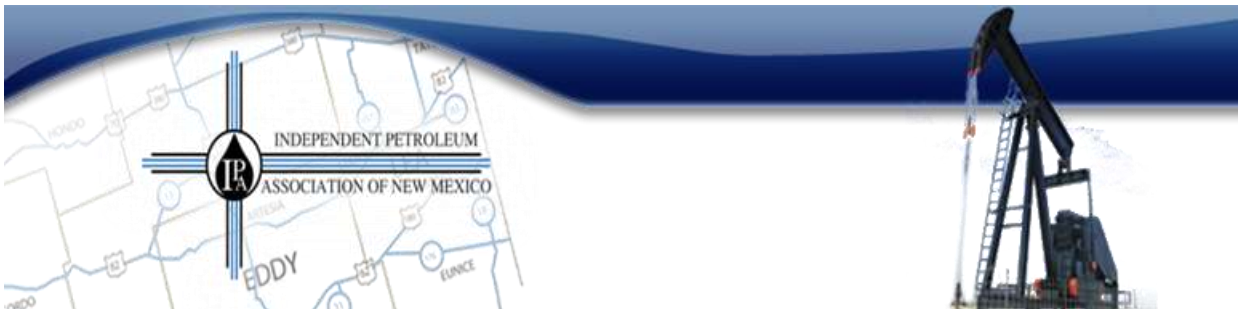


Bureau of Land Management
20 M Street, SE, Room 2134 LM
Washington, DC
20003

Attention: **Mike Pool and Regulatory Affairs**
Re: **Oil and Gas; Hydraulic Fracturing**

**RIN 1004-AE26; [WO-300-L13100000.FJ0000]**

Dear Mr.Poole:

The Independent Petroleum Association of New Mexico represents some 300 independent oil and gas producers in New Mexico. More than 13,000 people are directly employed by our member companies. The State of New Mexico relies on revenue from this industry. Tax and royalty payments make up over 27 percent of the General Fund revenues and 95 percent of the Land Grant Permanent Fund. Independent producers develop 95 percent of American oil and gas wells, produce 68 percent of US oil and produce 82 percent of US natural gas. Marginal wells – wells that produce barely enough hydrocarbons to remain economical, account for about twenty percent of U.S. oil and about twelve percent of U.S. natural gas. IHS Global Insight, onshore independents supported 2.1 million jobs in 2010, and contributed over $320 billion of U.S. GDP in 2010, a figure that will rise to over $466 billion by 2020. 500,000 workers are employed in American natural gas and oil exploration and production. But oil and natural gas producers are price takers, not price makers so they must absorb every increase is the cost of doing business and all regulatory burdens. Independents will damaged by the extremely large costs of the rule.

“The costs of the proposed rule have been grossly underestimated. BLM claims that the rule will not have a significant economic impact on industry. However, costs will easily exceed the $100 million threshold. John Dunham Associates estimates the rule will cost at least $1.226 billion in the thirteen western states analyzed based on the carrying costs of projects for new wells.2 Based on the discounted lost value of output, the proposed regulations would cost $1.342 billion annually for new wells. Averaging these two methods together suggests that a reasonable estimate for the cost of this proposed rule as applied to drilling new wells is just over $1.284 billion. The average cost per new well is estimated at $253,800. Considering both new wells and workovers, the estimated total aggregate annual cost is at least $1.499 billion and as high as $1.615 billion.

BLM estimates that about 90 percent (approximately 3,400 wells per year) of wells currently drilled on Federal and Indian lands are completed using hydraulic fracturing techniques. Over the past 10 years, there have been significant technological advances in horizontal drilling, which is frequently combined with hydraulic fracturing. This combination, together with the discovery that these techniques can release significant quantities of oil and gas from large shale tight, low permeability deposits, has led to production from geologic formations in parts of the country that previously did not produce significant oil or gas.
"We drill 35,000 wells a year, and 95 percent are fractured," says Lee Fuller, executive director of Energy in Depth. . hydraulic fracturing is now responsible for 30 percent of domestic oil and natural gas reserves, and has aided in extracting more than 600 trillion cubic feet of natural gas and 7 billion barrels of oil, Imposing more bureaucracy and regulation will destroy jobs and stifle opportunities for those looking to find a job. The oil and gas industry employs 6 million people in the U.S. I want to see that number go up, not down." This 60 year old technique has been responsible for the production of 7 billion barrels of oil and 600 trillion cubic feet (Tcf) of natural gas. The National Petroleum Council reports that 60 percent to 80 percent of all wells in the next ten years will require fracturing to remain productive and profitable. Effect of regulations according to BRIEF an industry group would be

> Plugging of more than half of our oil wells and a third of gas wells
> $4 billion loss to the US and states lose $785 million
> Domestic production down 183,000 bbls/day and natural gas down 245 billion cf/year."

So, before proceeding BLM must now comply with and consider the Paperwork Reduction Act, the Small Business Regulatory Enforcement Fairness Act, the Unfunded Mandates Reform Act, the Regulatory Flexibility Act, the Small Business Regulatory Enforcement Fairness Act, and Executive Order 12866 Regulatory Planning and Review.

The regulatory burdens have not been considered. The proposed rule is mixing metaphors when stimulation is lumped in with frac jobs in a regulation. Fracs are part of the completion or re-completion process. Well stimulation may be needed in the normal completion process and is mostly used in the production phase to maintain production levels. The pressures used in stimulation are lower than pressures used in a frac job. A frac job is the injection of fluid under adequate pressure to overcome the pressure of the overburden of in the reservoir rocks. Well stimulation means those activities conducted in an individual well bore designed to increase the flow of hydrocarbons from the rock formation to the well bore by modifying the permeability of the reservoir rock. The draft rule requires several reviews to approve new applications but there are few if any qualified, degreed professional engineers at BLM who are qualified to make the decisions called for in the draft regulation.

BLM rules have already affected use of public lands. Here is some public lands data from the January 2011 issue of the Oil and Gas Reporter.

A study by the Western Energy Alliance reveals that BLM management of western lands has produced a 79 percent drop in leases issued and a 46 percent drop in leasing revenues during the past five years.

During the period 2008 to 2010 revenue from royalties, rents and bonuses declined from $4.2 billion to 2.8 billion, a 33 percent decline.

For every dollar appropriated for BLM's oil and gas program, $40 in royalties, rents and bonus revenue is returned.

The actual surface disturbance from oil and gas activity amounts to . 7 percent of the total public acreage in the west. Of the 700 million acres of BLM managed estate on 6.4 percent is leased for oil and gas development.

Specifically in New Mexico, leasing revenues, from 2005 to 2010 dropped 56 percent from $54.3 million to $23.9 million. NM BLM leased 30660 acres in FY 2010 down from 184,786 in 2005. That is a 84 percent drop. NM get half the revenues returned.

A BLM rule on frac jobs is duplicative. Most of the producing states have already enacted frac rules. In addition the federal government utilizing authorities provided by the Clean Water Act (CWA) and Safe Drinking Water Act (SDWA) among others. The CWA for example, regulates the discharge of pollutants, including flowback from fracturing operations, into U.S. waters. It also provides regulatory structure mandating spill prevention control and countermeasures. Meanwhile, SDWA sets regulations for the disposal of brine and other wastes. of EPA administrator Lisa Jackson who noted, "you can't start to talk about a federal role [in hydraulic fracturing] without acknowledging the very strong state role." Jackson also added, "We have no data right now that lead us to believe one way or the other that there needs to be specific federal regulation of the fracing process."

The science to support this proposed rule is non-existent. There has been no incidence of contamination of ground water from hydraulic fracing of over 1.2 million wells since 1948. The states have been successfully regulating well integrity and Fracing for over sixty five years, including on federal lands, and duplicative federal regulations are un-necessary and costly for both industry and the government. The facts are that there has been no contamination over a 65 year period from fracing wells, so there is really no potential impact on water quality.

In addition to decades of frac jobs resulting in no damage to usuable water, the constituents in a frac job are essentially benign. The fluid used in hydraulic fracturing is 67.16 percent water, 6.95 percent sand, 25.28 percent nitrogen and .61 percent fluid system constituents. The constituents are used in such things as shaving gel, hand cleaner, antimicrobial agent, plumber's putty, toothpaste, beer, whey products, and dishwashing detergent and usually accompanied by proppants, such as the particles of sand that are carried into the newly fractured rock to keep the fractures open once the pressure fluid***s*** from the fracturing operation flowback. These chemicals can serve many functions in hydraulic fracturing, including limiting the growth of bacteria and preventing corrosion of the well casing.

