

This protest response was sent to the following individuals or organizations:

Anderson, L	Hennerty, M	Roberts, P
Andrews, K	Henty, R	Rockoff, Max
Archer, A	Hess, M	Rosethorn, C
Bachman, J	Hittel, CL	Rosethorn, J
Baker, P	Hittel, R	Ryan, J
Barger, P	Hoffman, L	Salazar, L
Barger,SH	Holden, H	Schlegel, G
Barger, S	Hollon, BC	Schlegel, G
Basile, P	Hufnagl, N	Schmidt, S
Bassett, C	Hunt, VJ	Schmidt, WE
Bell, LT	Hurd, N	Schuler, S
Benson, J	Jewell, I&S	Schweizer, S
Benson, O	Kahn, S	Shotwell, J
Berne, S	Kearns, M	Sievernich, L&C
Bondy, C	Khalsa, A	Taute, G&A
Brubaker, S	Knight, GD	The Monastery of the Holy
Bull, H	Kumpf, TM	Archangel Michael, et al
Buros, J	Lamoreux, ML	Thompson, P
Burton, A	Leany, W	Turner, B
Charis, J	Legato, V	Ussery, JW
Clark, W	Lister, S&C	Valencia, C
Cody, F	Logghe, J	Vanderbrook, K
Coe, D	Marshall, D&V	Wall, C
Cox, R	Martin, S	Wareham, C
Darr, M	Martinez, G	Wedda, B
Del Valle, A	Martinez, M	Whittaker, G
DiGangi, DC	McBride, T	Wikstrom, C
Dolci, R	McFarland, G	Williamson, MJ
Dolci, W	Minter, CB	Woolston, J
Douglas, J	Minter, J	
Douglas, R	Morrison, CC	
Drobeck, S	Nitz, J	
Eagleson, K	Orcutt, N	
Engelking, P	Phillips, M & George, J	
Ferguson, EJ	Price, C	
Fortson, T	Ramsey, B	
Garlie, R&J	Raymond, K	
Genth, DR	Rich, T	
Gonzales, M	Riege, C	
Graham, C	Rio Arriba Community	
Graham, J	Health Council, et al	
Harper, J	Rio Arriba Concerned	
Harrington, J	Citizens, et al	
Hennerty, J	Roach, WK	



# United States Department of the Interior



## BUREAU OF LAND MANAGEMENT

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In Reply Refer To:  
3100 (9210)

October 23, 2015

### **CERTIFIED MAIL RETURN RECEIPT REQUESTED**

(All individual letters will have a different number)

Individual  
Company  
Street  
City, State

### **DECISION PROTESTS DENIED OCTOBER 22, 2014, OIL & GAS LEASE SALE**

Between July 16, 2014 and August 18, 2014, the Bureau of Land Management (BLM), New Mexico State Office (NMSO) timely received 114 protest letters, two protest letters filed by non-governmental organizations, and a protest petition signed by 64 individuals. These letters were protesting the offering of 13 parcels (NM-201410-001, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, and -015) as described in the Notice of Competitive Lease Sale (Sale Notice) for the October 22, 2014 Competitive Oil and Gas Lease Sale.

The 13 parcels protested are located in Rio Arriba and Sandoval Counties, New Mexico within the Santa Fe National Forest (SFNF). The parcels are unleased Federal mineral estate administered by the BLM Farmington Field Office (FFO) with the surface estate administered by the United States Forest Service (USFS). The BLM issues and administers oil and gas leases on USFS lands only if the USFS does not object to leasing of specific lands. Altogether, the protested parcels aggregate approximately 20,146.67 acres.

### **BACKGROUND**

These parcels were nominated by interested parties in accordance with 43 CFR § 3120.3. After adjudication of the nominated parcels by the NMSO, the parcels were reviewed by the USFS to ensure leasing of the parcels would be in conformance with the applicable Santa Fe National Forest Plan decisions. The USFS did not object to leasing of these parcels and required the inclusion of appropriate stipulations (30 U.S.C. § 226(h)).

