

**STATE OF NEVADA
COMMISSION ON MINERAL RESOURCES
PUBLIC HEARING
FOR THE AMENDMENT OF REGULATIONS FOR
OIL AND GAS WELLS, WELLS INTENDED FOR HYDRAULIC FRACTURING
AND FOR GEOTHERMAL WELLS
Thursday, August 28, 2014 – 10:00 a.m.
Elko County Nannini Administration Building - Room 102
540 Court Street
Elko, Nevada**

CMR Members in Attendance:

Fred Gibson (Chairperson)
Richard DeLong
David Parker
John Snow
John Mudge
Dennis Bryan
Art Henderson

Also in Attendance:

Richard Perry – Secretary/Administrator – NDOM
Dave Gaskin – Deputy Administrator – NDEP
Alan Tinney – Bureau Chief – Water Pollution Control - NDEP
Mike Visher - NDOM
Valerie Kneefel – NDOM
Bryan Stockton - Deputy Attorney General

Chairperson Gibson called the meeting to order at 9:58 a.m., with a quorum of seven members present.

COMMENTS BY THE GENERAL PUBLIC – Pursuant to N.R.S. 241, this time is devoted to comments by the public, if any, and discussion of those comments. No action may be taken upon a matter raised under this item on the agenda until the matter itself has been specifically included on a successive agenda and identified as an item for possible action. All public comments will be limited to 5 minutes for each person. **ACTION WILL NOT BE TAKEN.**

- A.** Bob Fulkerson, Progressive Leadership Alliance of Nevada, requested ample arrangements be made for the hearing impaired, before the meeting continued, because the current system in place does not work. He questioned why the State was rushing into this process. He commented on the lack of regulations in the State of Nevada to protect the groundwater and reviewed regulations in other states to protect their groundwater. He commented the Commission was biased and not doing things in the best interest of the public. The Commission wants to give Noble Energy a pass on groundwater monitoring because they do not want to know the truth. The public wants more information and public notice when wells are being drilled in their areas. Mr. Fulkerson suggested waiting on moving forward with this process until the DRI study is completed. He commented on the State's lack of commitment to also protect sage grouse and wildlife, because the Nevada Department of Wildlife is not listed as one of the agencies to monitor hydraulic fracturing.
- B.** Grant Gerber, Elko County Commissioner, commented his family has been in the State since 1868. His experience with fracturing goes back forty years. He expressed his support for hydraulic fracturing and commented that opposition to fracturing may be politically-motivated. Oil and gas is needed in this country and does not need to be brought in from other countries. He commented that, in his opinion, hydraulic fracturing is safe, given his research with oil and gas leasing and is no threat to the sage grouse.