The proposed rule does not comply with the DATA QUALITY ACT
SEC. 515.
(a) IN GENERAL.—The Director of the Office of Management and Budget shall, by not later than September 30, 114 STAT. 2763A–154 PUBLIC LAW 106–554—APPENDIX C 2001, and with public and Federal agency involvement, issue guidelines under sections 3504(d)(1) and 3516 of title 44, United States Code, that provide policy and procedural guidance to Federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by Federal agencies in fulfillment of the purposes and

provisions of chapter 35 of title 44, United States Code, commonly referred to as the Paperwork Reduction Act.
(b) CONTENT OF GUIDELINES.—The guidelines under subsection (a) shall—
(1) apply to the sharing by Federal agencies of, and access to, information disseminated by Federal agencies; and
(2) require that each Federal agency to which the guidelines apply—
(A) issue guidelines ensuring and maximizing the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by the agency, by not later than 1 year after the date of issuance of the guidelines under subsection (a);
(B) establish administrative mechanisms allowing affected persons to seek and obtain correction of information maintained and disseminated by the agency that does not comply with the guidelines issued under subsection (a); and
(C) report periodically to the Director—
(i) the number and nature of complaints received by the agency regarding the accuracy of information disseminated by the agency; and (ii) how such complaints were handled by the agency.
It is clear that the data in the Petition is not based on any science, because the best available science is from EPA and the producing states, including several studies, all of which indicate there has been no contamination of fresh water anywhere in the nation over the some 64 years the industry has been doing frac jobs. BLM cannot implement this rule until it complies with the Data Quality Act.

The draft discusses fairly extensive meetings with Tribes, but only a few of the thousands of the real stakeholders, oil and gas mineral owners and producers and there was no coordination with the other stakeholder, states, cities and counties that rely on oil and gas revenues.

Specific comments ***in red bold italic*** and new language in red on the draft are imbedded in the following copy.

**Bureau of Land Management**
**43 CFR Part 3160**
**[WO-300-L13100000.FJ0000]**
**RIN 1004-AE26**
**Oil and Gas; Well Stimulation, Including Hydraulic Fracturing, on Federal and Indian Lands.**
**AGENCY:** Bureau of Land Management, Interior.
**ACTION:** Proposed rule.
**SUMMARY:** "Hydraulic fracturing," a common process used to stimulate production from oil and gas wells, ~~has been a growing practice in recent years~~. has been used in some 1.2 million wells since 1948. Public awareness of fracturing has grown as new horizontal drilling technology has allowed increased access to shale oil and gas resources across the country, sometimes in areas that have not previously experienced significant oil and gas development. ~~The extension of the practice has caused public concern about whether fracturing can allow or cause the contamination of underground water sources, whether the chemicals used in fracturing should be disclosed to the public, and whether there is adequate management of well integrity and the "flowback" fluids that return to the surface during and after fracturing operations.~~ ***Over a million wells have been drilled using frac jobs for completion and not one of them has caused contamination of any usuable water. Public concern, without any factual basis, does not***

***support a new rule. More especially in an area that has already been subject to adequate State regulation.***

The Bureau of Land Management (BLM) oversees oil and gas operations on the 7 percent of the approximately 700 million subsurface acres of Federal mineral estate and 56 million subsurface acres of and tribal mineral estate across the United States with oil and gas activity. The BLM ~~proposes to modernize its management of well stimulation activities, including~~ add regulations for hydraulic fracturing, to ensure that fracturing operations conducted on the public mineral estate (including split estate where the Federal Government owns the subsurface mineral estate) follow ~~common sense best practices, including:~~ state practices, including the public disclosure of chemicals used in hydraulic fracturing operations on Federal lands; ***New Mexico recently passed Rule 19.15.16.19 (B) on frac jobs, requiring operators to complete a state form, which is similar to FracFocus, reporting of the contents of hydraulic fracturing fluids. Some operators are also posting to the FracFocus website also. Completion reports filed in New Mexico for a federal well are forwarded to the New Mexico Oil Conservation Division (NMOCD) for their approval and the OCD requires their fracture disclosure report before they will approve them. The BLM's involvement in this is a duplication of other federal and state agency requirements***. ~~confirmation that wells used in fracturing operations meet appropriate construction standards; and a requirement that operators put in place appropriate plans for managing flowback waters from fracturing operations.~~ ***When BLM does not use common oil field terminology, it is very difficult to respond to a draft regulation. The industry does not use "construction" in connection with drilling, completing, or maintaining wells. A frac job is a process used in completing a well. Nothing is "constructed" in that process. We drill a hole, we run casing and we cement the casing. We do not "construct" anything, so we have no idea what BLM has in mind as "appropriate construction standards". Futhermore, New Mexico regulates casing and cementing in rule 19.15.16.10. State agencies protect underground water and hold operators to strict enforcement of all such rules. When an "Application to Drill"(APD) is submitted to the BLM, it contains a full design of the well bore and casing. When this is approved, the BLM agrees with this plan and finds it sufficient for the protection of water. This APD is then sent to the NMOCD for their review and the assignment of the API number. The state is involved in the design of all wells within the state. The BLM's involvement in this is a duplication of state requirements.*** The BLM proposes to apply the same rules and standards to tribal lands so that these lands and communities receive the same level of protection provided for Federal lands. Most of these requirements can be satisfied by submitting additional information during the process that the BLM currently applies to operators who are drilling on the public lands. The proposed rule would require that disclosure of the chemicals used in the fracturing process be provided to the BLM after the fracturing operation is completed. This information is ~~intended to be~~ already posted on a public web site~~, and the BLM is working with the Ground Water Protection Council to determine whether the disclosure can be integrated into the existing website~~ known as FracFocus.org. ***Flow back waters are already managed by New Mexico OCD under rule 19.15.35. In both instances the state agencies are involved in the process, and all waste water is hauled to a state approved disposal well for injection. The BLM's involvement in this is a duplication of state requirements.***

~~The BLM has developed the draft with an eye toward improving public awareness and oversight without introducing complicated new procedures or delays in the process of developing oil and gas resources on public and tribal lands~~. ***NEPA and FLPMA do not require the oversight. Nowhere is BLM required to make the public aware of oil and gas operations. Absolutely the BLM has no authority to grant oversight authority to the public. The public process occurred***

***when the decision to lease was made and when the actual lease sales were held. BLM holds APDs for a 30 day review now. There will be new delays because new approvals have been introduced into the drilling process. The goal of "improving public awareness" is not defined or quantified. How is public awareness quantified and how will improvement be measured? The proposed rule is too subjective.*** ~~Some~~ Most states have started requiring similar disclosures and oversight for oil and gas drilling operations under their own jurisdiction~~. This proposal seeks to create a consistent oversight and disclosure model that will work in concert with other regulators' requirements while protecting Federal and tribal interests and resources.~~

The BLM proposes these changes to existing well stimulation oversight partly in response to recommendations put forward by the Secretary of Energy's Energy Advisory Board in 2011~~. Also, current BLM regulations governing hydraulic fracturing operations on public lands are more than 30 years old and were not written to address modern hydraulic fracturing activities.~~ ***The sentence is misleading in that it makes it appear there are significant changes in fracing over the last 30 years and that these changes substantially affected the public. BLM must offer evidence of, not only change but how that change would reasonably be expected to harm fresh water.*** In preparing this proposed rule, the BLM has consulted broadly with members of the public, stakeholders, and tribal representatives. The BLM is looking forward to obtaining additional public input regarding the specific proposed provisions that are set forth herein.

***But they did not consult "broadly" with the primary stakeholder, the lessee of federal minerals. Nor did they consult with local, county or state governments who will be adversely affected by the rule.***

**DATES:** Send your comments on this proposed rule to the BLM on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. The BLM need not consider, or include in the administrative record for the final rule, comments that the BLM receives after the close of the comment period or comments delivered to an address other than those listed below (see ADDRESSES). If you wish to comment on the information collection requirements in this proposed rule, please note that the Office of Management and Budget (OMB) is required to make a decision concerning the collection of information contained in this proposed rule between 30 to 60 days after publication of this document in the Federal Register. Therefore, a comment to OMB is best assured of having its full effect if OMB receives it by [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** Mail: U.S. Department of the Interior, Director (630), Bureau of Land Management, Mail Stop 2134 LM, 1849 C St., NW, Washington, DC 20240, Attention: 1004–AE26. Personal or messenger delivery: Bureau of Land Management, 20 M Street, SE, Room 2134 LM, Attention: Regulatory Affairs, Washington, DC 20003. Federal eRulemaking Portal: http://www.regulations.gov. Follow the instructions at this Website.

Comments on the information collection requirement: Fax: Office of Management and Budget (OMB), Office of Information and Regulatory Affairs, Desk Officer for the Department of the Interior, fax 202-395-5806. Electronic mail: oira_docket@omb.eop.gov. Please indicate "Attention: OMB Control Number 1004-XXXX," regardless of the method used to submit comments on the information collection burdens. If you submit comments on the information collection burdens, please provide the BLM with a copy of your comments, at one of the addresses shown above.

**FOR FURTHER INFORMATION CONTACT:** Steven Wells, Division Chief, Fluid Minerals Division, 202-912-7143 for information regarding the substance of the rule or information about the BLM's Fluid Minerals Program. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1-800-877-8339 to contact the above individual during normal business hours. FIRS is available 24 hours a day, 7 days a week to leave a message or question with the above individual. You will receive a reply during normal business hours.

