

Singh, Angela K (DOA)

From: Fisher, Samantha J (DOA)
Sent: Monday, April 01, 2013 3:39 PM
To: Singh, Angela K (DOA)
Cc: Colombie, Jody J (DOA)
Subject: FW: Baker Hughes' Comments on AOGCC Proposed Changes to AAC Title 20, Chapter 25 Regarding Hydraulic Fracturing
Attachments: 2013-04-01 Baker Hughes Comments on AOGCC Proposed Changes to AAC Title 20, Chapter 25 Regarding Hydraulic Fracturing.pdf

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From: Armstrong, Matt [<mailto:Matt.Armstrong@bakerhughes.com>]
Sent: Monday, April 01, 2013 2:39 PM
To: Colombie, Jody J (DOA)
Cc: Paterson, Ian; Fisher, Samantha J (DOA)
Subject: Baker Hughes' Comments on AOGCC Proposed Changes to AAC Title 20, Chapter 25 Regarding Hydraulic Fracturing

Ms. Colombie –

Attached please find a .pdf copy of Baker Hughes' comments on the Alaska Oil & Gas Conservation Commission's proposed changes to Title 20, Chapter 25 of the Alaska Administrative Code, with regard to hydraulic fracturing. We are submitting these comments pursuant to the instructions contained in the original December 20, 2012 notice as well as in the various supplemental notices.

We greatly appreciate the opportunity to provide comment. If you or anyone else at the Commission have any questions please do not hesitate to contact me or Ian Paterson (cc'd here).

Thanks,

Matt Armstrong

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April 1, 2013

VIA E-MAIL

Cathy P. Foerster
Chair and Commissioner
Alaska Oil and Gas Conservation Commission
333 West 7th Ave., Suite 100
Anchorage, Alaska 99501

Re: Alaska Oil and Gas Conservation Commission proposed changes to Title 20, Chapter 25 of the Alaska Administrative Code, with regard to hydraulic fracturing.

Dear Ms. Foerster:

Baker Hughes Incorporated (Baker Hughes) submits the following comments on the Alaska Oil and Gas Conservation Commission (AOGCC) proposed revision of Title 20, Chapter 25 of the Alaska Administrative Code with regard to hydraulic fracturing (hereinafter, the Proposed Rule).

Baker Hughes is a leading international oilfield technology and service company headquartered in Houston, Texas, with operations in Alaska employing over 200 people. We have a proud, century-long history of providing technological solutions in both products and services for the full life-cycle of oil and natural gas reservoir development, from reservoir development to drilling and evaluation to completion and production. Baker Hughes spent nearly half a billion dollars on research and engineering in 2012, with an emphasis on developing solutions for the unconventional, deepwater, and high-pressure/high-temperature oil and gas frontiers.

Baker Hughes greatly appreciates the opportunity to comment on AOGCC's efforts to clarify and delineate the requirements associated with hydraulic fracturing in Alaska. We share AOGCC's commitment to the sustainable development of Alaska's resources and to providing more information to meet increasing public interest in oil and natural gas exploration and production. However, we respectfully request that AOGCC consider improving several elements of the Proposed Rule before it is finalized, and we highlight these elements below.

I. The Proposed Rule

The Proposed Rule seeks a number of changes related to hydraulic fracturing, centered on a new regulatory section, 20 AAC 25.283. That provision identifies new requirements, such as baseline water sampling and various cement evaluation logs, and details additional information that operators must submit to AOGCC on its Sundry Approval Application, Form 10-403, prior to



hydraulic fracturing. The proposed disclosure provisions contained in 20 AAC 25.283 would require operators to submit certain detailed information about the planned hydraulic fracturing program, by stage, prior to commencement of hydraulic fracturing. Operators would also be required to submit additional information on the hydraulic fracturing treatment within 30 days following completion of hydraulic fracturing operations. Notable by their absence are any provisions for protecting the intellectual property contained in the chemistry information submitted.