- C. Pam Borda, Executive Director - Northeastern Nevada Regional Development Authority, commented she wanted to go on record to say she was in support of the regulations. She thanked Rich Perry and his staff for their work. She was very much in favor of fracking, Noble Energy, and the economic boost to the State.
- D. Cliff Eckland stated he was the Mayor of Carlin, Nevada, but he was not representing a city or industry. He commented fracking on oil wells has been done since the 1940's - 1950's. He owns property in North Dakota that has been fracked and he has not seen any negative impact to the groundwater or wildlife. He understands people's concerns about protecting the groundwater, but the process makes it almost impossible for fracking fluids to reach the surface groundwater.
- E. Steve Fisher, Frac-Free Nevada, commented he moved from California to Nevada because of the pristine environment and groundwater. He researched fracking and came to the conclusion that: 1) the current plans are not well thought out and are ridiculously careless; and, 2) how quickly the process was implemented. He expressed concern about the groundwater to sustain his property and the decrease in tourism if fracking contaminates the ground.
- F. Larson Bell, Shoshone Tribe, stated his tribe still has a treaty with the United States. He commented on the spiritual connection to the land and the suffering that will occur to both people and animals from the lack of spirit in the land due to such things as hydraulic fracturing and global warming.
- G. Karlene Andreola, Andreola Farms and the Reese River Basin Citizens against Fracing, commented they did not receive any notification for the planned sale of land around their properties. They are intimately tied to their land and it is irresponsible to allow hydraulic fracturing to occur without an environmental impact study. She stated policy and regulations should be created and in place before this process is allowed to continue. One accident will destroy an entire region. Water is needed to frac, which is water that farms need. She requested measures be taken to involve Nevada citizens and the Legislature in developing policies and regulations instead of passing regulations in such a hurried manner. Hydraulic fracturing should not be allowed until baseline studies are completed. The land should be protected for now and for future generations.
- H. Jesse Baumgartner commented his family are fifth generation Nevadans. He questioned if Nevada was ready for this type of process and requested environmental impact studies be included in the regulations. He commented on the amount of water needed for fracking during the worst drought the State has seen in years. Nevada should be the state that sets the bar and puts in place the best practices that other States should follow. He requested the Commission postpone approving regulations until such practices are put in place.
- I. Mike Miller commented on the need to protect the environment for future generations. He requested further assessment of this process.
- J. Jennifer Eisele, Tribal Member of the Duck Valley Indian Reservation and the Western Shoshone Committee, stated she wanted to remind the Commission that this activity will occur on ancestral land of the Western Shoshone. She reviewed the Treaty of 1863. She stated there has been no communication with the Western Shoshone Committee regarding this issue. She requested a decision be postponed, due to the lack of public involvement. The Shoshone Tribe will prepare litigation to protect their water rights.
- K. Bob St. Louis commented, in his opinion, these regulations have not been rushed. The Division of Water Resources has done a good job with regulations. The protections put in place for these regulations are adequate for groundwater resources. He had confidence in the regulators and was in support of the regulations.
- L. Christian Gerlach commented he had to drive from Las Vegas to attend this public hearing. He stated it was egregious that a public meeting was only being held in Elko County and not throughout the State and that the public was not notified of the August 15, 2014 cut-off date for public comments to be submitted electronically. He stated he received comments from Gary Vesterman that he would be submitting to the Commission regarding water needed for inventions. Mr. Gerlach stated his comments regarded the need for water to sustain life on Earth. He expressed concern with the risk of contaminating the groundwater when there are other resources for energy other than oil and gas. There is a lack of regulations to protect the groundwater. He noted steel and concrete are not indestructible, but can break during an eruption. Water will be more valuable than oil and gasoline in the future. These regulations are being incredibly rushed. He will be filing petitions for more public hearings to be held throughout the State.

- M. Teresa Navarro, Board Chair for the Leadership Alliance of Nevada, commented the proposed regulations for underground water monitoring are inadequate, because regulations only monitor for leaks and do not monitor for equipment failure and operator error.
- N. John Norton commented on the need for progress and that, given his research, fracing is safe.
- O. Dawn Harris, Founder of Frac-Free Nevada, stated the hearing devices provided for the hearing impaired at the meeting failed. She commented on the environmental and health impacts to residents that may occur from the chemicals used in hydraulic fracturing. Studies need to be completed to determine the impact to the environment. There is a new method of fracing that is highly toxic. Fracing is being justified because there is lack of direct causation. There are other sources in Nevada for renewable energy. Ms. Harris also commented on the lack of diversity on the Commission.
- P. Norman DeLorme, Paiute and Washoe Indian, commented on his relationship to the land and that the Earth's crust is only seven miles deep. He questioned why the process was being rushed and stated regulations should be a model that works.
- Q. Bill Arthur, Elko resident, commented, in his opinion, Noble Energy was doing everything right.
- R. John Sande, legal counsel for the Western States Petroleum Association (WSPA), reviewed the following three regulations they are proposing: 1) on page 2, section 2, "area of review" should be revised to "fracture radial review area" because the acronym for area of review (AOR) is a term most applicable to the federal and state-delegated underground injection control or UIC programs, which is different from hydraulic fracturing; 2) on page 6, section 9.5 should include when the Administrator can request additional sampling; and, 3) on page 8, section 9.12 should clarify the provisions of NAC 522.9 must be fulfilled prior to the commencement of hydraulic fracturing activities. He noted Section 9 includes provisions that are post-fracturing requirements; therefore, it should be clarified that these provisions are not applicable because they are post-fracturing requirements.