The role of the BLM in issuing oil and gas leases for lands managed by the USFS was changed by the Federal Onshore Oil and Gas Leasing Reform Act (FOOGLRA), which amended 30

U.S.C. § 226. As a result of FOGLRA, when USFS-administered lands are being considered for oil and gas leasing, the BLM must not issue any lease over the objection of the USFS, and the USFS can require the inclusion of appropriate stipulations (30 U.S.C. § 226(h)). The USFS must verify the lands have been adequately analyzed in a forest plan level leasing analysis, that leasing decisions are based on the analysis, and that there is no new significant information or circumstances requiring further environmental analysis. Leasing analysis must comply with National Environmental Policy Act (NEPA) and its implementing regulations at 40 CFR §§ 1500-1508 in considering the effect of leasing on the human environment, including reasonably foreseeable future development. If the USFS does not object to leasing, then the BLM retains separate, independent authority to decide whether to include USFS-administered lands in a lease sale and, to impose additional stipulations, as described at 43 CFR § 3107-2.

The parcels were also reviewed by the FFO including interdisciplinary review, field visits to nominated parcels (where appropriate), review of conformity with the land use decisions for the planning area and preparation of an Environmental Assessment (EA) documenting (NEPA) compliance. The NMSO also reviewed each of the parcels, and confirmed plan conformance and conformance with national and state BLM policies.

The preliminary parcel list was posted for a two-week public scoping period on March 10, 2014. Prior to posting of the Sale Notice advertising the parcels to be offered at the competitive sale, the BLM prepared an EA in which the BLM tiered the analysis to the SFNF Oil and Gas Leasing and Roads Management Environmental Impact Statement (EIS) and Record of Decision (ROD) issued in 2008 and the Supplemental EIS issued in 2012. The purpose of the lease sale EA is to analyze specific parcels to determine what reasonably foreseeable impacts may occur from leasing. The EA augments the decisions made in the EISs with current on-the-ground information. The 30-day comment period of the EA and unsigned Finding of No Significant Impact (FONSI), commenced on May 1, 2014. Many of the protestors provided comments to the BLM during this period. The 30-day protest period commenced on July 16, 2014. A total of 116 protests were received, in which the protestors requested the BLM reconsider leasing 13 parcels.

On October 22, 2014, the BLM conducted a competitive oil and gas lease sale during which all of the protest parcels were successfully bid upon, and the necessary monies were subsequently received by the BLM. Given the pending protest, the BLM has not issued the leases.

## **ISSUES**

The statement of reasons presented in the 114 individual protest letters and the petition signed by 64 individuals are similar. The majority of the protest letters did not specify a statement of reason(s). This response will cover all substantive statement of reasons. The BLM has reviewed the protestors' arguments in their entirety; the substantive arguments are numbered and summarized in bold, with BLM responses following.

- 1. The NEPA document produced by the BLM is generally inadequate and does not support a "Finding of No Significant Impact" (FONSI).**

BLM Response:

Section 102(2)(C) of NEPA requires consideration of the potential environmental impacts of a proposed action in an EIS if that action is a “major Federal action[s] significantly affecting the quality of the human environment” (42 U.S.C. § 4332(2)(C)). The BLM must consider all relevant matters of environmental concern, take a “hard look” at potential environmental impacts, and make a convincing case that no significant impact will result that has not already been addressed in an EIS or that any such impact will be reduced to insignificance by adoption of appropriate mitigation measures (see Wyoming Outdoor Council, 173 IBLA 226, 235 (2007)). In the October 2014 Lease Sale EA, the BLM identified, disclosed, and analyzed potential impacts that could arise from offering the parcels, including the impacts of hydraulic fracturing in the Environmental Impact sections related to Air Resources, Water Resources, Wildlife and Environmental Justice. The October 2014 Lease Sale EA tiers to the USFS SFNF 2008 and 2012 EISs where appropriate, and includes additional information as necessary. “Tiering” and “incorporation by reference” are two concepts, which are provided in the Council on Environmental Quality regulations implementing NEPA and which are designed to reduce redundant paperwork and analysis in the NEPA process (see 40 CFR § 1502.20 and § 1502.2). Through the use of tiering or incorporation by reference, federal agencies need not repeat analysis and content that is already contained in another NEPA document previously prepared by that agency or another in order to comply with NEPA.

