Environmental Advisory



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Department of Interior Releases Revised Rules on Hydraulic Fracturing on Federal and Indian Lands

By David S. Hoffmann

A final rule that seeks to address perceived risks associated with hydraulic fracturing was published by the Department of Interior (DOI) in the *Federal Register* on March 26, 2015. The rule revises existing Bureau of Land Management (BLM) oil and gas drilling rules. *Hydraulic Fracturing on Federal and Indian Lands*, 80 Fed. Reg. 16,128 (Mar. 26, 2015). The revised regulations attempt to strike a balance between those who believe hydraulic fracturing should be banned or severely restricted, and those who believe that existing state regulatory programs are sufficient, and that the federal government has no right to impose additional or duplicative requirements.

Neither side may be satisfied with the result. Two industry associations have filed suit in Wyoming federal district court to overturn the regulations based on the lack of underlying justification over the rules and duplication of state law requirements. Congress may seek to similarly limit DOI's authority by expressly giving states sole regulatory authority in this area. Environmental groups continue to lobby for a complete moratorium on hydraulic fracturing, or to limit the practice until they are satisfied that their environmental, health and safety concerns are addressed.

The revised regulations track many of the regulatory revisions implemented or proposed by states and industry guidance recommendations. For example, the rules require that usable groundwater and production zones be isolated by casing and cementing; that flowback and produced water (recovered fluids) must be stored in tanks rather than in unlined pits; and that chemical additives must be disclosed through FracFocus, a publically accessible industry information site that many states utilize for required disclosure. *Id.* at 16,133. These proposed rules also require both pre- and post-drilling inspections, as well as additional reporting requirements that may reduce the ability of operators to move and locate heavy drilling equipment from site to site within tight scheduling windows.

Whether the regulations survive the legislative and litigation challenges remains to be seen, but DOI seems to be following the US Environmental Protection Agency (EPA) in seeking to impose an increased level of federal control over the largest energy boom in recent US history. Moreover, the preamble to the revised rules notes that operators may be subject to "criminal liability for certain false statements in public land matters, whether sworn or unsworn." *Id.* at 16,159 (citing 43 U.S.C. § 1212). This emphasis is consistent with EPA's national focus on energy extraction as a priority area for civil and criminal enforcement.

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Breakdown of Regulatory Changes

Definitions. One of the most contentious issues based on both the number and tenor of comments is the definition of "usable water." The final rule settled on a definition that broadly defines "usable water" as groundwater meeting a general water quality standard of 10,000 ppm or less, a designated underground drinking water source per EPA, state or tribal criteria, or waters designated for protection by a state or tribal authority. Although many commenters believed that this broad definition will require protection of deep, marginal groundwater zones, DOI maintains that, given increasing demands on water use, scarcity of supply and current state regulations and industry guidance, broader protection is not overly burdensome and is justified. The rule also includes a definition of "cement evaluation log," which covers an array of testing methods used to verify the integrity of cement bonding in the annular space, including cement bond and ultrasonic imaging logs.

Application and Approval for Hydraulic Fracturing Operations. Although BLM has not fundamentally altered its drilling approval process, application and approval for hydraulic fracturing operations will require additional information and documentation including wellbore geology, location of nearby faults, estimated depths of usable water and the confining zone, source and location of water supplies, and a proposed "master hydraulic fracturing plan" (MHFP) as well as a plan for managing and disposing of flowback and produced water. *Id.* at 16,218–19 (to be codified at 43 C.F.R. § 3162.3–3(d)). The MHFP may be submitted for one or more wells provided the geologic characteristics of the wells are substantially similar, and must include direction and length of hydraulic fracture propagation, estimated vertical distances to the nearest usable groundwater, and maximum anticipated surface pressure. *Id.* at 16,219 (to be codified at 43 C.F.R. § 3162.3–3(d)(5)). Well integrity information must be submitted for each well 48 hours prior to commencing hydraulic fracturing. *Id.* (to be codified at 43 C.F.R. § 3162.3–3(d)(5)).

Well operators have the option of cementing all casing strings to surface, or demonstrating adequate cementing through well integrity tests of the surface casing as well as intermediate and production casings and at least 200 feet of adequately bonded cement between the fracture zone and the deepest usable groundwater zone. *Id.* (to be codified at 43 C.F.R. § 3162.3-3(e)(2)(i)). In the event that there is an indication of inadequate cement bonding on any casing string used to isolate usable groundwater, the operator must notify BLM within 24 hours of discovery and submit a request for approval of a mitigation plan, as well as a subsequent report and certification that the cement deficiencies were corrected. *Id.* (to be codified at 43 C.F.R. § 3162.3-3(e)(3)). During hydraulic fracturing operations, the operator must continually monitor and record annulus pressure. *Id.* at 16,220 (to be codified at 43 C.F.R. § 3162.3-3(e)(1)).

Flowback and Produced Water Management. Any returned flowback or produced water from the well must be stored in "rigid enclosed, covered, or netted and screened above ground tanks" with a maximum of 500 bbl. *Id.* (to be codified at 43 C.F.R. § 3162.3–3(h)). Pits are no longer permitted, except if an applicant demonstrates that the use of rigid tanks is infeasible for "environmental, health or safety reasons" and the location of pits must meet minimum setback requirements. *Id.* (to be codified at 43 C.F.R. § 3162.3–3 (h)(1)). In addition, pits must be lined and equipped with a leak detection system. *Id.* (to be codified at 43 C.F.R. § 3162.3–3 (h)(2)).