**SUPPLEMENTARY INFORMATION:**



**I. Public Comment Procedures**

If you wish to comment, you may submit your comments by any one of several methods: Mail: You may mail comments to U.S. Department of the Interior, Director (630), Bureau of Land Management, Mail Stop 2134LM, 1849 C Street, NW, Washington, DC 20240, Attention: 1004-AE26. Personal or messenger delivery: Bureau of Land Management, 20 M Street, SE, Room 2134 LM, Attention: Regulatory Affairs, Washington, DC 20003. Federal eRulemaking Portal: http://www.regulations.gov. Follow the instructions at this Website.

You may submit comments on the information collection burdens directly to the Office of Management and Budget, Office of Information and Regulatory Affairs, Desk Officer for the Department of the Interior, fax 202-395-5806, or oira_docket@omb.eop.gov. Please include "Attention: OMB Control Number 1004-XXXX" in your comments. If you submit comments on the information collection burdens, please provide the BLM with a copy of your comments, at one of the addresses shown above.

Please make your comments as specific as possible by confining them to issues directly related to the content of this proposed rule, and explain the basis for your comments. The comments and recommendations that will be most useful and likely to influence agency decisions are:

1. Those supported by quantitative information or studies; and
2. Those that include citations to, and analyses of, the applicable laws and regulations.

The BLM is not obligated to consider or include in the Administrative Record for the rule comments received after the close of the comment period (see **DATES**) or comments delivered to an address other than those listed above (see **ADDRESSES**).

Comments, including names and street addresses of respondents, will be available for public review at the address listed under **ADDRESSES** during regular hours (7:45 a.m. to 4:15 p.m.), Monday through Friday, except holidays.

Before including your address, telephone number, e-mail address, or other personal identifying information in your comment, be advised that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask in your comment to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

**II. Background**

~~Well stimulation techniques, such as~~ Hydraulic fracturing, ~~*are*~~ *is* used by oil and natural gas producers to increase the volumes of oil and natural gas that can be extracted from wells. Hydraulic fracturing techniques are particularly effective in enhancing oil and gas production from "shale" gas or oil formations. Until quite recently, shale formations rarely produced oil or gas in commercial quantities because shale does not generally generate flow of hydrocarbons to well bores unless mechanical changes to the properties of the rock can be induced. The development of horizontal drilling, combined with hydraulic fracturing, have made the production of oil and gas from shale possible. Hydraulic fracturing involves the injection of fluid under ~~high~~ adequate pressure to ~~create or enlarge fractures~~ overcom~~e~~ the pressure of the overburden of in the reservoir rocks. The fluid that is used in hydraulic fracturing is ***67.16 percent water, 6.95 percent sand, 25.28 percent nitrogen and .61 percent fluid system constituents. The constituents are used in such things as shaving gel, hand cleaner, antimicrobial agent, plumber's putty, toothpaste, beer, whey products, and dishwashing detergent.*** ~~usually accompanied by proppants, such as~~ ***The*** particles of sand ~~that~~ are carried into the newly fractured rock and help keep the fractures open once the ~~pressure~~ ***fluids*** from the fracturing operation ~~is released~~ ***flowback***. The ***small, maybe ¼ inch wide by 10 to 100 feet long,*** proppant-filled fractures ~~become conduits for~~ ***improve*** fluid migration ~~from~~ ***through*** the reservoir rock to the wellbore and the fluid is subsequently brought to the surface. In addition to the water and sand (which together typically make up 98 to 99 percent of the materials pumped into a well during a fracturing operation), chemical additives are also frequently used. These chemicals can serve many functions in hydraulic fracturing, including limiting the growth of bacteria and preventing corrosion of the well casing. The exact formulation of the chemicals used varies depending on the rock formations, the well, and the requirements of the operator.

The BLM estimates that about 90 percent (approximately 3,400 wells per year) of wells currently drilled on Federal and Indian lands are stimulated using hydraulic fracturing techniques. Over the past 10 years, there have been significant technological advances in horizontal drilling, which is frequently combined with hydraulic fracturing. This combination, together with the discovery that these techniques can release significant quantities of oil and gas from ~~large shale~~ ***tight, low permeability*** deposits, has led to production from geologic formations in parts of the country that previously did not produce significant oil or gas~~. The resulting expansion of oil and gas drilling into new parts of the country as a result of the availability of new horizontal drilling technologies has significantly increased public awareness of hydraulic fracturing and the potential impacts that it may have on water quality and water consumption.~~ ***The facts are that there has been no contamination over a 65 year period from fracing wells, so there is really no potential impact on water consumption or quality. In New Mexico fresh water has not been shown below 200 to 400 feet. Frac jobs are usually done at depths exceeding 3000 feet. According to IPAA data the longest frac job extension is 200 feet. Anything over 30 feet is considered cause for celebration. Everything we do as people has an impact on something, but the issue is whether that impact is, in fact, injurious. A recent study by the Colorado Division of Water Resources that showed that in 2010, 85 percent of the water used in Colorado went to agriculture, 7.4 percent to municipalities and less than 1 percent to hydraulic fracturing. The Texas RRC found that in the Carrizo Wilcox Aquifer in South Texas, oil and gas accounts for 6 percent of the usage, irrigation uses 64 percent and municipal consumption is 17 percent.***

The BLM's existing hydraulic fracturing regulations are found at 43 CFR 3162.3-2. These regulations were established in 1982 and last revised in 1988, ~~long before the latest hydraulic fracturing technologies became widely used.~~ ***Un-necessary and not quite accurate comment There is really nothing in modern practices that would require new regulations.*** **Page 27709 (§3162.3-2 Subsequent well operations) Ref. Subsection (a) – in contrast to what the preamble states, this subsection calls for submittal "for approval by the authorized officer"** ***Neither industry or BLM can cope with new approvals added into the drilling and completion process.***
In response to public interest in hydraulic fracturing and in the BLM's regulation of hydraulic fracturing, in particular, the Department of the Interior (Department) held a forum on hydraulic fracturing on November 30, 2010 in Washington, DC, attended by the Secretary of the Interior and more than 130 interested parties. The BLM later hosted public forums in Bismarck, North Dakota on April 20, 2011; Little Rock, Arkansas on April 22, 2011; and Golden, Colorado on April 25, 2011, to collect broad input on the issues surrounding hydraulic fracturing. More than 600 members of the public attended the April forums. Some of the comments frequently heard during these forums included concerns about water quality, water consumption, and a desire for improved environmental safeguards for surface operations. Commenters also strongly encouraged the agency to require public disclosure of the chemicals used in hydraulic fracturing operations on Federal and tribal lands.
Around the time of the BLM's forums, at the President's direction, the Secretary of Energy's Advisory Board convened a Natural Gas Subcommittee (Subcommittee) to evaluate hydraulic fracturing issues. The Subcommittee met with industry, service providers, state and Federal regulators, academics, environmental groups, and many others stakeholders. Initial recommendations were issued by the Subcommittee on August 18, 2011. Among other things, the report recommended that more information be provided to the public, including disclosure of the chemicals used in fracturing fluids. The Subcommittee also recommended the adoption of progressive standards for wellbore construction and testing. The initial report was followed by a final report that was issued on November 18, 2011. The final report recommended, among other things, that operators engaging in hydraulic fracturing prepare cement bond logs and undertake pressure testing to ensure the integrity of all casings. These reports are available to the public from the Department of Energy's web site at http://www.shalegas.energy.gov.

The BLM's proposed rule is consistent with the American Petroleum Institute's (API) guidelines for well construction and well integrity (see API Guidance Document HF 1, Hydraulic Fracturing Operations—Well Construction and Integrity Guidelines, First Edition, October 2009).

Based on the input provided from a broad array of sources, including the individuals who spoke at the BLM's public forums and the recommendations of the Subcommittee, the BLM is proposing to make changes ~~critical improvements~~ to its regulations for hydraulic fracturing. The proposed regulations would be applied to all wells administered by the BLM, including those on Federal, tribal, and individual Indian trust lands. ***There is no evidence that the proposed rule is critical or an improvement over the current regulations. The facts clearly indicate there is no need for any new regulations and that the states have the situation well in hand.***
The BLM has initiated government-to-government consultation with tribes on this proposal and has offered to hold follow-up consultation meetings with any tribe that desires to have an individual meeting. The BLM held four tribal consultation meetings, to which over 175 tribal entities were invited. The consultations were held in Tulsa, Oklahoma on January 10, 2012; in Billings, Montana on January 12, 2012; in Salt Lake City, Utah on January 17, 2012; and in

Farmington, New Mexico on January 19, 2012. Eighty-one tribal members representing 27 tribes attended the meetings~~. One of the outcomes of these meetings is the proposed requirement in this proposed rule that operators certify that operations on tribal lands comply with tribal laws.~~ ***This only creates utter chaos. BLM is proposing we have state regulations, federal regulations and tribal regulations.*** Comments from tribes will be accepted and considered throughout the rule making process. Tribal governments, tribal members, and individual Native Americans are also invited to comment directly on this proposed rule through the process described in the Public Comment Procedures section of this document. ***BLM has not reached out to the states and counties and had similar meetings.***

Over the past few years~~, in response to strong public interest~~, ***Not relevant and inflamitory.*** ~~several~~ ***most oil and gas producing*** states—including ***New Mexico,*** Colorado, Wyoming, Arkansas, and Texas—have substantially revised their state regulations related to hydraulic fracturing. ***As a result there is no need for an additional layer of federal regulation. Nor is there any need to add all well stimulation to a fracing regulation.*** ~~One of the BLM's key goals in updating its regulations on hydraulic fracturing is to complement these state efforts by providing a consistent standard across all public and tribal lands.~~ ***BLM cannot complement state regulations by writing more regulations differing from state regulations and adding well stimulation to fracing regulations. A consistent standard can only mean BLM has regulations differing from most of the state regulations and tribal regulations means three layers of fracing and well stimulation regulations for operators to work under.***

Administrative Record for the rule comments received after the close of the comment period (see DATES) or comments delivered to an address other than those listed above (see ADDRESSES).

