPGP-4 for pipelines crossing streams (if < 1 acre)
25	Water Obstruction – Encroachment – US Army Corps of Engineers Section 404 Joint Permit
26	Dam permit for a centralized impoundment dam for Marcellus Shale gas wells
27	GP-11 for non-road engine air emissions
28	GP-05 for natural gas compression facilities emissions
29	Earth disturbance permit (if > 5 acres)
30	Erosion and sedimentation control permit (if > 25 acres)
31	NPDES storm water for construction activities
32	Water allocation (SRBC, DRBC or DEP for Ohio River basin)
33	GP-3 for bank rehabilitation, bank protection, and gravel bar removal
34	GP-4 for intake and outfall structures
35	GP-5 for utility line stream crossings
36	GP-7 for minor road crossings
37	GP-8 for temporary road crossings
38	GP-11 Maintenance, Testing, Repair, Rehabilitation or Replacement of Water Obstructions and Encroachments

Industry Standards

Existing regulations covering well design requirements and hydraulic fracturing operations are specifically formulated to protect groundwater.

Working through API's ANSI-accredited standards program, the industry has adopted standards and practices for continuous improvement, hundreds of which are referenced in state regulations thousands of times.

Several federal agencies, including the Environmental Protection Agency, the Bureau of Land Management, and the Occupational Safety and Health Administration, also cite API standards.



Source: <http://www.api.org/policy-and-issues/policy-items/hf/shale-answers>

Working through API's ANSI-accredited standards program, the industry has adopted standards and practices for continuous improvement, hundreds of which are referenced in state regulations thousands of times. Several federal agencies, including the Environmental Protection Agency, the Bureau of Land Management and the Occupational Safety and Health Administration, also cite API standards. Industry also works closely with STRONGER, a non-profit organization

that helps states formulate environmental regulations associated with oil and natural gas development. The FracFocus.org chemical disclosure registry provides information on hydraulic fracturing fluid used in nearly 56,000 wells. Industry activity is subject to a number of federal and state laws including the Safe Drinking Water Act, the Clean Water Act, the Clean Air Act and the National Environmental Policy Act.