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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

Via Federal eRulemaking Portal: <http://www.regulations.gov>

Re: Proposed Rule to Regulate Hydraulic Fracturing on Federal and Indian Lands/78 FR 31636

Hess Corporation (Hess) appreciates the opportunity to comment on the Notice published by the Department of the Interior Bureau of Land Management's (BLM) Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands/78 FR 31636 published in the Federal Register May 24, 2013 (Volume 78, Number 101) at 78 FR 31636-31637 ("Proposed HF Regulations").

Hess is an integrated energy company with operations in over 20 countries. Within our exploration and production operations, Hess holds BLM leases in the state of North Dakota and we intend to drill and hydraulically fracture wells on BLM land in 2014.

Hess comments will focus on the anticipated potential impacts of this rule as it relates to our operations in North Dakota. In particular, Hess comments focus on the proposed regulations for Mechanical Integrity Testing, Monitoring of Cementing Operations, Usable Water, Type Well and Chemical Disclosure. However, Hess has participated in the development of and endorses the more detailed comments submitted by the American Petroleum Institute ("API").

Hess Corporation (“Hess”) is pleased to submit the following comments in response to the Department of Interior, Bureau of Land Management (“BLM”) May 15, 2013 *Federal Register* notice announcing proposed amendments to 43 C.F.R. Part 3160, relating to hydraulic fracturing on public land and Indian land “Proposed HF Regulations”. Hess’s comments focus on five major concerns:

- A. **Mechanical Integrity Testing Prior to Hydraulic Fracturing**
- B. **Monitoring of Cementing Operations Prior to Hydraulic Fracturing**
- C. **Definition of Usable Water**
- D. **Definition of Type Well**
- E. **Reporting Requirements for Chemical Disclosure**

For the reasons explained in detail below, Hess requests the BLM modify the proposed regulations as recommended and provide the public with an opportunity to comment.

A. MECHANICAL INTEGRITY TESTING PRIOR TO HYDRAULIC FRACTURING

The requirement of pressure testing the hydraulic fracturing string is unnecessary, cost prohibitive, and may cause damage to the well.

Proposed Section 43 CFR 3162.3-3(f) (2) - Mechanical Integrity Testing Prior to Hydraulic Fracturing as proposed requires that “If hydraulic fracturing through a fracturing string is proposed, the fracturing string must be inserted into a liner or run on a packer-set not less than 100 feet below the cement top of the production or intermediate casing. The fracturing string must be tested to not less than the maximum anticipated treating pressure minus the annulus pressure applied between the fracturing string and the production or intermediate casing.”.

In light of the absence of a “fracturing string” definition within the BLM regulations, Hess offers the following information to provide clarity and context for our comments on this matter. A fracturing string is a string of pipe that is used to transport fluids to hydraulically fracture a well at the zone of interest. It ties the liner assembly to the surface. It is typically removed prior to flowback of the well or a short time period after the well has cleaned up (production has stabilized for the fluids it will typically produce – oil, gas and water). Fracturing strings are not required to be used to perform hydraulic fracturing. They do however, in certain specific instances provide an additional level of control and benefit to the hydraulic fracturing process.

In addition, Hess provides the BLM with the following detailed technical information for their consideration:

1. Hess uses a PH-6 metal to metal sealed connection for our fracturing strings, which is considered a premium connection by API standards.
 - i. The fracturing string manufacturer is Hydril Company or other licensed suppliers.
 - ii. Hess utilizes two grades of fracturing string: For wells with a Max Surface Pressure (MSP) of 8,000 pounds per square inch (PSI), we use a 4-1/2" 15.5 lb/ft L-80 PH-6 Connection with a Burst/Collapse rating of 10,480 PSI and 11,090 PSI respectively. For wells with a MSP of 9000 PSI pressure we use 4-1/2" 15.5 lb/ft P-110 PH-6 Connection with a Burst/Collapse rating of 14,420 PSI and 14,340 PSI respectively.
 - iii. Thread Details:
 1. APPLICATIONS
 - a. Production tubing
 - b. Work strings
 - c. Drilling cement
 - d. Milling
 - e. Fishing
 - f. High-pressure drill stem testing
 2. KEY FEATURES/BENEFITS
 - a. Two-step, noninterference thread for trouble-free makeup
 - b. 100% pipe body tension strength
 - c. 100% metal-to-metal internal pressure seal
 - d. 100% external pressure seal
 - e. Special clearance outer diameter retains 100% tension and pressure ratings
 - f. High torque strength provided by 30° reverse-angle shoulder
 - g. Suitable for hydrogen sulfide service
2. The hydraulic fracturing string is visually inspected under controlled conditions prior to bringing to the field for use. The inspection includes screening with calibrated scanner to evaluate corrosion, wear and thread damage. Pipe will be rejected if the screening indicates poor quality.
3. At initiation, the injection pressure is monitored against the annulus pressure for communication. If pressure responses indicate that there is communication from the Frac String to the annulus, the hydraulic fracturing treatment is not started and the issue is identified and corrected.
4. During the hydraulic fracturing operations, annulus pressures are continuously monitored and recorded. If potential communication from the fracturing string to the annulus is indicated, the operation is suspended until the cause is determined. A risk assessment is performed and a plan of action is developed. By conducting testing dynamically during the hydraulic fracturing event, a broader evaluation of the operations is provided verses conducting a static test on the fracturing string prior to the event.