Comments, including names and street addresses of respondents, will be available for public review at the address listed under ADDRESSES during regular hours (7:45 a.m. to 4:15 p.m.), Monday through Friday, except holidays.

Before including your address, telephone number, e-mail address, or other personal identifying information in your comment, be advised that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask in your comment to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

II. Background

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***antimicrobial agent, plumber's putty, toothpaste, beer, whey products, and dishwashing detergent.*** ~~usually accompanied by proppants, such as~~ ***The*** particles of sand ~~that~~ are carried into the newly fractured rock and help keep the fractures open once the ~~pressure~~ ***fluids*** from the fracturing operation ~~is released~~ ***flowback.*** The ***small, maybe ¼ inch wide by 10 to 100 feet long,*** proppant-filled fractures ~~become conduits for~~ ***improve*** fluid migration ~~from~~ ***through*** the reservoir rock to the wellbore and the fluid is subsequently brought to the surface. In addition to the water and sand (which together typically make up 98 to 99 percent of the materials pumped into a well during a fracturing operation), chemical additives are also frequently used. These chemicals can serve many functions in hydraulic fracturing, including limiting the growth of bacteria and preventing corrosion of the well casing. The exact formulation of the chemicals used varies depending on the rock formations, the well, and the requirements of the operator.

The BLM estimates that about 90 percent (approximately 3,400 wells per year) of wells currently drilled on Federal and Indian lands are stimulated using hydraulic fracturing techniques. Over the past 10 years, there have been significant technological advances in horizontal drilling, which is frequently combined with hydraulic fracturing. This combination, together with the discovery that these techniques can release significant quantities of oil and gas from ~~large shale~~ ***tight, low permeability*** deposits, has led to production from geologic formations in parts of the country that previously did not produce significant oil or gas~~. The resulting expansion of oil and gas drilling into new parts of the country as a result of the availability of new horizontal drilling technologies has significantly increased public awareness of hydraulic fracturing and the potential impacts that it may have on water quality and water consumption.~~ ***The facts are that there has been no contamination over a 65 year period from fracing wells, so there is really no potential impact on water consumption or quality. In New Mexico fresh water has not been shown below 200 to 400 feet. Frac jobs are usually done at depths exceeding 3000 feet. According to IPAA data the longest frac job extension is 200 feet. Anything over 30 feet is considered cause for celebration. Everything we do as people has an impact on something, but the issue is whether that impact is, in fact, injurious. A recent study by the Colorado Division of Water Resources that showed that in 2010, 85 percent of the water used in Colorado went to agriculture, 7.4 percent to municipalities and less than 1 percent to hydraulic fracturing. The Texas RRC found that in the Carrizo Wilcox Aquifer in South Texas, oil and gas accounts for 6 percent of the usage, irrigation uses 64 percent and municipal consumption is 17 percent.***

The BLM's existing hydraulic fracturing regulations are found at 43 CFR 3162.3-2. These regulations were established in 1982 and last revised in 1988, ~~long before the latest hydraulic fracturing technologies became widely used.~~ ***Un-necessary and not quite accurate comment There is really nothing in modern practices that would require new regulations.*** **Page 27709 (§3162.3-2 Subsequent well operations) Ref. Subsection (a) – in contrast to what the preamble states, this subsection calls for submittal "for approval by the authorized officer"** ***Neither industry or BLM can cope with new approvals added into the drilling and completion process*****.**

In response to public interest in hydraulic fracturing and in the BLM's regulation of hydraulic fracturing, in particular, the Department of the Interior (Department) held a forum on hydraulic fracturing on November 30, 2010 in Washington, DC, attended by the Secretary of the Interior and more than 130 interested parties. The BLM later hosted public forums in Bismarck, North Dakota on April 20, 2011; Little Rock, Arkansas on April 22, 2011; and Golden, Colorado on April 25, 2011, to collect broad input on the issues surrounding hydraulic fracturing. More than 600 members of the public attended the April forums. Some of the comments frequently heard during these forums included concerns about water quality, water consumption, and a desire for improved environmental safeguards for surface operations. Commenters also strongly

encouraged the agency to require public disclosure of the chemicals used in hydraulic fracturing operations on Federal and tribal lands.
Around the time of the BLM's forums, at the President's direction, the Secretary of Energy's Advisory Board convened a Natural Gas Subcommittee (Subcommittee) to evaluate hydraulic fracturing issues. The Subcommittee met with industry, service providers, state and Federal regulators, academics, environmental groups, and many others stakeholders. Initial recommendations were issued by the Subcommittee on August 18, 2011. Among other things, the report recommended that more information be provided to the public, including disclosure of the chemicals used in fracturing fluids. The Subcommittee also recommended the adoption of progressive standards for wellbore construction and testing. The initial report was followed by a final report that was issued on November 18, 2011. The final report recommended, among other things, that operators engaging in hydraulic fracturing prepare cement bond logs and undertake pressure testing to ensure the integrity of all casings. These reports are available to the public from the Department of Energy's web site at http://www.shalegas.energy.gov.

The BLM's proposed rule is consistent with the American Petroleum Institute's (API) guidelines for well construction and well integrity (see API Guidance Document HF 1, Hydraulic Fracturing Operations—Well Construction and Integrity Guidelines, First Edition, October 2009).

Based on the input provided from a broad array of sources, including the individuals who spoke at the BLM's public forums and the recommendations of the Subcommittee, the BLM is proposing to ~~make critical improvements~~ to its regulations for hydraulic fracturing. The proposed regulations would be applied to all wells administered by the BLM, including those on Federal, tribal, and individual Indian trust lands. ***There is no evidence that the proposed rule is critical or an improvement over the current regulations. The facts clearly indicate there is no need for any new regulations and that the states have the situation well in hand.***
The BLM has initiated government-to-government consultation with tribes on this proposal and has offered to hold follow-up consultation meetings with any tribe that desires to have an individual meeting. The BLM held four tribal consultation meetings, to which over 175 tribal entities were invited. The consultations were held in Tulsa, Oklahoma on January 10, 2012; in Billings, Montana on January 12, 2012; in Salt Lake City, Utah on January 17, 2012; and in Farmington, New Mexico on January 19, 2012. Eighty-one tribal members representing 27 tribes attended the meetings. ~~One of the outcomes of these meetings is the proposed requirement in this proposed rule that operators certify that operations on tribal lands comply with tribal laws.~~ ***This only creates utter chaos. BLM is proposing we have state regulations, federal regulations and tribal regulations.*** Comments from tribes will be accepted and considered throughout the rule making process. Tribal governments, tribal members, and individual Native Americans are also invited to comment directly on this proposed rule through the process described in the Public Comment Procedures section of this document. ***BLM has not reached out to the states and counties and had similar meetings.***
Over the past few years, ~~in response to strong public interest~~, ***Not relevant and inflamitory.*** ~~several~~ ***most oil and gas producing*** states—including ***New Mexico,*** Colorado, Wyoming, Arkansas, and Texas—have substantially revised their state regulations related to hydraulic fracturing. ***As a result there is no need for an additional layer of federal regulation. Nor is there any need to add all well stimulation to a fracing regulation.*** ~~One of the BLM's key goals in updating its regulations on hydraulic fracturing is to complement these state efforts by providing a consistent standard across all public and tribal lands.~~ ***BLM cannot complement state regulations by writing more regulations differing from state regulations and adding well***

***stimulation to fracing regulations. A consistent standard can only mean BLM has regulations differing from most of the state regulations and tribal regulations means three layers of fracing and well stimulation regulations for operators to work ~~confusing for both the agency and those attempting to comply with the regulations. As previously stated, the regulations are now 30 years old and need to be updated to keep pace with the many changes in technology and current best management practices. As discussed in the background section of this document, the increased use of well stimulation activities over the last decade has also generated concerns among the public about well stimulation and about the chemicals used in hydraulic fracturing. The proposed rule is intended to increase transparency for the public regarding the fluids used in the hydraulic fracturing process, in addition to providing assurances that well bore integrity is maintained throughout the fracturing process and that the fluids that flow back to the surface from hydraulic fracturing operations are properly stored and disposed of or treated.~~***