The October 2014 Lease Sale EA and the USFS SFNF 2008 and 2012 EISs, concluded that the sale of parcels and issuance of oil and gas leases is strictly an administrative action that does not authorize ground-disturbing activities. While BLM acknowledges that leasing carries a right-to-use leased land subject to BLM controls, direct impacts from the act of leasing are not a foregone conclusion. Nonetheless, there are indirect effects, arguably caused by the act of leasing. Indirect effects are caused by the action, are later in time, but are still reasonably foreseeable, and may occur at some point after implantation of the proposed action (see 40 CFR § 1508.8(b)). The effects analysis in the section titled Environmental Impacts of the EA addresses indirect effects that could result from leasing these lands for oil and gas development and production. The EA addresses typical oil and gas exploration and development activities, including the potential future use of a particular type of well stimulation (hydraulic fracturing), which are generally anticipated as a result of lease issuance. Although the USFS SFNF 2008 and 2012 EISs do not provide specific information about oil and gas development scenarios, the EISs provide substantial information on potential surface disturbing impacts, as well as cumulative impacts related to the human and natural environment. The October 2014 Lease Sale EA and USFS SFNF 2008 and 2012 EISs identified several stipulations that the USFS and BLM would attach to the leases which are designed to protect cultural and visual resources, wildlife habitat, surface integrity, riparian areas and wetlands, and recreation areas. Lease stipulations attached to the parcels immediately mitigate some negative impacts from future development.

Ground disturbing activities cannot occur until a lessee applies for and receives approval for drilling on the lease. For this reason, without a discrete development proposal, the use of

hydraulic fracturing in the oil and gas exploration and development process cannot be determined at the lease stage. When a well is proposed for development, it must undergo a project-specific NEPA analysis when an Application for Permit to Drill (APD) is received. The site-specific analysis addresses the location, intensity, and timing of development, ensures that lease stipulations are applied and the project is in full compliance with Federal, State, Local, and Tribal laws, rules, regulations, and policy. When the proposed development is anticipated to or has the potential to have impacts on a resource(s), the analysis would identify best management practices (BMP) and attach additional restrictions and mitigations, known as Conditions of Approval (COA) that would minimize or eliminate the impacts. If adverse impacts are unavoidable, the project may not be approved or additional environmental analysis will be performed to disclose the effects.

Based on the lease stipulations accompanying the parcels and the requirement for additional site-specific analysis and mitigation, the impacts of future development would not rise to the level of significance and a FONSI is warranted. As well, no new evidence was presented that was not already considered in the EA or EISs or that is regulated by Federal or State laws, rules, regulations, or policy. Therefore, the statement of reason has been considered, found to be without merit and is denied.

**2. Impacts on water quality and quantity from lease development activities, including drilling, hydraulic fracturing and production were not adequately addressed in the Environmental Assessment. There is potential for surface and groundwater contamination from development activities, as well as, surface and groundwater depletion.**

BLM Response:

The FFO addressed potential impacts to water resources in the section titled Environmental Impacts, Water Resources which begins on page 37 of the October 2014 Lease Sale EA made available for the protest period. The EA analysis determined that there were no impacts to water resources from leasing the parcels; however, there could be indirect impacts to water resources from reasonably foreseeable oil and gas development on the leases, including groundwater contamination from inadequate casing and cementing of the wellbore; surface water contamination from accidental spills or releases of drilling fluids, hydraulic fracturing fluids, produced water, or chemicals used during development and production of a well; and groundwater depletion. The EA also concluded that “Adherence to APD COAs and other design measures would minimize potential effects to groundwater quality.”

***Quality***

Several protestors addressed concern over hydraulic fracturing and the impacts to water quality. As stated in the October 2014 Lease Sale EA, “there are no verified instances of hydraulic fracturing adversely affecting groundwater in the San Juan Basin.” This can, in part, be attributed to the fact that “the producing zone targeted by both action alternatives is well below

any underground sources of drinking water.” The EA states that the typical depth of groundwater in the San Juan Basin is 500 feet or less, and that any future hydraulic fracturing is expected to occur deeper than 5,700 feet as measured from the surface. The SFNF USFS 2008 EIS states the water depths in domestic wells are shallow ranging from six feet deep in the Arroyo Chijuilla watershed to 304 feet in the Rio Gallina watershed. Based on the distance between the groundwater and the targeted formations, no adverse impacts to groundwater are expected to occur.