Post-Fracturing Reporting. Within 30 days after completion of the last stage of hydraulic fracturing for each well, the operator must submit information including vertical depth of the well; source and location of water used; maximum surface pressures; fracture length and direction; total volume of fluid recovered and disposition; and a certification signed by the operator that all of the listed requirements have been met. *Id.* at 16,220 21 (to be codified at 43 C.F.R. § 3162.3–3(i)). Base fluid and any additives, including trade name, supplier, purpose, ingredients, Chemical Abstracts Service (CAS) number and concentrations must be submitted through FracFocus, unless the operator invokes trade secret protection under applicable law. *Id.* at 16,221 (to be codified at 43 C.F.R. § 3162.3–3(j)).

Individual, State or Tribal Variance. To respond to comments criticizing BLM for adding duplicative permit requirements on top of existing state requirements, the rules include provisions for submission of individual or state or tribal variances demonstrating that the existing state or tribal requirements meet or exceed the requirements in the new DOI rule. *Id.* (to be codified at 43 C.F.R. § $_{3162.3-3}(k)(2-3)$). In effect, if the information required by state or tribal regulation meets the standards of this rule, operators may submit the same information to BLM. *Id.*

Rule Analysis. Most of the new rule's requirements mirror existing or proposed state regulations or industry guidance. For example, many states require, and American Petroleum Institute (API) guidance recommends, detailed surface and subsurface plans including construction plats, seismic surveys and surface discharge controls. *See*, e.g., 25 PA. CODE REGS. § 78.83; AMERICAN PETROLEUM INSTITUTE, RECOMMENDED PRACTICES FOR HYDRAULIC FRACTURING, HF 3, § 12.2 (2011). Although the API guidance and many state regulations require baseline water sampling, the rule does not include that step as a requirement. *Id.* at 16,183. Cementing of surface, intermediate and production casings including productive groundwater zones is consistent with state law requirements and API guidance. *See*, e.g., CAL. CODE REGS. tit. 14, § 1722.4; 2 COLO. CODE REGS. § 404–1, 317.9; 16 TEX. ADMIN. CODE § 3.13(b); AMERICAN PETROLEUM INSTITUTE, ISOLATING POTENTIAL FLOW ZONES DURING WELL CONSTRUCTION, 65–2, § 4.6.3 (2nd Ed. 2010).

Cement logs and mechanical integrity tests are routinely required or recommended to demonstrate well integrity. AMERICAN PETROLEUM INSTITUTE, RECOMMENDED PRACTICES FOR HYDRAULIC FRACTURING, HF 1, § 7 (2009); *see*, e.g., CAL. CODE REGS. tit. 14, § 1722.4; 2 COLO. CODE REGS. § 404–1, 317.0; 16 TEX. ADMIN. CODE § 3.13(b); 25 PA. CODE § 78.85(f). Most states also require water management plans including source and disposition. *See*, e.g. W. VA. CODE § 22-6A–7(e); 58 PA. CONS. STAT. § 3211(m). And virtually all states require public disclosure of hydraulic fracturing fluids and additives through FracFocus. 80 Fed. Reg. at 16,133 (Mar. 26, 2015) (listing states that use FracFocus for chemical disclosure). BLM has already begun to review and compare Wyoming's oil and gas rules for possible variance in an effort to minimize potential impacts before the new rules take effect. *See* Alan Kovski, *BLM Has Begun Work on State Variances from Requirements of Federal Fracking Rule*, BNA, Mar. 25, 2015.

One provision that drew many comments and may pose significant challenges, particularly in remote areas, is the requirement to store flowback in portable tanks. Colorado requires, and other states are considering, the use of tanks for storage of returned fluids in certain circumstances, but DOI is the first to require it on a widespread scale, unless an operator is able to meet the criteria for infeasibility. *See* 2 COLO. CODE REGS. § 404–1, 317B. In addition, the application, reporting and inspection requirements may also pose significant concerns because of potential delays in the approval process. DOI rejected proposals to establish deadlines upon which BLM must approve or deny applications, so delays seem inherently likely given the increased demands on an agency that is admittedly understaffed. That, together with the additional information required and strict notification requirements will likely impact industry's ability to forecast and schedule drilling opportunities.

As noted above, while the revised rules do not change the existing enforcement or penalty structure, the rule states that operators may be subject to "criminal liability for certain false statements in public land matters, whether sworn or unsworn." 80 Fed. Reg. at 16,159 (Mar. 26, 2015) (citing 43 U.S.C. § 1212). Similar to other self-certifying regulatory reporting schemes, this may be fertile ground for future enforcement efforts, and it puts increased emphasis on the obligation of operators to seek to ensure accuracy in reporting, and on the level of inquiry made by their employees charged with certifying such reports. Finally, while these rules for the most part adopt many similar practices and procedures from state laws and industry guidance, the additional costs and the application and reporting requirements are likely to impact the pace of well development activities, particularly in more remote areas. Moreover, states may look to this rule as a model and adopt many of the same requirements.

The final rule can be viewed here.



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