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My name is John Rogers and I am the Associate Director of the Division of Oil, Gas and Mining for the State of Utah (DOGGM). The Division manages the permitting, regulation and monitoring of oil and gas drilling, Class II UIC injection wells and oil and gas disposal facilities in Utah. This includes hydraulic fracturing which it has regulated for many years, which is the primary purpose of this hearing.

Hydraulic fracturing (HF) has been an operational practice for completing and stimulating oil and gas wells in Utah since the 1960's. State government regulation of the oil and gas industry commenced with creation of the Utah Oil and Gas Conservation Commission in 1955. In all of the historical records of DOGM, there has never been a verified case of hydraulic fracturing causing or contributing to contamination of water resources. The Division has always had very stringent rules concerning well bore construction and the protection of water resources. However, to make the the process of hydraulic fracturing more transparent and alleviate the recent public fear of hydraulic fracturing, the Division adopted a formal hydraulic fracturing rule in October 2012. This rule combined many of the Division exiting rules concerning overall best management practices for oil and gas production as related to safe and efficient operations, as well as a public disclosure of chemicals used in the hydraulic fracturing process.

There are three major concerns that have come to the forefront concerning hydraulic fracturing. The BLM has presented these in their proposed rule and Utah has also addressed them historically and with their current hydraulic fracturing rule.

- (1) Provide public disclosure of chemicals used in hydraulic fracturing
- (2) Include regulations to insure well-bore integrity
- (3) Address issues related to flowback water

### **PUBLIC DISCLOSURE**

The Utah rule requires operators to report to fracfocus.org within 60 days of completion of the hydraulic fracturing operation of the chemicals used in the process. The primary purpose of fracfocus.org is to provide factual information concerning hydraulic fracturing and groundwater

protection. FracFocus is the national hydraulic fracturing chemical registry accepted by both industry and government. It is managed by the Ground Water Protection Council (GWPC) and the Interstate Oil and Gas Compact Commission (IOGCC), two organizations whose missions both revolve around conservation and environmental protection.

The site was created to provide the public access to reported chemicals used for hydraulic fracturing at specific well locations. To help users put this information into perspective, the site also provides objective information on hydraulic fracturing, the chemicals used, and the purposes they serve and the means by which groundwater is protected.

This reporting process that The Division uses and is also proposed by the BLM rule.

### **WELL BORE INTEGRITY**

Existing rules were already in place to insure well bore integrity and construction. This included detailed rules on:

- Casing and cementing programs
- Blowout prevention and uncontrolled flow
- Protection of freshwater aquifers
- Casing pressure tests

The Utah hydraulic fracturing rule emphasizes the the use of already existing rules that have manage oil and gas production in Utah for many years. The regulatory processes of The Division (that include permitting, inspection, compliance, and enforcement) are effective in ensuring the responsible development of Utah's resources with due regard for and protection of the environment. This begins with well bore integrity. The professional staff of DOGM has the local knowledge and expertise to address the technical and scientific challenges posed by Utah's unique geology and geography. A nationwide process of hydraulic fracturing rulemaking would be no more effective in achieving better oversight of hydraulic fracturing operations than exits at the state level in Utah and other states with similar rules. In addition, substantial cost of manpower and time for both government and the private sector organizations would be incurred.

On-site inspection of oil and gas wells are a key component of The Division's regulatory program. All wells drilled on state or private lands in Utah are subject to a rigorous inspection program that includes: inspection and witnessing of well control equipment tests, casing/cementing operations, follow up to third party complaints, general compliance verification, drilling operations, emergency response, final land restoration/bond release, well plugging, production/environmental, and workover/recompletion. In 2012, 8,983 such on-site inspections were performed by DOGM field operations staff.

Through a detail and very comprehensive geologic study, the depth to the usable ground water has been mapped in the primary oil and gas producing area of Utah, the Uintah Basin. Recognizing the usable water and its protection is the primary concern when developing a casing program for a potential well.

## **MANAGEMENT OF FLOWBACK WATER AND SURFACE PROTECTION**

The Division's rules state that the operators shall take all reasonable precautions to avoid polluting lands, streams, lakes, reservoirs, natural drainages and underground water. Prior to any drilling operations all drill sites have on-site inspections and are analyzed for surface conditions and best practices are employed to prevent any contamination of surface water or ground water. The Division's Board has recently approved (July 1, 2013) a revised set of rules entitled "Waste Management and Disposal" These rules update methods and restraints for disposal of RCRA (Resource Conservation Recovery Act) exempt waste from oil and gas production. This would include the the management of hydraulic fracturing fluid flow back.

Utah production water is dispose of by two methods:

- UIC Class II injection wells (94%)
- Evaporative disposal ponds (6%)

DOG M has primacy from EPA region 8 to permit Class II injection well on all non-Indian Country. The Division just recently went under an extensive review of the process from EPA and was found to be in compliance with their rules and regulations.

The Board at DOGM has recently approved new rules that revised the regulations concerning surface disposal facilities that accept hydraulic fracturing flowback. This includes:

- Chemical testing as needed
- Surface and sub-surface geology
- Size and depth limited to 10 acre-feet
- Protection of drinking water, flood plains and ground water
- Duel liners with leak detection system
- Bermed area to contain any catastrophic failure

- Safety and emergency plans
- Increased and escalated bonding.

The management of hydraulic fracturing flow back is monitored through both surface disposal and UIC Class II wells as directed by the EPA. No other regulation is necessary.

### **FEDERAL / STATE INTERACTION**

The Division has worked very well with federal agencies when concerned with spacing, flaring and split estate issues. However, there is no collaboration concerning hydraulic fracturing. The Division believes that a state wide standard as defined by The Division's hydraulic fracturing would be beneficial, rather than several regulations as proposed.

### **STATE AND INDUSTRY**

State and industry have worked very well together to establish a win-win situation concerning hydraulic fracturing flowback that is injected into the ground for water floods. Facilities, both permanent and temporary have been used to clean flowback water and use it in the water flood of an oil field. This recycled water greatly reduces the amount of fresh water that is used in hydraulic fracturing. In addition, water flow lines have been constructed in order to greatly reduce truck traffic and improve air quality.

### **CONCLUSION**

I believe that Utah DOGM does an excellent job in monitoring hydraulic fracturing in Utah. Also, it is my experience that other States also perform at a similar exceptional level. In the ongoing EPA study on hydraulic fracturing in order to insure public and stakeholder confidence, it is my opinions that the EPA may raise issues concerning possible impacts of hydraulic fracturing on drinking water resources. Those risks should identified and analyzed based on probability and possible perceived consequences. The current risk management as defined by modern technology as utilized by industry should be taken into account as to the true nature of those risks and quantified as actual or perceived risks.