II. Specific Comments and Suggestions

Baker Hughes believes that AOGCC should include a mechanism to safeguard proprietary information. It is our understanding that AOGCC omitted intellectual property protections for information submitted about fracturing chemistry in order to stimulate discussion about the appropriate level of protection for that information. Baker Hughes welcomes this opportunity for discussion and hope that we contribute to it with the comments below. In addition, critical aspects of the Proposed Rules' disclosure provisions are vague and confusing, and we ask that AOGCC consider ways to improve that language as well.

A. The proposed disclosure provisions should include intellectual property protections.

Both the United States and Alaska Constitutions provide protections for trade secrets.¹ As the United States Supreme Court stated in *Ruckelshaus v. Monsanto Co.*, the "general perception of trade secrets as property is consonant with a notion of "property" that extends beyond land and tangible goods and includes the products of an individual's "labour and invention."² The privacy protections contained in the Alaska Constitution are explicit and have been construed to be broader than those found in the United States Constitution.³ The Alaska Constitution also provides "that all persons have a natural right to. . . the enjoyment of the rewards of their own industry."⁴

This right has been frequently upheld by the State Supreme Court and is more fully described in law pursuant to the Uniform Trade Secrets Act, as adopted by the State.⁵

¹ *Ruckelshaus v. Monsanto Co.*, 467 U.S. 986, 1003-04 (1984) (holding that trade secrets are a property right protected by the Takings Clause of the Fifth Amendment); and Article I, Section 22 of the Alaska Constitution, providing that "[t]he right of the people to privacy is recognized and shall not be infringed." Alaska Const. art. I, § 22.

² 467 U.S. 986, 1002-03 (1984) (citations omitted).

³ See *Ravin v. State*, 537 P.2d 494, 514-15 (Alaska 1975) (reasoning that because "the citizens of Alaska, with their strong emphasis on individual liberty, enacted an amendment to the Alaska Constitution expressly providing for a right to privacy not found in the United States Constitution, it can only be concluded that that right is broader in scope than that of the Federal Constitution.")

⁴ Alaska Const. art. I, § 1

⁵ In *State Dept. of Natural Res. v. Arctic Slope Reg'l Corp.*, the Alaska Supreme Court recognized that data derived from an oil and gas well constituted trade secrets and was "the property of the drillers," reasoning that because "the value of the data depends on its secrecy and the companies obviously have attempted to keep it secret we have no difficulty characterizing the data obtained by the oil companies . . . as trade secrets." 834 P.2d 134, 139 (Alaska 1991).



The Alaska Uniform Trade Secrets Act provides statutory protection for trade secrets, and defines “trade secrets” as something that:

- (A) derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use; and
- (B) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.⁶

As one can easily imagine, proprietary fracturing systems and the chemical composition of additives used in such systems may sometimes fall within this definition. The absence of proprietary information protections from the Proposed Rules thus represents a startling and significant departure from Alaska’s legal tradition, a departure that has been made with no showing of why one industry should be deprived of this state right enjoyed by all others.

Indeed, the Proposed Rules are a significant departure from the path taken by other states and our federal government, as well. All of our federal chemical management and hazard communication laws acknowledge that intellectual property rights are critical for businesses and that public health, safety and environmental concerns can be addressed without jeopardizing proprietary information. This is true of federal laws regarding the safety of workers handling chemicals, the registry of new chemicals being introduced into commerce, and the provision of chemical information to first responders and to the public under community right-to-know laws. Current state rules in the U.S., provincial rules in Canada, and proposed U.S. federal regulations for hydraulic fracturing on federal lands all fall well within this mainstream consensus. No other state regulatory agency—including California’s Department of Oil, Gas and Geothermal Resources—has proposed a disclosure program without a provision for conserving important intellectual property. Even standards embraced by some environmental groups—such as the performance standards recently published by the Center for Sustainable Shale Development—acknowledge the importance of structuring disclosure in a way that protects proprietary information.⁷

This is best accomplished, in our view, by allowing the service provider or operator to withhold the specific identity of a chemical, the concentration of the chemical, or both if comprised of proprietary information.⁸ In some states this claim is simply made as part of the disclosure made to FracFocus⁹; in others, the claim must be made to the state regulator itself. To claim protection in Colorado, for example, the operator submits a form and identifies the chemical family or provides a similar description.¹⁰ We can accommodate either option.¹¹

⁶ Alaska Stat. Ann. § 45.50.940 (West).