The potential for drilling or hydraulic fracturing fluids or produced water to contaminate groundwater is significantly reduced if wells are properly cased and cemented. The BLM has adopted stringent requirements for casing and cementing of well bores (see Onshore Oil and Gas Order No. 2, Drilling Operations on Federal and Indian Oil and Gas Leases). As part of a complete APD package the operator must submit a drilling plan which includes the proposed casing and cementing program. The BLM thoroughly reviews these plans for every APD submitted to ensure that usable groundwater is isolated and that all BLM and state requirements for casing and cementing have been met or exceeded. While a well is being drilled, BLM inspectors are onsite when the surface casing is installed and cemented to confirm that the operator is following the approved casing and cementing plan. BLM inspectors verify cement integrity by witnessing casing pressure tests. These measures are intended to ensure that hydrocarbon-bearing strata at great depths remain isolated from surface waters and freshwater-bearing strata at shallow depths. New downhole tools are being used to detect the presence and quality of cement resulting in more precise results. If the pressure declines more than 10 percent in 30 minutes or if there is another indication of a leak, the casing must be re-cemented, repaired, or an additional casing string run and the casing tested again. All results are recorded in the driller’s log.

Because there are a number of chemicals that are used, stored, and/or produced on each well site, there is a potential for spills and leaks (which are described as ‘undesirable events’) to occur. The BLM has established regulations that require -- to the extent possible -- prevention of spills and leaks, reporting (via Notice to Lessees (NTL) 3A, Reporting of Undesirable Events), and emergency response. The first mitigation measure is at the APD phase in which the BLM works with the operator to site the well pad, tank battery, and access road as far as possible from the water source and the use of a close-loop drilling system if practicable. In addition, COAs are attached to APDs (e.g. impermeable liners for pits, secondary containment structures around all storage facilities including tank batteries, complying with the Environmental Protection Agency’s (EPA) Spill Prevention, Control and Countermeasure regulations (40 CFR § 112)), and BMPs, such as storing chemicals off the ground to prevent contact with the soil and standing water, to reduce the likelihood of these undesirable events occurring, and to mitigate damage from a spill or leak through remediation and reclamation.

Each field office maintains records of spills and leaks that occur within their jurisdiction. In addition, the New Mexico Oil Conservation District (NMOCD) requires that all spills regardless of landowner be reported to the State of New Mexico. The BLM did identify the potential for these events to occur in the impact assessment section of FFO Resource Management Plan

(RMP), and analyzed the potential consequences of spills and leaks, as a means of evaluating the effectiveness of mitigating measures. However, because these are rare and unforeseeable events, it would be inappropriate to quantitatively estimate the volumes of oil or brine leaks and spills, and their environmental consequences.

The BLM is responsible for inspection and enforcement of wells and facilities that have a Federal lease nexus and to conduct regular regulatory inspections, such as but not limited to, drilling, production, environmental compliance, production audits, and abandonment inspections.

If at any time during the life of the well, a well site is causing or has the potential to cause environmental damage, such as surface contamination, the BLM has the authority to issue Written Orders of the Authorized Officer, Incidents of Non-Compliance, citations, fines and, in specific circumstances, cessation of operations when incidents of non-compliance occur.

### *Quantity*

Water quantity is briefly addressed in the October 2014 Lease Sale EA stating “Because large volumes of water are needed for hydraulic fracturing, the use of groundwater for this purpose might contribute to the drawdown of groundwater aquifer levels.” (pp. 61). The amount of water used during well development is highly dependent on a number of factors including but not limited to: vertical or horizontal well, length of well bore, closed-loop or reserve pit drilling system, type of mud, type of stimulation used (e.g. hydraulic fracturing or acidizing), formation being fractured, and use of recycled water or inert gases. Therefore, the amount of water that could actually be used is too speculative to reasonably quantify at the leasing stage. When an APD is received a quantitative analysis can be completed. Once a well is drilled, operators are required to report the volumes of water and gases used in completion of the well to the BLM and are available for review at NMOCD’s website: [ocdimage.emnrd.state.nm.us](http://ocdimage.emnrd.state.nm.us).

In response to the high demand for and the lack of availability of water in the San Juan Basin, operators have successfully developed fracturing techniques that use considerably less water by substituting inert gases such as nitrogen and carbon dioxide as the carrier of the fluid for the frack. These can replace up to 95 percent of the water used for the frack fluids. The BLM encourages operators to utilize this new technology to lessen the impact of oil and gas development on water availability in the area.

The New Mexico Constitution establishes that all the water in the State belongs to the public and, to the extent that it is unappropriated, it is available for appropriation. The office of the State Engineer is responsible for permitting all surface and groundwater withdrawals apart from water rights acquired before 1907 and small scale stock watering. An application for a new appropriation or a change in an existing water right is reviewed for the existence of unappropriated waters, if the application will impair existing water rights, whether granting the application would be contrary to the conservation of water within the state, and if the application will be detrimental to the public welfare. Because of these statutes and process, the BLM does not generally have control of permitted water wells, their intended uses, or to regulate if they are

exceeding their permitted allocation. The BLM requires full compliance with applicable state regulations.