Commissioner Parker asked how the area was determined for a "fracture radial review area". Mr. Sande stated he believed it was a one mile radius.

Commissioner Henderson asked if Mr. Sande's comment was to change the definition, but not the intent of the term. Mr. Sande replied that is correct. It was to clarify the area of review did not have anything to do with the UIC programs.

Commissioner Bryan asked if there was a sample of a specific trigger. Mr. Sande stated there was a sample on page 6.

- S. Jeff Williams, Elko County Commissioner, commented he agreed with Mr. Gerber's comments that hydraulic fracturing was safe and regulations were in place to protect the environment. He encouraged extracting energy sources from federal lands in order to keep the country and its economy from becoming more vulnerable to other countries.
- T. Kate Fay, Noble Energy, thanked the Commission for working in collaboration with other agencies, stakeholders and the environmental community to develop regulations that protect human health and the environment, especially the groundwater. She commented on Noble Energy's commitment to protect people and the environment. She believes in being transparent with the public regarding their operations and whole-heartedly supports notification requirements. Noble Energy is also an active member and participant in Frac Focus, a national, web-based registry that was created and maintained by two associations of State regulators, including NDEP, which provides information about hydraulic fracturing to the public.
- U. Vicky Rock, Winnemucca resident, stated one of her concerns was with earthquake probability and the increase in earthquake insurance should an earthquake occur due to hydraulic fracturing.
- V. William Johnson commented there was a recent article in a scientific magazine regarding the relationship between hydraulic fracturing and earthquake activity in Oklahoma. He requested a similar study be completed in Nevada.

I. PUBLIC HEARING

The Commission on Mineral Resources will consider written and oral comments and may adopt amendments to regulations for Oil and Gas Wells as set forth in Chapter 522 of the Nevada Administrative Code and for Geothermal Wells as set forth in Chapter 535A of the Nevada Administrative Code.

Commissioner Henderson requested Rich Perry provide a review of the process to develop regulations and respond to public questions and concerns.

With a PowerPoint© presentation, Rich Perry reviewed the following four agencies that are involved in permitting an oil well in the State of Nevada: 1) BLM; 2) NDEP; 3) NDOM; and, 4) Division of Water Resources. He also reviewed information received from other states in developing the updated regulations for Nevada. He stated, for a well that is intended for hydraulic fracturing, the application process requires an area of review process for a one-mile area around the well; groundwater baseline sampling and monitoring of up to four existing water sources; and, water analysis for inorganic and organic compounds and dissolved gases. The approved permits are uploaded on the Division of Minerals website for public review. Proposed regulations would require: an intermediate casing that is cemented 500 feet from the bottom; pressure testing of the production casing, once the well is completed, to ensure the casing is intact with no leaks; and, production casing cemented 500 feet above the uppermost zone of hydrocarbons so there is a seal to prevent contamination from strata to strata. During the hydraulic fracturing stimulation treatment, proposed regulations would require: a 14-day notification to landowners before hydraulic fracturing can begin; nearby water well sampling after hydraulic fracturing; a sundry notice required to be sent to the Division fourteen days prior describing the plan and the use of chemicals; monitor and record the hydraulic fracturing pressures during the process; contain all flow back liquids in steel tanks for containment; and, include a plan if solutions from the well path will be transported. Administrator Perry noted the minimal water use on vertical wells that have already been hydraulically fractured in Nevada. After completion of a well where hydraulic fracturing occurred, operators will be required to post the chemicals that were used on the Frac Focus website; resample water sources that were sampled pre- and post-frac 60-72 months later; and, provide notification to the Division if there are any levels of methane or petroleum hydrocarbons that are detected in the water samples. Other proposed changes to Nevada Administrative Code Chapter 522 include updates to oil and gas regulations; conductor casing cemented to the surface; minimum cementing of 500 feet; and, 500 feet of cemented intermediate casing or production casing from the bottom of the shoe or the highest hydrocarbon production zone. Administrator Perry noted Nevada has never had commercial production of gas. Geologists indicate Nevada may only be an oil-producing state. They have addressed the twenty regulatory elements for benchmarking. He reviewed the meeting schedule that took place when the draft regulations were developed, including a 10-week review of all public comments received. He reviewed the requirements in S.B. 390 that will assess the effects of hydraulic fracturing on waters in the state. He stated the Division has developed a list of approved chemicals to be used prior to hydraulic fracturing. The program was to be developed by July 1, 2014. The Legislature requested the regulations be implemented and the program adopted by January 1, 2015. There are several recommendations they are requesting to be considered for modification in the final regulations. With regards to seismic monitoring, seismic monitoring is in place in eastern Nevada. Administrator Perry stated the seismic activity in Oklahoma was due to the reinjection of water and not due to hydraulic fracturing. He noted Nevada has been reinjecting water from oil production for the past fifty years.