***BLM is mixing up frac jobs and well stimulation. They are mutually exclusive. There is no need for increased transparency because FracFocus is in existence and available to the public.***

~~As an administrative matter, the proposed rule would amend the authorities section for the BLM's oil and gas operations management regulations at 43 CFR 3160.0-3 to include FLPMA. Section 310 of FLPMA authorizes the Secretary of the Interior to promulgate regulations to carry out the purposes of FLPMA and other laws applicable to the public lands. See 43 U.S.C. 1740. This amendment will would not be a major change and will would have no effect on lessees, operators, or the public.~~

~~The proposed rule would remove the terms "nonroutine fracturing jobs," "routine fracturing jobs," and "acidizing jobs" from 43 CFR 3162.3-2(a) and 43 CFR 3162.3-2(b). It would add a new section, 43 CFR 3162.3-3, for well stimulation activities. In the proposed rule, there would be no distinction drawn between what was previously considered nonroutine or routine well stimulations. Prior approval would be required for well stimulation activities, generally in connection with the prior approval process that already is in place for general well drilling activities through the Application for Permit to Drill (APD) process.~~ Operators also will be required to submit cement bond logs before fracturing operations begin. The running of cement bond logs on surface casing, which is currently an optional practice, would now be required for new wells. Existing wells would require mechanical integrity testing prior to hydraulic fracturing.

The proposed rule would include six new definitions for technical terms used in the proposed rule. These definitions will improve readability and clarity of the regulations.

***It is inappropriate to put in a new well stimulation rule in under the guise of a frac regulation.***

The proposed rule intends to add the following definitions:

- Annulus means ~~the space around a pipe in a wellbore, the outer wall of which may be the wall of either the borehole or the casing; sometimes~~ also called the annular space.

***The space between two concentric objects, such as between the wellbore and casing or between casing and tubing, where fluid can flow. This is the official oil field definition.***

- Bradenhead means a heavy, flanged steel fitting connected to the first string of casing that allows suspension of intermediate and production strings of casing, and supplies the means for the annulus to be sealed off. ***Bradenhead considered an obsolete term now casinghead- A head, screwed into the top of the casing, used to confine gas in the well***

***until release through an outlet into a pipeline. a heavy, flanged steel fitting connected to the first string of casing. It provides a housing for slips and packing assemblies, allows suspension of intermediate and production strings of casing, and supplies the means for the annulus to be sealed off.***

- ***Bradenhead means a heavy, flanged steel fitting connected to the first string of casing that allows suspension of intermediate and production strings of casing, and supplies the means for the annulus to be sealed off. Bradenhead considered an obsolete term now casinghead- A head, screwed into the top of the casing, used to confine gas in the well until release through an outlet into a pipeline. a heavy, flanged steel fitting connected to the first string of casing. It provides a housing for slips and packing assemblies, allows suspension of intermediate and production strings of casing, and supplies the means for the annulus to be sealed off***
- Proppant means a granular substance (most commonly sand, sintered bauxite, or ceramic) that is carried in suspension by the fracturing fluid and that serves to keep the cracks open when fracturing fluid is withdrawn after a hydraulic fracture treatment.

- ~~Stimulation fluid means the liquid or gas, and any accompanying solids, used during a treatment of oil and gas wells, such as the water, chemicals, and proppants used in hydraulic fracturing.~~

- ***Hydraulic Fracturing means the injection of fluids and proppants expressly designed to initiate or propagate fractures in a target geologic formation at pressures that exceed the in-situ formation pressure***~~.~~

~~A treatment fluid prepared for stimulation purposes, although the term most commonly is applied to matrix stimulation fluids. A treatment performed to restore or enhance the productivity of a well. Stimulation treatments fall into two main groups, hydraulic fracturing treatments and matrix treatments. Fracturing treatments are performed above the fracture pressure of the reservoir formation and create a highly conductive flow path between the reservoir and the wellbore.~~

~~Matrix treatments are performed below the reservoir fracture pressure and generally are designed to restore the natural permeability of the reservoir following damage to the near-wellbore area.~~ ***To explain the difference between a frac job and well stimulation, well stimulation means those activities conducted in an individual well bore designed to increase the flow of hydrocarbons from the rock formation to the well bore by modifying the permeability of the reservoir rock.***

- • Usable water means water containing up to 10,000 ppm of total dissolved solids ***capable of entering a well in sufficient amounts to be utilized as a water supply on a year round basis. This is essentially the New Mexico definition.***
- ~~Well stimulation means those activities conducted in an individual well bore designed to increase the flow of hydrocarbons from the rock formation to the well bore by modifying the permeability of the reservoir rock. Examples of well stimulation operations are acidizing and hydraulic fracturing.~~ ***Well stimulation is not part of this rule. In any separate rule on stimulation, there must be wording to the effect that "Acid operations for maintenance work will be excluded from the rule." This operation is not designed to use enough pressure, to cause a vertical fracture of the rock formation, and is a maintenance operation. There are two basic types of acidizing, Matrix and Acid-Wash. Matrix is the injection of reactive acid into a formation in an effort to improve formation permeability to enhance production reservoir fluids. This is ideally performed at high rates but at treatment pressures below the fracture pressure of the formation. This enables the acid to penetrate the formation and extend the depth of treatment while avoiding damage to the reservoir formation. Acid-Wash is an acid treatment of the wellbore designed to remove scale or similar deposits from perforations and well completion components. This generally do not include injection of treatment fluid into the reservoir formation.***
- ***Neither of these operations are designed, nor use enough pressure, to cause a vertical fracture of the rock formation, and are generally considered a maintenance operation. Acidizing should not be included in this definition***

The proposed rule would delete the definition of "fresh water." The BLM has maintained a definition of fresh water in its oil and gas operating regulations since 1988. However, in its onshore orders, the BLM has sought to protect all usable waters during drilling operations, not just fresh water. This distinction has led to confusion in the regulations. Usable water includes fresh water and water that is of lower quality than fresh water. The BLM intends to be more protective when it seeks to protect all usable water during drilling operations, not just fresh water. Therefore, the BLM proposes to delete the definition of fresh water.

Revised section 3162.3-2(a) would remove the phrase "perform nonroutine fracturing jobs" from the current 43 CFR 3162.3-2(a). The phrase "routine fracturing jobs or acidizing jobs, or"

would also be removed from existing section 3162.3-2(b). Well stimulation activities would be addressed under the new proposed 43 CFR 3162.3-3.

~~Proposed section 3162.3-3(a) would make it clear that this section applies only to well stimulation activities and that all other injection activities must comply with section 3162.3-2. This language is necessary to make the distinction between well stimulation activities and other well injection activities, such as secondary and tertiary recovery operations.~~

~~Proposed section 3162.3-3(b) would require the BLM's approval of all well stimulation activity. For new wells, the operator has the option of applying for the BLM's approval in its application for permit to drill (APD). For wells permitted prior to the effective date of this section or for wells permitted after the effective date of this section, the operator would submit a Sundry Notice and Report on Wells (Form 3160-5) for the well stimulation proposal for the BLM's approval before the operator begins the stimulation activity. This section would supersede and replace existing section 3162.3-2(b) that states that no prior approval is required for routine fracturing. This reference in the existing section would be deleted. Also, an operator must submit a Sundry Notice prior to well stimulation activity if the BLM's previous approval for well stimulation is more than five years old, or if the operator becomes aware of significant new information about the relevant geology, the stimulation operation or technology, or the anticipated impacts to any resource. The five-year period is consistent with common state practices, including those of Montana, Wyoming, and Colorado, which require that operators reconfirm well integrity for fracturing operations through a pressure test every five years. The BLM does not anticipate that the submittal of additional well stimulation-related information with APD applications will impact the timing of the approval of drilling permits. The BLM believes that the additional incremental information that would be required by this rule would be reviewed in conjunction with the APD and within the normal APD processing time frame. Also, the BLM anticipates that requests to conduct well stimulation activities on existing wells that have been in service more than five years will be reviewed promptly.~~

***Once a well is spudded, we cannot stop mid stream and wait for a new approval process. APD approvals have gone from one day in the 1980s to 30, 90, 190 days now. We have no reason to believe that could not happen to these new draft approvals. A drilling rig costs $16,500/day and a pulling/completion unit $4330/day. The physical problem is that we may lose the hole while the rig sits on it circulating. We might submit our protocol for hydraulic fracturing to the BLM for information only.***

***If this Sundry Notice is submitted with the APD (Application for Permit to Drill), it will accompany this APD to any other outside and applicable organization, such as BIA or Indian Tribal Organizations.***

***When cement is circulated to surface, temperature surveys and pressure test are reliable indicators of mechanical integrity. If there is evidence of potential failure, a CBL can be requested by the authorized officer. A variance should not be required.***