No new evidence was presented that was not already considered in the October 2014 Lease Sale EA or that is regulated by Federal or State laws, rules, regulations, or policy. In conclusion, the BLM adequately addressed potential impacts to water resources from oil and gas development, including hydraulic fracturing, and the environmental consequences of how development may affect water quality and quantity. Therefore, the statement of reason has been considered, found to be without merit and is denied.

### **3. Impacts on the human environment, including socioeconomics and human health and safety, from oil and gas development were not adequately addressed.**

#### BLM Response:

Generally, the protestors contend that leasing and subsequent development activities will affect the quality of life of individuals near the proposed parcels. They cite that property values will plummet, tourism will decrease, truck traffic will increase, and air quality will deteriorate. Any authorized exploration or development activities conducted on an oil or gas lease must conform to agency standards and environmental protection requirements.

The October 2014 Lease Sale EA acknowledges that oil and gas exploration, drilling, hydraulic fracturing or production may result in increased traffic, air pollution, and noise. The EA also describes potential positive impacts associated with oil and gas operations, including increased employment, population, and revenues. Lease stipulations attached to the parcels immediately mitigate some negative impacts from future development. Once site-specific lease activities are proposed, COAs, and BMPs are included to mitigate negative impacts.

Visual quality was not addressed in the October 2014 Lease Sale EA made available for the protest period; however, the USFS SFNF 2008 EIS addresses impacts from oil and gas leasing on visual resources (pp. 184-194). Five parcels have CSU stipulation for Retention Visual Quality Objective (High Scenic Integrity Objective) (CSU3B) attached, which informs the lessee that surface disturbance activities must be located and designed to be consistent with the visual quality objective of “retention” (or the scenic integrity of “high”) or to reclaim disturbed areas to meet visual quality objectives within one to three years from project startup. Lessees can achieve this requirement by following industry’s BMPs for minimizing impacts to visual quality, along with implementing visual quality guidelines in the Forest Plan Forest Service Scenery Management System Handbook (Agriculture Handbook 701). If development is proposed, the USFS would site the access road and well pad in such a way that minimizes the visibility of the surface disturbance from roads, trails, and towns. As well, COAs could be attached depending on the need to reduce the visual impacts. Potential COAs include but are not limited to low profile tanks, and painting the tanks a color that blends with the surrounding environment. Proper implementation of mitigation measures, BMPs, and COAs can greatly reduce visibility of the development, especially from further distances. These measures would prevent degradation



of scenic beauty. Scenic beauty could be an added value to property in the surrounding areas and is valued by recreationist visiting the area.

Project-specific NEPA analysis would address the location, intensity, and timing of proposed lease development; where necessary additional restrictions and mitigations in the form of BMPs and COAs could be required to ensure negative impacts are minimized. In conclusion, the BLM adequately addressed potential impacts to the human environment and the environmental consequences of how development may affect human health and safety, as well as the socioeconomics of development. Therefore, the statement of reason has been considered, found to be without merit and is denied.

#### **4. Impacts to air quality and climate from oil and gas development were not adequately addressed in the Environmental Assessment.**

##### BLM Response:

The BLM analyzed air resources including air quality and climate in the October 2014 Lease Sale EA starting on page 21 of the EA made available for the protest period. In the analysis, the BLM provided a brief description of when air quality could be impacted, an estimate of the expected greenhouse gas (GHG) emissions, and the large context of GHG emissions and climate change. The analysis incorporates by reference the Air Resources Technical Report for Oil and Gas Development<sup>1</sup> (Technical Report). The purpose of the Technical Report is to summarize the technical information on air quality and climate change and to collect and present the data and information needed for air quality and climate change analysis pertaining to oil and gas development.

The October 2014 Lease Sale EA estimated the total GHG emissions anticipated if all 25 nominated parcels considered under Alternative B - Proposed Action were leased at 11,611 metric tons CO<sub>2</sub>e annually; however, the decision was to lease only 13 of the 25 parcels. Using the reasonable foreseeable development scenario in Table 19 of the October 2014 Lease Sale EA made available for the protest period, it can be determined that if full lease development occurred on the 13 parcels a total of 67 vertical wells would be drilled resulting in 6,592.8 metric tons CO<sub>2</sub>e annually. The amounts to 0.0001% of the total GHG emissions from all sources in the United States and 0.15% of the total emissions from oil and gas field production in New Mexico. Cumulatively the level of emissions anticipated is insignificant.