Commissioner Henderson asked if seismic monitoring recorded any activity when the three wells were hydraulically fractured in Nevada. Administrator Perry replied no, they did not.

Commissioner Bryan asked how high seismic activity registered on the Richter scale in other states and if any damage occurred from these events. It was stated activity registered at approximately 3.2 to 3.3, but it was not known if any damage occurred.

Regarding postponement of the regulations, Administrator Perry stated they were mandated by the Legislature to have the regulations and the program in place by January 1, 2015. Administrator Perry also stated that, in his opinion, they have met the meeting requirements in NAC Chapter 522. Dave Gaskin, Deputy Administrator for NDEP, added the Legislature was very clear in its mandate on the schedule for this process and they have been careful to proceed according to that schedule.

Regarding concerns about trimethylbenzene, Mike Visher stated it is listed as #17 on the Division's list of chemicals. He explained his research has shown the average concentration for this chemical's use was very low.

Commissioner Mudge commented on the extensive list of chemicals and asked how the public can be reassured that all of these chemicals will not end up in the groundwater. Mr. Gaskin stated the focus will be on prevention. The list is unprecedented in providing information to the public regarding what chemicals will be used.

Commissioner DeLong asked how many chemicals are listed on the Frac Focus website. Mr. Visher stated there are more than 600.

Regarding the proposed regulation changes by WSPA, Administrator Perry stated they were opposed to the first two changes because they believe the regulations, as currently written, allows them to do what they need to do. The third proposed change in section 12.9 should be a correction.

Commissioner Henderson asked about the other proposed change regarding well monitoring. Administrator Perry stated they do not believe it is necessary to mandate a monitoring well for every oil well that is drilled. However, they have proposed to formalize the requirement to sample from any well that is used for drill water located within 300' of the exploration well.

Commissioner Henderson disclosed his personal and professional relationship in the Oil and Gas Industry. He noted he took into consideration the value and well-being of his family and his home when developing these regulations.

Commissioner Bryan disclosed he is a Senior Vice President of the Western Lithium Corporation. He stated the hectorite muds produced by his company would not be used as part of the fracing process.

Commissioner Snow disclosed he has twenty-five years of geothermal and oil and gas regulatory experience in the State of Nevada. He owns parcels in three counties in the State of Nevada with mineral rights, he owns federal mineral leases in Nevada. He also owns stock in other companies outside of the state and owns no stock in energy companies doing business in the State of Nevada.

Commissioner Parker disclosed he owns shares in Exxon, which he inherited from his mother. His wife and daughter work in a family-owned company in the Bay area that exports lubricants packaged in the U. S. and shipped overseas. He has no affiliation with hydraulic fracturing in Nevada.