5. This PH-6 premium fracturing string connection has been proven to be effective. Hess has successfully used this connection on over 400 hydraulic fracturing events with no failures.
6. As currently proposed by the BLM, pressure testing of the hydraulic fracturing string would result in approximately 12 hours of rig time delay at an average cost of \$38,000 per well. In addition to the rig delay cost, the pressure testing itself would add approximately \$16,000 in costs per well.

Therefore, Hess proposes that the BLM allow for alternative dynamic monitoring in lieu of mechanical integrity testing satisfying the assurance that there is no communication between the fracturing string and the annulus. The recommended alternative language is as follows:

“If hydraulic fracturing through a fracturing string is proposed, the fracturing string must be tested or monitored to assure there is no communication between the fracturing string and the Annulus by one of the following methods.

- (i) If using a premium connection, the injection pressure must be monitored against the Annulus pressure throughout the hydraulic fracturing event. If pressure responses indicate that there is communication from the fracturing string to the Annulus, the injection of hydraulic fracturing fluid shall be suspended until the cause of the communication is identified and corrected.
- (ii) If using an API connection, the fracturing string must be inserted into a liner or run on a packer-set not less than 100 feet below the cement top of the production or intermediate casing. The fracturing string must be tested to not less than the maximum anticipated treating pressure minus the annulus pressure applied between the fracturing string and the production or intermediate casing.

B. MONITORING OF CEMENTING OPERATIONS PRIOR TO HYDRAULIC FRACTURING

The requirement of performing a cement evaluation log on surface casing prior to performing hydraulic fracturing is unnecessary, cost prohibitive, and may cause damage to the well.

Proposed Section 43 CFR 3162.3-3(e) (2) – Monitoring of Cementing Operations and Cement Evaluation Log Prior to Hydraulic Fracturing as proposed requires that “The operator must run a cement evaluation log or logs on each casing that protects usable water...”.

As proposed above, running a cement evaluation log (CEL) on surface casing could result in approximately 12 hours of rig time delay and result in an estimated additional cost of \$50,000 per well. This includes the time for the rig and the cost from the wireline company to run the CEL.

1. North Dakota currently requires that a cement evaluation log be run on all intermediate and production casing. For the surface casing a cement evaluation log is required only if cement is not observed to extend to the surface.

2. For the production/intermediate casing, if there is an indication from the CEL that there is a problem with the cement, North Dakota requires that a fracturing string be used to complete the hydraulic fracturing event. Repairs to the cement are then performed after the hydraulic fracturing event.
3. Making repairs to the cement prior to performing a hydraulic fracturing event can result in losses of well integrity.

This process has proven to be effective. Hess has successfully used this cement evaluation and control process on over 400 hydraulic fracturing events with no failures.

Therefore, Hess proposes that the BLM allow for an alternative cement integrity assurance process. The recommended alternative language is as follows:

Proposed Section 43 CFR 3162.3-3(e) (2) The operator must run a cement evaluation log or logs on the intermediate and production casings. A cement evaluation log shall be run on the surface casing only if cement does not extend to the surface. Cement evaluation logs are not required for the conductor casing. The operator must submit those logs to the authorized officer within 30 days after operations, except as provided under (e) (3) of this section.

Proposed Section 43 CFR 3162.3-3(e) (4) For any well, if there is an indication of an inadequate cement job (such as, but not limited to, lost returns, cement channeling, gas cut mud, or failure of equipment), then the operator must report that information to the authorized officer within 24 hours, followed by a written report within 48 hours. In the event an inadequate cement job is indicated, the operator must use a hydraulic fracturing string to conduct the operations. Following the hydraulic fracturing operations, the operator shall seek approval from BLM to obtain permission for how and when remediation must take place.

C. **DEFINITION OF “USABLE WATER”**

The proposed definition of “Usable Water” varies from the definition of the BLM Onshore Oil and Gas Order No. 2 and does not provide a reasonable level of certainty.