Flaring was a concern for many protesters. Flaring occurs when natural gas that is produced at oil and gas wells cannot be captured or vented safely and efficiently. Natural gas is a valuable resource and most producers would rather capture natural gas than flare it. At the time of a lease sale, it is not possible to predict whether a well developed on the lease will flare or not. Compared to the air quality issues associated with venting of natural gas directly to the

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<sup>1</sup> US Department of Interior. BLM. 2014. Air Resources Technical Report for Oil and Gas Development. New Mexico State Office. [http://www.blm.gov/nm/st/en/prog/more/air\\_resources/air\\_resources\\_technical.html](http://www.blm.gov/nm/st/en/prog/more/air_resources/air_resources_technical.html).

atmosphere, flaring is a preferred method of releasing natural gas that cannot be captured because it minimizes the emissions of methane, a potent GHG, and volatile organic compound, which may be hazardous to human health and also contribute to the formation of ozone. The BLM encourages industry to incorporate and implement BMPs, which are designed to reduce impacts to air quality by reducing emissions. Typical measures include: adherence to BLM's NTL 4A, Royalty or Compensation for Oil and Gas Loss, concerning the venting and flaring of gas on Federal leases for natural gas emissions that cannot be economically recovered and flaring hydrocarbon gases at high temperatures in order to reduce emissions of incomplete combustion. As well, the BLM encourages operators to adopt proven, cost-effective technologies and practices that improve operation efficiency and reduce emissions (i.e. EPA's Natural Gas Star Program).

In October 2012, EPA promulgated air quality regulations for completion of hydraulically fractured gas wells. These rules require air pollution mitigation measures that reduce the emissions of volatile organic compounds during gas well completions. Mitigation includes a process known as "Green Completion" in which natural gas brought up during flowback must be recaptured and reroute into the gathering line thus reducing the emissions of Volatile Organic Compounds.

No new evidence was presented that was not already considered in the EA or the Technical Report or that is regulated by Federal or State laws, rules, regulations, or policy. In conclusion, the BLM adequately addressed potential impacts to air quality and climate and the environmental consequences of how development may affect air resources. Therefore, the statement of reason has been considered, found to be without merit and is denied.

## **5. Hydraulic fracturing has the potential to cause increased seismic activity or earthquakes.**

### **BLM Response:**

Dramatic increases in seismicity rates have been observed in the Central United States in the past five to seven years. Seismicity induced by human activity related to energy technologies is caused by change in pore pressure and/or change in stress taking place in the presence of (1) faults with specific properties and orientations, and (2) a critical state of stress in the rocks. In general, existing faults and fractures are stable (or are not sliding) under the natural horizontal and vertical stress acting on subsurface rocks. However, the crustal stress in any given area is perpetually in a state in which any stress change, for example through a change in subsurface pore pressure due to injecting or extracting fluid from a well, may change the stress acting on a nearby fault. This change in stress may result in slip or movement along that fault creating a seismic event. The increase seismicity is reported to be stimulated by injection of wastewater or other fluids in high volumes over an extended period of time in deep disposal wells<sup>2</sup>.

<sup>2</sup> Petersen, M.D., Mueller, C.S., Moschetti, M.P., Hoover, S.M., Rubinstein, J.L., Llenos, A.L., Michael, A.J., Ellsworth, W.L., McGarr, A.F., Holland, A.A., and Anderson, J.G., 2015, Incorporating induced seismicity in the 2014 United States National Seismic Hazard Model—Results of 2014 workshop and sensitivity studies: U.S. Geological Survey Open-File Report 2015–1070, 69 p., <http://dx.doi.org/10.3133/ofr20151070>.

Wastewater disposal wells typically operate for longer durations and inject much more fluid than hydraulic fracturing, making them more likely to induce a seismic event. Enhanced oil recovery injects fluid into rock layers where oil and gas have already been extracted, while wastewater injection often occurs in never-before-touched rocks. Therefore, wastewater injection can raise pressure levels more than enhanced oil recovery, and thus increases the likelihood of induced seismicity.

The EPA has the primary responsibility for fluid injection under the Safe Drinking Water Act (SDWA) of 1974, which does not address induced seismicity. The EPA is addressing the issue through a current study in consultation with various other state and federal agencies.