⁷ See Center for Sustainable Shale Development’s Performance Standard No. 7, available on the Center’s website at <http://037186e.netsohost.com/site/performance-standards/>.

⁸ See 2 Colo. Code Regs. § 404-1:205A(b)(2)(B); 16 Tex. Admin. Code § 3.29(c)(2)(C); Ohio Rev. Code Ann. § 1509.10(I)(1); 25 Pa. Code § 78.122(c); La Admin. Code 43:XIX 118; Okla. Admin. Code . § 165:10-3-10.

⁹ See N.D. Admin. Code 43-02-03-27.1(2)(i); 16 Tex. Admin. Code § 3.29(c)(2)(C).

¹⁰ 2 Colo. Code Regs. § 404-1:205(b)(2)(B).

¹¹ In developing its trade secrets provisions, Colorado considered but rejected a rule that would have required the state to review and approve all trade secret claims. Colorado decided to avoid such an approach, citing that



It is important to note that the limited confidentiality claims contemplated by these disclosure programs do not impede public knowledge of the products that are pumped (trade names are obviously not trade secrets), the products' toxicity profile or exposure risks. Regardless of any confidentiality claims, information regarding exposure hazards, first aid and firefighting measures, environmental risks and clean-up methods, transportation, handling, storage, personal protection, disposal and other regulatory requirements, and detailed information on the physical, chemical, toxicological, ecological, stability and reactivity properties of the chemical constituents are described on the material safety data sheet (MSDS) for each product, and Baker Hughes publishes all of its product MSDS.

In any event, it is certainly possible to craft a disclosure regulation that preserves proprietary information while recognizing that certain exigent circumstances might require the immediate communication of that information to AOGCC or other authorities.¹²

Prohibiting proprietary information protections would have the perverse consequence of impeding the improvement of hydraulic fracturing chemistry. For example, our Sorb™ technology allows us to introduce solid-state hydraulic fracturing and production additives into the well during hydraulic fracturing operations. The Sorb™ technology reduces water demand and the risk profile of surface transportation, storage and handling of the chemistry—the Sorb™ granules are much less likely to spill in any significant quantity, much easier to clean up and much less likely to impact the environment. In addition, Sorb™ additives reduce the number of subsequent chemical operations at the well, with concomitant reductions in additional chemical mixing and injection, truck traffic, and other surface activity as the well moves into production. The technology thus represents a significant competitive advantage for Baker Hughes, a benefit that would be lost if we were required to disclose publicly every constituent of the product. Similarly, we have designed fracturing systems that utilize produced water, allowing operators to recycle waste streams and reduce freshwater consumption. Our proprietary VaporFrac™ system produces a fracturing fluid stream that is over 90% gas—again, greatly reducing the upfront demand for water and the volume of flowback while enhancing production in low-pressure or water-sensitive formations. In 2010 we developed—and published—a chemical evaluation process review framework (CEPR) that allows us to rank our products against environmental considerations and identify the best, the result of which you can see in our SmartCare™ line of environmentally-preferred products. The CEPR and SmartCare™ line have driven competition among our chemical suppliers to provide higher-ranking (i.e., “better”) products, and allowed us

the state oil and gas agency lacked experience in evaluating trade secret claims, that there was a risk of inadvertent disclosure, and that, in light of the Colorado Open Records Act, a review and approval process could allow persons to request documents concerning the state's trade secrets determination process, “including the identity or concentration of the chemical and any internal staff documents evaluating the trade secret claim.” See *Report of the Oil and Gas Conservation Commission of the State of Colorado, In the Matter of Changes to the Rules of Practice and Procedure of the Oil and Gas Conservation Commission of the State of Colorado*, Cause No. 1R, Order No. 1R-114, Exhibit A, p.13 (Dec. 13, 2011) (hereinafter, “*COGCC Rule 205(A) Report*”). The state determined that a request under the Open Records Act could result in a strain on state resources if the agency was forced to defend a trade secret decision in court. Numerous other states have come to a similar conclusion, including Pennsylvania, Texas, Ohio, and North Dakota. See, e.g., Pennsylvania, 25 Pa Code 78.122; Texas, 16 Tex. Admin. Code § 3.29; Ohio, Ohio Rev. Code §1509.10(A); North Dakota, N.D. Admin. Code 43-02-03-27.1.