As defined in Onshore Oil and Gas Order No. 2, “*Usable Water* means generally those waters containing up to 10,000 ppm of total dissolved solids”. It is important to note that by including the word “generally”, this definition should appropriately allow for other factors to be considered in the determination of whether groundwater is usable or not. For example, the presence of other constituents could render the water unusable regardless of the total dissolved solids (TDS) content. In addition, the cost to access water zones at great depths and the subsequent treatment requirements to render the water fit for purpose could be infeasible and cost prohibitive despite the TDS concentration. This would be particularly apparent where the water bearing zone is limited in horizontal or vertical extent. The definition of “usable water” should not be so broad as to ignore local area aquifer and geologic conditions and actual current and projected groundwater

uses. It is more appropriate to retain the rights of state and other local water authorities who are most familiar with water needs and hydrogeological water cycle conditions to determine what water is “usable” for their areas of jurisdiction.

Therefore, Hess proposes that the BLM remove subsections 2, 3 and 4 of the “usable water” definition. In addition, Hess recommends alternative language for the definition and its existing subsection 1 as follows:

Usable water means generally those waters containing up to 10,000 parts per million (ppm) of total dissolved solids. The following geologic zones are deemed to contain usable water:

Underground sources of drinking water as defined by the U.S. Environmental Protection Agency or by State law (for Federal lands) or tribal law (for Indian lands)

Hess also shares the concerns raised by API in their comment letter regarding the potential interpretation of the proposed rule to imply a retroactive revision to existing approved BLM permits. We would appreciate BLM’s clarification that it does not intend the rule to be retroactive. Therefore, Hess requests that BLM clarify that existing wells constructed in accordance with an approved BLM permit, including approved variances, shall be deemed to comply with requirements to protect and/or isolate usable water.

D. DEFINITION OF “TYPE WELL”

The proposed definition of “Type Well” is unclear. The definition as proposed by BLM: “*Type Well* means an oil and gas well that can be used as a model for well completion in a field where geologic characteristics are substantially similar within the same field, and where operations such as drilling, cementing, and hydraulic fracturing are likely to be successfully replicated using the same design.”.

Hess appreciates BLM’s intent in using the term “Type Well” to reduce burdens of this rule. However, only limited guidance was provided by BLM regarding “Type Wells”. Hess, like many operators, has developed a standardized well design which is used by Hess across the extent of our Bakken operations. This is possible because the geological characteristics of the Bakken shale are quite similar, even though it covers a broad geographic area.

E. REPORTING REQUIREMENTS FOR CHEMICAL DISCLOSURE

The proposed requirements relating to reporting of chemical disclosure information should be modified to correct liability obligations to the proper party, and provide consistency with current state requirements

Proposed Section 43 CFR 3162.3-3(i) – Information that Must be Provided to the Authorized Officer After Completed Operations as proposed requires that chemical disclosure information be submitted within 30 days. For consistency with existing Colorado and North Dakota reporting requirements, Hess recommends that the timeframe for submittal be modified to 60 days.

Please also note that Hess fully supports the use of FracFocus to meet the requirements of chemical disclosure.

- a. The proposed requirements relating to certification of hydraulic fracturing fluid should be modified to reflect proper liability obligations.

Proposed section 43 CFR 3162.3-3(i)(7)(ii) and (iii) as proposed requires that the operator submit a certification that “...the hydraulic fracturing fluid used complied with all applicable permitting and notice requirements as well as all applicable Federal, State, and local laws, rules, and regulations”. This certification requirement is not only excessively broad; it also requires certification of a fluid that is often times applied by a service provider.

Therefore, Hess proposes that the BLM modify the certification requirement to appropriately reflect the actions over which the operator would have control and liability. The recommended alternative language is as follows: “...the use of hydraulic fracturing fluid complied with all applicable permitting and notice requirements as well as all applicable Federal, state, and local laws, rules, and regulations.”.

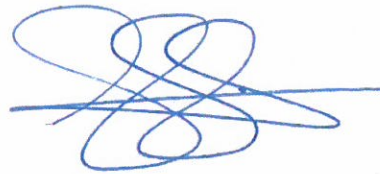
- b. The proposed requirements relating to trade secret information should be modified to reflect the service provider as the interested party.

Proposed section 3162.3-3(j) – Identifying Information Claimed to be Exempt from Public Disclosure as proposed misdirects the trade secret provisions from the service providers and suppliers to the operator. Trade secret information resides with the service provider or supplier, not the operator. Therefore this section should be modified accordingly to require trade secret information from the appropriate entities.

F. Conclusion

Hess recognizes that BLM has invested significant efforts in preparation of these proposed rules and appreciates the opportunity to comment. For all the reasons detailed in this comment letter, Hess strongly urges BLM to reconsider aspects of the proposed rule and make the appropriate modifications to allow for the continued safe and environmentally protective development of oil and gas resources.

Respectfully submitted,

A handwritten signature in blue ink, consisting of several overlapping loops and a horizontal line extending to the right.

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