***Yet another approval step for a CBL is of significant concern for operators. This delay while a rig is on standby and the uncertainty of time to approval, or even that approval will be granted creates a disincentive for development of federal minerals. All the steps such as the wait on cement to thoroughly cure to give a good reading, run the log, wait to be printed, prepare Sundry and submittal to BLM, BLM review could cost an additional $25K to $50K per well. These type of delays and expenses could jeopardize well economics. Most often the cement behind the surface casing is circulated to surface and documented as such. The various***

***state agencies do an excellent job of monitoring the cement behind surface casing as they are very interested in the protection of water in their areas. Let the state agency do their job. BLM made an erroneous assumption that operators routinely perform CBLs. This requirement will create a burden not only in the delay and cost directly attributed to the CBL, such as time between cement and ability to run the log, but also through the delay and uncertainty of the interim approval step. CBLs are subject to interpretation and BLM has not addressed protocols for:***
***Qualifications for the staff responsible for evaluating logs, criteria for approval and resolution of differing interpretation, and time lines for approval.***

~~Proposed section 3162.3-3©(1) would require a report that includes the geological names, a geological description, and the depth of the top and the bottom of the formation into which well stimulation fluids would be injected. The report is needed so that the BLM may determine the properties of the rock layers and the thickness of the producing formation and identify the confining rocks above and below the zone that would be stimulated.~~
***BLM does not have the qualified, experienced Registered Professional Engineers to do this. All stimulation language must come out. Furthermore, this information is furnished in the APD Packet and/or completions filed with each well. New Mexico does likewise under their rule 19.15.16.10. State agencies are very concerned with the protection of underground water and hold operators to strict enforcement of all such rules. When an "Application to Drill"(APD) packet is submitted to the BLM, it contains a full design of the wells construction. When this is approved, the BLM is stating that they agree with this plan and find it sufficient for the protection of water. This APD is then sent to the NMOCD for their review and the assignment of the API number. Therefore the state is very much involved in the construction standards of all wells within the state. The BLM's involvement in this is a duplication of state requirements.***

~~Proposed section 3162.3-3(c)(2) would require the operator to submit information in the form of a cement bond log, which will help the BLM in its efforts to make sure that water resources are protected. A cement bond log is a tool used to gauge the extent to which water bearing formations are isolated from the casing string.~~ ~~***The state already requires this.***~~ ~~The log is a document that reports the data from a probe of the wellbore that uses sonic technology to detect gaps or voids in the cement and the casing. This log would be used to verify that the operator has taken the necessary precautions to prevent migration of fluids in the annulus from the fracture zone to the usable water horizons.~~
***NM requires an operator shall protect usable water by setting surface casing at depths established by BLM, by existing water wells, or as prescribed by State authorities. Proposed Rule 3162.3-3 (c) 2 requires a cement bond log prior to stimulation. Our horizontal well construction programs in Colorado and New Mexico involve liners that isolate zones using inflatable packers instead of cement (Exhibit #2). The liner is tied to surface equipment for hydraulic fracturing then removed for production. The packer system provides better isolation of each stimulation stage than cementing the horizontal. Isolation cannot be tested using cement bond logs.***

The proposed regulation allows for the use of other evaluation tools acceptable to the BLM in order to allow the substitution of equally effective tools or procedures~~. For example, an operator could request a variance from the requirements of proposed section 3162.3-3(c)(2) that it submit cement bond logs to prove that the occurrences of usable water have been isolated to protect them from contamination~~. The BLM ~~could~~ ***shall*** grant a variance to allow for

the use of logs other than cement bond logs (e.g., slim array sonic tool, ultrasonic imager tool) if it was satisfied that the alternative logs would meet or exceed the objectives of section (c)(2). ). ~~The BLM recognizes that the cement bond log would not be available prior to drilling a well. Therefore, when the operator takes advantage of the option to submit its well stimulation information as part of its APD, the cement bond log would be required after approval of the permit to drill and prior to commencing well stimulation activities. Many operators routinely perform cement bond logs for the zones of interest, so the BLM does not expect this step to be a burden for operators. The best available means for the BLM to help ensure that well stimulation activities do not contaminate aquifers is to require cement bond logs for the cement behind the pipe along all areas intersecting useable water, including running cement bond logs on the surface casing.~~

Proposed section 3162.3-3(c)(3) ~~would require reporting of the measured depth to the perforations in the casing and uncased hole intervals (open hole). This proposed section would also require the operator to disclose specific information about the water source to be used in the fracturing operation, including the location of the water that would be used as the base fluid. The BLM needs this information to determine the impacts associated with operations and the need for any mitigation applicable to Federal and Indian lands~~. ***The measured depth to perforations is never known until the well reaches Total Depth and is logged. To give this information prior to then is purely speculative at best. The source of water to be used must be arranged thru dealing with surface owners and is typically done closer to spud date*** This section would also require the operator to disclose the type of materials (proppants) that would be injected into the fractures to keep them open and the anticipated pressures to be used in the well stimulation operation.
***What mitigation would there be down hole? This is a new concept. The BLM has no one qualified to make those decisions.***

Proposed section 3162.3-3©(4), ~~consistent with protecting public health and safety and preventing unnecessary or undue degradation to the public lands, would require operators to certify in writing that they have complied with all applicable Federal, tribal, state, and local laws, rules, and regulations pertaining to proposed stimulation fluids. The BLM will use this information to make an informed decision on the proposed action. This section also would require the operator to certify that it has complied with all necessary permit and notice requirements. The BLM acknowledges that other Federal, state, tribal, and local agencies may have regulatory requirements that would apply to chemical handling, injecting fluids into the subsurface, and the protection of groundwater. It remains the responsibility of the operator to be aware of and comply with these regulatory requirements. The BLM will rely on the operator's certification that it has complied with all of the laws and regulations that apply to its operation.~~
***Incredible, we must certify we comply with the law and regulations. This certification would open an operator to possible criminal charges for falsely certifying to a federal official. How can any operator know what amounts to "unnecessary or undue degradation to the public lands"? The fact is that no one can certify they are in compliance with all federal, tribal, state and local laws, rules and regulations.The best we can do is a statements made are, to the best of my knowledge, true and correct. Onshore order no 1 Section III (6)***

Proposed section 3162.3-3(c)(5~~) would require the operator to submit a detailed description of the well stimulation engineering design to the BLM for approval. This information is needed in~~

~~order for the BLM to be able to verify that the proposed engineering design is adequate for safely conducting the proposed well stimulation~~. ***Might replace "approval" with "to the BLM for information purposes only."***
***BLM has fewexperienced, qualified Registered Professional Engineers to make this call. Differences between estimated and actual must not be confused with deviations or subject to incidents of non compliance.***

Proposed section 3162.3-3(c)(5)(i) ~~would require the operator to submit to the BLM an estimate of the total volume of fluid to be used in the stimulation~~.

Proposed section 3162.3-3(c)(5)(ii) ~~would require the operator to submit to the BLM a description of the range of the surface treating pressures anticipated for the stimulation. This information is needed by the BLM to verify that the maximum wellbore design burst pressure will not be exceeded at any stage of the well stimulation operation.~~
***BLM does not have the degreed, experienced engineers to make these decisions. How does a well bore burst?***

Proposed section 3162.3-3(c)(5)(iii) ~~would require the operator to submit to the BLM the proposed maximum anticipated injection pressure for the stimulation. This information is needed by the BLM to verify that the maximum allowable injection pressure will not be exceeded at any stage of the well stimulation operation~~

Proposed section 3162.3-3(c)(5)(iv) would require the operator to submit to the BLM the estimated or calculated fracture length and height anticipated as a result of the ***FRAC JOB.*** ~~stimulation, so that the BLM can verify that the intended effects of the well stimulation operation will remain confined to the petroleum-bearing rock layers and will not have unintended consequences on other rock layers, such as aquifers~~
***There will be consequences for us if our "anticipation" is incorrect. BLM is not qualified to decide. Impossible Proposed Rule 3162.3-3 (c) 5 requires a detailed engineering fracture stimulation design to be submitted that includes: total estimated volume of fluid, range of treating pressures, maximum injection pressure, and calculated fracture length and height. Even with sophisticated simulators, fracture geometry cannot be estimated with certainty. We design our fracture stimulations to create a complex geometry to maximize effective surface area of the treatment and optimize recovery. Variables for the model include but are not limited to, formation heterogeneity, fluid pump rates, fluid rheology, and treatment spacing. Providing estimates prior to gathering drilling and completion data gives a non unique solution for the stimulation.***

Proposed section 3162.3-3(c)(6) would require the operator to provide for information only data pertaining to the handling of recovered fluids that will be used for the stimulation activities for ~~approval. This information is being requested so that the BLM has all necessary information regarding chemicals being used in the event that the information is needed to help protect health and safety or to prevent unnecessary or undue degradation of the public lands.~~ ***All these approvals will be a problem. We can provide information, but there can be no approval. We have a lease and we have an approved APD. Completion is part of the process necessary to find and produce that which we leased. All these interim approvals delay the operator and the state and federal government from selling product.***

~~Proposed section 3162.3-3(c)(6)(i) would require the operator to submit to the BLM an estimate of the volume of fluid to be recovered during flow back, swabbing, and recovery from production facility vessels. This information is required to ensure that the facilities needed to process or contain the estimated volume of fluid will be available on location.~~ ***NO During this process it is almost impossible to determine if flowback water is from the hydraulic fracturing operation or produced water.***

Proposed section 3162.3-3(c)(6)(ii) would require the operator to submit to the BLM the proposed methods of managing the recovered fluids. This information is needed to ensure that the handling methods will adequately protect of public health and safety.