The United States Geological Survey (USGS) has the capability and expertise to address monitoring and research associated with induced seismic events. USGS is working to create a seismic hazard model that incorporates induced seismicity. In a 2014 report, USGS states that forecasting the seismic hazard from induced earthquakes is fundamentally different from forecasting the seismic hazard for natural, tectonic earthquakes. This is because the spatio-temporal patterns of induced earthquakes are reliant on economic forces and public policy decisions regarding extraction and injection of fluids. As such, they conclude that the rates of induced earthquakes are inherently variable and nonstationary; therefore, they will only be able to create maps based on an annual rate of exceedance rather than the 50-year rates calculated for previous USGS hazard maps<sup>2</sup>.

No new evidence was presented that was not already regulated by Federal or State laws, rules, regulations, or policy. In conclusion, the BLM adequately addressed potential impacts from oil and gas development, including hydraulic fracturing. Therefore, the statement of reason has been considered, found to be without merit and is denied.

## **6. Oil and gas companies do not have to disclose to the BLM, EPA, or the local community what chemicals are being used for daily operations.**

### BLM Response:

The October 2014 Lease Sale EA describes representative chemicals used in exploration and development of oil and gas production in Appendix 1 (EA pp. 76-80). A recent EPA study analyzed approximately 38,530 disclosures submitted to the *FracFocus Chemical Disclosure Registry* and identified a total of 692 unique additive ingredients reported as used by at least one operator as an additive, base fluid, or proppant in the hydraulic fracturing process alone<sup>3</sup>. The number of chemicals available for use today, as well as not-yet developed chemicals or chemicals currently thought to not be feasible, is too large and speculative to complete an in-depth analysis at the leasing stage.

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<sup>3</sup> Environmental Protection Agency (EPA). 2015. Analysis of Hydraulic Fracturing Fluid Data from the FracFocus Chemical Disclosure Registry 1.0. US Environmental Protection Agency, Office of Research and Development. EPA/601/R-14/003. March 2015. Washington, DC. Available at: [http://www2.epa.gov/sites/production/files/2015-03/documents/fracfocus\\_analysis\\_report\\_and\\_appendices\\_final\\_032015\\_508\\_0.pdf](http://www2.epa.gov/sites/production/files/2015-03/documents/fracfocus_analysis_report_and_appendices_final_032015_508_0.pdf).

The BLM has been actively working towards amending current regulations that would require chemical disclosure. On March 26, 2015, the BLM's final rule on hydraulic fracturing was published in the federal register which updated current regulations on hydraulic fracturing that would be effective June 24, 2015. The Rule requires public disclosure of all chemicals, subject to limited exceptions for trade secret material, after fracturing operations are complete. The Ground Water Protection Council's FracFocus<sup>4</sup> database is the primary means of reporting this information. Implementation of the Hydraulic Fracturing Rule was postponed pending the Court rulings in Wyoming v. DOI and Southern Ute Indian Tribe v. DOI. On September 30, 2015, the U.S. District Court issued an order stating that the BLM is preliminary enjoined from enforcing the final rule related to hydraulic fracturing on federal and Indian lands.

Current regulations including the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) of 1980 (Public Law 96-510), Resource Conservation and Recovery Act (RCRA) (Public Law 94-580, October 21, 1976), SDWA of 1974 (Public Law, as amended), and the Toxic Release Inventory of the Emergency Planning and Community Right-to-Know Act (EPCRA) (Public Law) are all laws that require chemical disclosures; however, EPA and amendments to existing laws have exempted and excluded the oil and gas industry from the disclosure requirements. To change these laws, Congress and/or the EPA would have to enact new or amend existing legislation or regulations.

New Mexico state law requires the operator to file with the NMOCD a hydraulic fracturing disclosure form within 45 days after completion of the well if the well was hydraulically fractured. The hydraulic fracture disclosure form includes information about the well and treatment, but also requires the operator to provide a description of the hydraulic fluid composition and concentration listing each ingredient and for each ingredient the trade name, supplier, purpose, chemical abstract service number, maximum ingredient concentration in additive as percentage by mass, maximum ingredient concentration in the fracturing fluids as a percentage by mass, and a certification by the operator that the information included on the disclosure form is true and complete to the best of their knowledge and belief (19.15.16.19(B) New Mexico Administrative Code (NMAC), as amended through 05/01/2013). However, the NMOCD does not require the reporting or disclosure of proprietary, trade secret or confidential business information.