¹² See 2 Colo. Code Regs. § 404-1:205A(b)(5); 16 Tex. Admin. Code § 3.29(c)(4); Ohio Rev. Code Ann. § 1509.10(H)(1); 25 Pa. Code § 78.122(d); Cal. Code Regs. tit. 14, § 1788.2(c) (Dec. 18, 2012 Discussion Draft).



and our customers to target and eliminate specific chemicals from several of our products, often in rapid evolution. It could be difficult to justify introducing such products into markets which make it significantly harder to protect proprietary information about the products, and if every market were to adopt the approach taken by the Proposed Rules, it could be very difficult to justify our current research and development expenditure in an area where no opportunity exists to recoup the expense and profit our investors.

Considering this, the Proposed Changes should be amended to provide that any information required to be submitted shall not be publicly disclosed if it is protected under the Alaska Uniform Trade Secrets Act. The final rule should clarify that entities other than operators can claim such trade secret protection and that such a claim shall protect the confidential information from disclosure unless the State determines that the Uniform Trade Secrets Act does not apply. The rule should also include a judicial review provision for any such finding by the State and should state that disclosure is prohibited until such judicial review is completed. The rule should further provide that, once a particular trade secret claim has been made and confirmed, the protected identity of a substance remains protected in the future, without need to reassert the claim. We believe that the revisions to the Proposed Rule submitted by the Alaska Oil & Gas Association are sufficient to address the essential aspects of our comments regarding 20 AAC 25.283(h), and we support them and incorporate them by reference herein.

B. AOGCC should clarify what submissions are required to fulfill the disclosure requirements.

The requirements contained in 20 AAC 25.283(h)(2)(B)-(D) appear to require slightly different, but overlapping, information regarding the chemical components of each additive. It seems to us as if 20 AAC 25.283(h)(2)(C)-(D) are meant as a further gloss on 20 AAC 25.283(h)(2)(B). If the above-referenced intellectual property concerns are addressed, it is not necessarily problematic to provide this information, but some clarification is needed regarding some of the terminology and the format.

Regarding terminology, 20 AAC 25.283(h)(2)(B) appears to describe disclosure of *chemical ingredient* identity, but goes on to discuss the “rate or concentration for each *additive*” (emphasis added) without any clear antecedent. It is thus not clear whether 20 AAC 25.283(h)(2)(B) means to require disclosure of the rate or concentration of the additive within the overall hydraulic fracturing operation, or to require disclosure of the rate or concentration of each chemical ingredient within the overall hydraulic fracturing operation, or to require disclosure of the rate or concentration of each chemical ingredient with each additive. The former two possibilities are each achievable and might provide valuable context to AOGCC and the public; the latter possibility—especially when extended to non MSDS listed ingredients—contemplates the public disclosure of precise product formulations.

Many states have wrestled with how to structure a disclosure template that maximizes the amount of information disclosed and minimizes trade secret claims. It is no coincidence that even those states that have not explicitly adopted FracFocus have essentially adopted two of its critical elements: linking ingredient information (at least non-MSDS-listed) to the overall frac system pumped rather than to specific additives and allowing for maximum concentrations.



The initial FracFocus template required the operator to disclose the volume of water used as the base fluid, the types of additives used and their trade names, the maximum concentration of each additive within the overall hydraulic fracturing fluid, the chemical compound name and Chemical Abstract Services Registry Number (CASRN) for each hazardous constituent of the additives, and the maximum concentration of each hazardous constituent within the additive and within the overall hydraulic fracturing fluid. The information regarding the hazardous constituents is drawn primarily from the MSDS that accompany each product, and to the extent that federal hazard communication laws allow the supplier to withhold chemical identity or CASRNs as proprietary on the MSDS, the same protection is afforded by FracFocus.