Proposed section 3162.3-3(c)(6)(iii) ~~would require the operator to submit to the BLM a description of the proposed disposal method of the recovered fluids. This is currently required by existing BLM regulations (i.e., Onshore Order Number 7, Disposal of Produced Water, (58 FR 47354). This information is requested so that the BLM has all necessary information regarding disposal of chemicals used in the event it is needed to protect the environment and human health and safety and to prevent unnecessary or undue degradation of the public lands. The BLM specifically requests comments on whether the operator should be required to submit as part of the Sundry Notice application additional information about how it will dispose of waste streams not specifically addressed in this proposal~~.

***The disposal of such fluids is heavily regulated by federal and state agencies and should be sufficient for BLM purposes also. The BLM does not need to address this, let the states do their jobs on this. The BLM involvement in this is a duplication of effort***

Proposed section 3162.3-3(c)(7) ~~would require the operator to provide, at the request of the BLM, additional information pertaining to any facet of the well stimulation proposal. For example, the BLM may require new or different tests or logs in cases where the original information submitted was inadequate, out of date, or incomplete. Such information may include, but is not limited to, tabular or graphical results of a mechanical integrity test, the results of logs run, the results of tests showing the total dissolved solids in water proposed to be used as the base fluid, and the name of the contractor performing the stimulation. This provision would allow the BLM to obtain additional information about the proposed well stimulation activities~~

***We are striking all language relating to well stimulation.***

Proposed section 3162.3-3(d***)*** ~~would require the operator to perform a successful mechanical integrity test before beginning well stimulation operations. This requirement is necessary to help ensure the integrity of the wellbore under anticipated maximum pressures during well stimulation operations.~~

Proposed section 3162.3-3(d)(1) ~~would require the mechanical integrity test to emulate the pressure conditions that would be seen in the proposed stimulation process. This test would show that the casing is strong enough to protect water and other subsurface resources during well stimulation activities~~

***Already regulated by Onshore Order No 1 Section (B) (1) (h) All casing strings below the conductor shall be pressure tested to 0.22 psi per foot of casing string length or 1500 psi, whichever is greater, but not to exceed 70 percent of the minimum internal yield.***
***And New Mexico OCD 19.15.25.14 Demonstrating Mechanical Integrity***

***A. An operator may use the following methods of demonstrating internal casing integrity for wells to be placed in approved temporary abandonment:***
***(1) the operator may set a cast iron bridge plug within 100 feet of uppermost perforations or production casing shoe, load the casing with inert fluid and pressure test to 500 psi surface pressure with a pressure drop of not more than 10 percent over a 30 minute period;***
***(2) the operator may run a retrievable bridge plug or packer to within 100 feet of uppermost perforations or production casing shoe, and test the well to 500 psi surface pressure for 30 minutes with a pressure drop of not greater than 10 percent over a 30 minute period; or (3) B. (1) (2) top off the casing with inert fluid prior to leaving the location;***
***(3) report flow during the test in Paragraph (2) of Subsection A of 19.15.25.14 NMAC to the appropriate division district office prior to completion of the temporary abandonment operations; the division may require remediation of the flow prior to approving the well's temporary abandonment. the operator may demonstrate that the well has been completed for less than five years and has not been connected to a pipeline. During the testing described in Paragraphs (1) and (2) of Subsection A of 19.15.25.14 NMAC the operator shall: open all casing valves during the internal pressure tests and report a flow or pressure change occurring immediately before, during or immediately after the 30 minute pressure test;***
***C. An operator may use any method approved by the EPA in 40 C.F.R. section 146.8(c) to demonstrate external casing and cement 19.15.25 NMAC: Integrity for wells to be placed in approved temporary abandonment.***
***D. The division shall not accept mechanical integrity tests or logs conducted more than 12 months prior to submittal.***
***E. The operator shall record mechanical integrity tests on a chart recorder with a maximum two hour clock and maximum 1000 pound spring, which has been calibrated within the six months prior to conducting the test. Witnesses to the test shall sign the chart. The operator shall submit the chart with form C-103 requesting approved temporary abandonment.***

The proposed section 3162.3-3(d)(2) ~~would establish the engineering criteria for using a fracturing string as a technique during well stimulation. The requirement to be 100 feet below the cement top would be imposed to ensure that the production or intermediate casing is surrounded by a competent cement sheath as required by Onshore Order Number 2. The 100 foot requirement is required by some state statutes (e.g., Montana Board of Oil and Gas Conservation, section 36.22.1106, Hydraulic Fracturing) and is a generally accepted standard in the industry. Testing would emulate the pressure conditions that would be seen in the proposed stimulation process in order to ensure that the casing used in the well would be robust enough to handle the pressures.~~

Proposed section 3162.3-3(d)(3~~) would require the use of the pressure test time requirement of holding pressure for 30 minutes with no more than 10 percent pressure loss. This requirement is the same standard applied in Onshore Order Number 2, Drilling, (53 FR 46790) Section III.B.h., to confirm the mechanical integrity of the casing. This language does not set a new standard in the BLM's regulations. This test, together with the other proposed requirements, would demonstrate if the casing is strong enough to protect water and other subsurface resources during well stimulation activities. The BLM believes that all of these tests are important to show that reasonable precautions have been taken to ensure the protection of other resources during well stimulation activities.~~
***Proposed Rule 3162.3-3 (d) 3 requires a pressure test to be held for 30 minutes with <10 percent leak off at maximum pressure. Horizontal completions with inflatable packers require***

***the use of open ended casing, float shoe or hydraulic actuated sleeve to circulate down perforating guns, sleeve actuating balls, or plugs. Open floats will not hold pressure tests and hydraulic actuated sleeves must open at a pressure lower than maximum treating pressure (pressure test limit required by rule).***

Proposed section 3162.3-3(e)(1) ~~would require the operator to continuously monitor and record the pressure(s) during the well stimulation operation. The pressure during the stimulation should be contained in the string through which the stimulation is being pumped. Unexpected changes in the monitored and recorded pressure(s) would provide an early indication of the possibility that well integrity has been compromised. This information is needed by the BLM to ensure that well stimulation activities are conducted as designed. This information would also show that stimulation fluids are going to the formation for which they were intended.~~

Proposed section 3162.3-3(e)(2) ~~would require the operator to orally notify the BLM as soon as possible, but no later than 24 hours following the incident, if during the stimulation operation the annulus pressure increases by more than 500 pounds per square inch over the annulus pressure immediately preceding the stimulation. Within 15 days after the occurrence, the operator must submit a Subsequent Report Sundry Notice (Form 3160-5, Sundry Notices and Report on Wells) to the BLM containing all details pertaining to the incident, including corrective actions taken. This information is needed by the BLM to ensure that stimulation fluids are going into the formation for which they were designed. The BLM also needs to obtain reasonable assurance that other resources are adequately protected. An increase of pressure in the annulus of this amount could indicate that the casing had been breached during well stimulation. Consistent with the BLM's Onshore Order Number 2, Drilling Operations, the operator must repair the casing should a breach occur.~~

~~Proposed section 3162.3-3(f) would require the operator to store recovered fluids in tanks or lined pits. The BLM is proposing this requirement because flowback fluids could contain hydrocarbons from the formation and could also contain additives and other components that might degrade surface and ground water if they were to be released without treatment. Additional conditions of approval for the handling of flowback water may be placed on the project by the BLM if needed to ensure protection of the environment and other resources. The BLM specifically requests comments on whether this rule should impose additional requirements that would require tanks or lined pits for drilling fluids and any other fluids associated with well stimulation operations.~~

Proposed section 3162.3-3(g) ~~would require the operator to submit to the BLM the post-operation data on a Subsequent Report Sundry Notice (Form 3160-5, Sundry Notices and Report on Wells) following the completion of the stimulation activities. The BLM would determine if the well stimulation operation was conducted as approved. This information would be retained by the BLM as part of the individual well record and would be available for use when the well has been depleted and the plugging of the well is being designed.~~

Proposed section 3162.3-3(g)(1) ~~would require, within 30 days after the operations is completed, reporting of the actual measured depth to the perforations and open hole interval. This information identifies the producing interval of the well and will be available for use when the well has been depleted and plugging of the well is being designed. Specific information as to the actual source of water, including location of the water being used as the base fluid, is required because the BLM needs the information to determine the impacts~~

~~associated with operations and the need for any mitigation applicable to Federal and Indian lands.~~

***30 days after completion determined for multi-well pads and for multi-stage wells. consider 30 days may not allow enough time to obtain data from the service provider for the report. data requested will change from the pre completion estimates and reiterate that they should not be considered deviations from actual plan or create a history of non-compliance.***

Proposed section 3162.3-3(g)(2) would require the operator to submit to the BLM the actual total volume of fluid used, including water, proppants, chemicals, and any other fluid used in ~~the stimulation(s)~~ ***FRAC JOB*** in order for the BLM to maintain a record of the stimulation operation as actually performed.