Commissioner DeLong disclosed he is President of Enviroscientists, a company that works with the natural resource industry, primarily mining, but also oil and gas. In the past, Noble Energy has been one of their clients. He also has investments in mutual funds that may have shares in oil and gas companies, but he was not aware of any at this time.

Commissioner DeLong commented, in his opinion, Administrator Perry has responded to public concerns regarding the timing of the process and the regulations to protect groundwater and other environmental protections. There were some public comments there were out of the jurisdiction of the Division.

Commissioner Henderson commented fracing has been around for several years. Senior members from the Division and other agencies with a certain level of expertise, as well as regulations from other states, were used to develop these regulations.

Commissioner Snow pointed out the three hydraulically fractured well jobs that were completed in the interim since the Legislature mandated this program to be implemented have been successful with no known adverse effects. Staff went out of their way to make sure these activities were supervised appropriately.

Commissioner Henderson noted the three hydraulically fractured jobs were controlled by COA's. Oil companies were required to follow strict guidelines set by NDOM and many of these guidelines are now in the proposed regulations.

Commissioner Bryan commented six of the seven Commissioners have a background in Earth Sciences.

Commissioner Mudge stated water protection was paramount in his concerns, as well. He is proud of the proposed regulations to monitor water wells and source control to prevent leaking.

Commissioner Snow stated he heard comments regarding concern about the proximity of the hydraulic fracturing activity to private land. He wanted to point out the BLM controls lease issuance activity or the development of mineral rights on federal land. The Division only regulates activities on those lands.

Commissioner DeLong stated he did not see a need to change the definition, as proposed by WSPA, if the Administrator feels the need for additional monitoring. He agreed with the clarification on page 8 to exclude 3B and 3C.

Commissioner Henderson asked Administrator Perry if there were any additional changes that needed to be made in addition to the three proposed changes. Administrator Perry replied no.

The Commission reviewed the three proposed changes from Administrator Perry on page 4, Section 9.1(e), on page 8, Section 12, and on page 9, Section 10.2.

Richard DeLong moved to approve the third revision from LCB (dated 7/24/14) to include the three edits from Mr. Perry and to replace “near” with “Area of Review” on page 4, Section 9.1(e). John Snow seconded the motion. The Motion carried unanimously.

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- A. Dawn Harris commented Frac Focus was a good source for public transparency, but it only allows the public to know what is in the water and does not provide a way for the public to dispute the chemicals being used. She questioned what assurance there was that monitoring of wells would continue with this more modern-type of hydraulic fracturing. There is also too much language that says things should be done, but there is no guarantee regulations will be enforced. She was concerned that no clear answer was given on the assurance that these chemicals will not enter the water system.
- B. Vicky Rock questioned the funding source for this program. She commented page 4 only shows how much water was used, but no time was given. She asked if there was any metering for that. Commissioner Henderson explained, on page 4, the actual amount of water used, including with sand, was over a period of less than four hours and that water recovered was stored in tanks by Noble Energy for reuse. Commissioner Snow noted future inspections will be conducted by the Field Inspector and the Program Manager.
- C. Bob Fulkerson commented there is still insufficient dialogue on this process. He encouraged more public hearings be held throughout the State. There are 3,300 transportation trips that are required to hydraulically fracture one well. He questioned who would assist in this mitigation. There is also lack of monitoring for long-term effects on groundwater. There were also loopholes to allow “trade secrets” to be used or chemicals that do not need to be listed for public review. He asked why the four carcinogenic chemicals that are listed are not banned. He stated he will continue to fight against this process.
- D. Karlene Andreola commented, in her opinion, this is still a rushed process. Her concern was the long-term effects on the environment and the lack of information about the effects on deep water wells.
- E. Christian Gerlach commented on studies completed regarding the effects on hydraulic fracturing on well production.
- F. Jennifer Eisele commented she still did not understand about the injection wells under the regulations and was concerned about the long-term damage.
- G. Norman DeLorme commented on “dead” water or recycled water. He stated he would like to see more public comment on this process.

There being no further business, the meeting adjourned at 12:52 p.m.