In response to regulatory developments in some states, beginning in 2012, FracFocus also began to allow for the disclosure of non-hazardous chemical constituents. This "MSDS-plus" FracFocus template requires the operator to disclose everything described above from the original template, but includes in addition the chemical compound name and CASRN for each non-hazardous constituent, as well as the maximum concentration of each within the overall hydraulic fracturing fluid. This avoids disclosure of precise product formulations and greatly increases the amount of information that can be made available to the public. Indeed, providing maximum concentrations for individual ingredients is conservative from an environmental perspective because it overstates the concentration in most cases.

Because these chemical identities and CASRN are not ordinarily required to be disclosed under federal law, proprietary information claims by suppliers could have increased greatly when FracFocus expanded to include non-hazardous constituents. To mitigate this effect, this "MSDS-plus" template does not tie the non-hazardous constituents to the additives, but rather aggregates them in a single list at the end of the form. This greatly reduces but does not eliminate the need to withhold certain information as proprietary. For example, within this format, Baker Hughes has eliminated almost all proprietary designations for our own manufactured hydraulic fracturing additives, but we still list generic chemical family names and withhold CASRN for certain constituents of third-party supplied products. FracFocus also accommodates a "systems" style template that aggregates *all* chemical constituents in a single list, which accomplishes the same fundamental goal of increasing the chemical identity information on the form.

Regardless of whether AOGCC ultimately embraces FracFocus as a regulatory disclosure tool, we respectfully submit that the platform's format provides critical guideposts to an effective public disclosure template. Nevertheless, it is worth noting that proposed 20 AAC 25.283(i) would mandate the posting of certain information to the Fracfocus website. Much of the information required for the Fracfocus submission duplicates what is required elsewhere in the Proposed Rule, including in proposed 20 AAC 25.283(h)(2)(A)-(D). It is not clear whether AOGCC intends that the FracFocus form to be attached to Form 10-404 per 20 AAC 25.283(i) will fulfill the disclosure requirements described in 20 AAC 25.283(h)(2)(A)-(D). Notably, if the above changes to the Proposed Rule are made, submission of the FracFocus information as an attachment to Form 10-404 should suffice to satisfy 20 AAC 25.283(h)(2)(A)-(D). This would be a significant benefit to AOGCC, the public and industry, since many service companies and operators have processes in place to make such disclosures and so this approach would likely accelerate implementation of the regulation and reduce the administrative burden on all involved.



Again, we believe that the revisions to the Proposed Rule submitted by the Alaska Oil & Gas Association are sufficient to address the essential aspects of our comments regarding 20 AAC 25.283(h), and we support them and incorporate them by reference herein.

Finally, it is unclear whether the disclosures described in 20 AAC 25.283(h)(2)(A)-(D) must be made for each treatment stage individually or for the overall treatment. We can understand requiring a description of each treated interval and the amount and types of material pumped during each treatment stage; however, providing detailed chemical breakdowns on a stage-by-stage basis will create much work for little practical value to AOGCC or to the public, since knowing the aggregate chemistry, the sum total of that used to fracture the well, is the most important fact. Providing this information on a stage-by-stage basis is logistically challenging and would significantly slow down the overall process for even the larger service companies and operators.

III. Conclusion

Baker Hughes shares AOGCC's commitment to safety and environmental protection in its operations. We also have a compelling interest in ensuring that the final rule is achievable and produces no gratuitously negative effects on the competitive marketplace. We welcome further discussion of this important rule, and we invite AOGCC to contact us regarding any questions related to these comments or any other topics relevant to AOGCC's work in this area. If you have any questions concerning our comments or require clarification, please contact me at (907) 267-3400. Thank you for your consideration.

Sincerely yours,

A handwritten signature in blue ink, appearing to read "Ian Paterson", written over a horizontal line.

Ian Paterson
Director, Operations