~~Proposed~~ section 3162.3-3(g)(3) ~~would require the operator to submit to the BLM a report of the surface pressure at the end of each stage pumped and the rate at which the fluid was pumped at the completion of each stage (i.e., just prior to shutting down the pumps). In addition to the information provided for the individual stages, the pressure values for each flush stage must also be included. This information is needed by the BLM for it to ensure that the maximum allowable pressure was not exceeded at any stage of the well stimulation operation.~~

~~Proposed sections~~ 3162.3-3(g)(4) and (5) ~~would require the operator to identify to the BLM the stimulation fluid by additive trade name and additive purpose, the Chemical Abstracts Service Registry Number, and the percent mass of each ingredient used in the stimulation operation. This information is needed in order for the BLM to maintain a record of the stimulation operation as performed. The information is being required in a format that does not link additives (required by 3162.3-3(g)(4)) to chemical composition of the materials (required by 3162.3-3(g)(5)) to minimize the risk of disclosure of any formulas of additives. This approach is similar to the one the State of Colorado adopted in 2011 (Colorado Oil and Gas Conservation Commission Rule 205A.b2.ix – xii). The BLM intends to place this information on a public web site and is working with the Ground Water Protection Council in an effort to integrate this information into the existing website known as FracFocus.org. The disclosure of the fluids used in hydraulic fracturing would only be required after the fracturing operation has taken place.~~ ***Language that reporting of data consistent with and/or disclosing chemicals to FracFocus is sufficient to meet requirement of 3162.3-3(g)(4) and (5).***

Proposed section 3162.3-3(g)(6) ~~would require the actual, estimated, or calculated fracture length and height of the stimulation(s) to be reported to the BLM so that it can verify that the intended effects of the well stimulation operation remain confined to the petroleum-bearing rock layers and will not have unintended consequences on other rock layers or aquifers. This section would require the operator to show that the well stimulation activity was successfully implemented as designed and that the integrity of the well was maintained during stimulation.~~ ***Information on fracfocus Fracture length and height will need to be measured, estimated, or calculated. Something we aren't commonly doing now. We design our fracs to stay in zone – it makes business sense. Besides there is plenty of data that demonstrates that fracs don't get anywhere near water zones.***

***Proposed section 3162.3-3(g)(6) allows the option of estimating or calculating the fracture length and height but then seems to impose a more stringent verification process based on the statement "would require the operator to show that the well stimulation activity was successfully implemented as designed." This appears to put the burden on the operator to***

***prove the frac length and height. Operators only have a general understanding of the frac length and height due to modeled inputs and execution plans.***
***This would require the service companies to re-run the fracture model with actual information. This is overly burdensome and operators and/or would possibly need to hire additional personnel which is an unnecessary expense.***

Proposed section 3162.3-3(g)(7) would allow the operator flexibility to report online the information listed in proposed sections 3162.3-3(g)(1) through 3162.3-3(g)(6) by attaching a copy of the service company contractor's job log or report, provided the information required is adequately addressed. The operator is responsible for ensuring the accuracy of any information provided to the BLM, even if originally drafted by a third party.

Proposed section 3162.3-3(g)(8), ~~would require operators to certify they have complied with all applicable Federal, state, tribal, and local laws, rules, and regulations pertaining to the stimulation fluids that were actually used during well stimulation operations. The proposed section would also require that the operator certify that it has complied with all necessary permit and notice requirements. This information would be retained by the BLM as part of the well record and be available for use when the well has been depleted and closure of the well is being designed. The information is also needed for the BLM to fulfill its obligation to prevent unnecessary or undue degradation of the public land.~~
***Operators cannot attest to a service provider's compliance with all applicable requirements. Tribal and local laws can be enacted quickly and not allow adequate time for an operator to comply with requirements, NM 19.15.16.19 LOG, COMPLETION AND WORKOVER REPORTS: certification by the operator that the information included on the hydraulic fracture disclosure form is true and complete to the best of the operator's knowledge and belief; and the signature, printed name, e-mail address and title of the operator or operator's designated representative.***

Proposed section 3162.3-3(g)(9) ~~would require operators to certify that wellbore integrity was maintained throughout the operation. This information is needed because the BLM has a mandate to protect human health and safety and prevent contamination of the environment.~~

Proposed section 3162.3-3(g)(10) ~~would require the operator to provide information describing the handling of the fluids used for the stimulation activities, flow-back fluids, and produced water. The operator must also report how it handled those fluids after operations were completed.~~

Proposed section 3162.3-3(g)(10)(i) ~~would require the operator to report the volume of fluid recovered during flow back, swabbing, or recovery from production facility vessels.~~ ***A vessel is a utensil for holding something, as a bowl or kettle. Webster's New World. We do not use many vessels during a frac job so we suspect the drafters meant a tank. The failure to use terms of art common to an industry in a regulation leads to ambiguity and confusion on the part of the regulated community. Miss-use of the oil field vernacular leads us to conclude that rules are being drafted in Washington by federal government employees who have little knowledge of how the oil field really works.***

Proposed section 3162.3-3(g)(10)(ii) ~~would require the operator to report the methods of managing the recovered fluids~~.

Proposed section 3162.3-3(g)(10)(iii) ~~would require the operator to report the disposal method of the recovered fluids. This section also makes it clear that the fluid disposal methods must be consistent with Onshore Order Number 7, Disposal of Produced Water (58 FR 47353). This information is needed so that the BLM can help protect human health and safety and prevent the contamination of the environment. The BLM also needs to confirm that the disposal methods used are those that were approved and conform to the regulations.~~

Proposed section 3162.3-3(g)(11) ~~would require the operator to submit documentation and an explanation if the actual operations deviated from the approved plan. Understanding the complexities of well stimulation, the BLM expects there to be slight differences between the proposed plan and the actual operation.~~

***BLM is creating a record of deviation from an approved plan based on information submitted as estimates. Recognizing that values will definitely change during the completion of the well, the requirement of pre job submittals of estimate as such information may be misleading and has little value. BLM must not look at these deviations as non-compliance.***

***Proposed*** sections 3162.3-3(h) and (i) ~~would notify the operator of procedures it needs to follow to identify information required to be submitted under this section that the operator believes to be exempt, by law, from public disclosure. If the operator fails to specifically identify information as exempt from disclosure by Federal law, the BLM will release that information. The BLM may also release information which the operator has marked as exempt if the BLM determines that public release is not prohibited by Federal law after providing the operator with no fewer than 10 business days' notice of the determination. All other information submitted by the operator will become a matter of public record.~~

> ***This is an undue burden as operators do not normally own the right of protection for information entitled to trade secret protection. In Fracfocus 10 business days is not adequate time for the operator to convey information to the owner of the trade secret. 10 business days is not adequate for communication to appropriate party and action, nor is the process for appeal specified.***

Proposed section 3162.3-3(j) would provide the operator with a process for requesting a variance from the minimum standards of this regulation. Variances apply only to operational activities and do not apply to the actual approval process. The proposed regulation would make clear that the BLM has the right to rescind a variance or modify any condition of approval due to changes in Federal law, technology, regulation, field operations, noncompliance, or other reasons. The BLM must make a determination that the variance request meets or exceeds the objectives of the regulation. For example, an operator could request a variance from the requirements of proposed section 3162.3-3(c)(2) that it submit cement bond logs to prove that the occurrences of usable water have been isolated to protect them from contamination~~.~~ ~~The BLM could grant a variance to allow for the use of logs other than cement bond logs if it was satisfied that the alternative logs would meet or exceed the objectives of section (c)(2). This variance provision is consistent with existing BLM regulation such as Onshore Order Number 1 (see section X. of Onshore Oil and Gas Operations; Federal and Indian Oil and Gas Leases; Onshore Oil and Gas Order Number 1, Approval of Operations (72 FR 10308, 10337).~~

Revised section 3162.5-2(d) ~~would remove the references to fresh water and remove the phrase "containing 5,000 ppm or less of dissolved solids." This revision would require the operator to~~

~~isolate all usable water. This language does not set a new standard in the BLM's regulations. Since 1988, Onshore Order Number 2, Drilling Operations, (53 FR 46790) Section II.Y. has defined usable water and Onshore Order Number 2, Drilling Operations, Section III.B. has required the operator to "protect and/or isolate all usable water zones." Section 3162.5(d) was not revised when Onshore Order Number 2, Drilling Operations, was promulgated, which has led to some confusion in implementing and interpreting the regulations.~~
***More duplicative regulations. States have different definitions of water that must be protected and this proposed rule will just add another definition of water that must be isolated. There are also other federal water protection in place.***

Sincerely,

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