In conclusion, no new evidence was presented that was not already considered in the EA or that is established by current laws and regulations; therefore, the statement of reason has been considered, found to be without merit and is denied.

## **7. Flaring and other surface operations have the potential to cause wildfires.**

### **BLM Response:**

Data on fires caused by well flaring or oil and gas development activity is not well recorded in

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<sup>4</sup> <http://fracfocus.org>

all areas of the state particularly when they are on private land. In 2013 the BLM Pecos District Office in southeastern New Mexico, reported three fires (1 on state land and 2 on private land) that were suspected of being caused by flaring from wells. None were reported in 2014 and three fires (2 on private and 1 on BLM) was suspected of being caused by flaring in 2015. Most of these fires were less than one acre in size and were extinguished in less than four hours. After some investigation, the fires started by flares seem to be the result of oil coated sand being diverted to the flare stack and ignited and then dropped onto surrounding vegetation. It is standard practice that while a well is being flared an operator's representative or employee is watching the flare or within a short distance of the area to respond quickly if an issue arises. In most of the fires reported, the operator had equipment nearby in which they could contain the fire prior to the fire personnel arriving on site. According to the USFS, since 1970 there have been 10 wildfires within the oil and gas producing zones of the SFNF. Six of them were caused by lightning strikes, two were unspecified, but were not near any oil and gas wells, one was caused by a campfire, and one was caused by faulty muffler on a gas well near a major road.

The risk of fire associated with oil and gas development is minimal, as oil and gas producers have an interest in minimizing fire risk because of the threat to employee health and safety, the environment and the economic losses associated with well fires. There is potential for fires to occur at any phase of development. During drilling and production (specifically during workovers), well blowouts could occur; however, they are rare. Drill rigs have a "blowout preventer" that prevents fires and explosions and damage to the rig. During all phases of development, 43 CFR § 3162.5 - Environment and Safety states "The operator shall perform operations and maintain equipment in a safe and workman like manner. The operator shall take precautions to provide adequate protection for the health and safety of life and the protection of property." Operating in a safe manner can include but is not limited to keeping the well pad free of debris, weeds, and tall vegetation, all of which can prevent the spread of wildfire if a fire should start at the well site or prevent incoming wildfire from damaging the well site and causing additional hazards. If a well site is found to be unsafe or contributing to a potential hazard during well site inspections, the BLM will issue a violation to the operator instructing them to abate the problem. If a fire were to start, operators and the BLM have procedures in place to react quickly to suppress the fire that started at the well site or to prevent the well site from igniting from an encroaching wildfire.

Although the October 2014 Lease Sale EA did not specifically address the potential for wildfire, the BLM finds that current regulations and policy mitigates the risk of wildfire to the point that the concern is not an issue. Therefore, the statement of reason has been considered, found to be without merit and is denied.

**8. The long history and availability of beautiful night skies would be negatively impacted by lights used at production facilities and individual oil well pads.**

BLM Response:

The October 2014 Lease Sale EA analyzes the impacts of oil and gas development on night skies and includes a table that identifies the number of light sources and the duration of each light

source that is reasonably expected to be present on a well site during development. The analysis determined that the average number of days the majority of light sources would be present is 17 days with an illumination period of night-time hours. The EA concluded that “activities could result in minor, short-term impacts to night skies as well locations typically do not have lighting as a permanent feature upon completion” (EA pp. 61).

No new evidence was presented that was not already considered in the EA. In conclusion, the BLM adequately addressed potential impacts from oil and gas development on night skies; therefore, the statement of reason has been considered and found to be without merit and is dismissed.

## **9. Cultural and historical sites could potentially be ruined by industry.**

### BLM Response:

The BLM analyzed reasonably foreseeable oil and gas development impacts on heritage and cultural resources in the EA made available for the protest period. Table 7 lists if any archaeological surveys have been completed on the parcels, as well as how many acres, if sites were found and if traditional cultural properties are on record in the parcel. As directed by law, when proposed lease development is submitted to the FFO cultural resource inventories are conducted prior to surface disturbance, and adverse effects to cultural and/or historic properties are avoided or mitigated as appropriate. Avoidance through project redesign is the preferred method of mitigation; however, when avoidance is not feasible, protective measures, data recovery or other forms of mitigation are implemented prior to ground-disturbing activities.

Unavoidable adverse effects to cultural or historic properties would be addressed through mitigation in accordance with the appropriate processes and developed in consultation with the New Mexico State Historic Preservation Office (SHPO) and in collaboration with Indian tribes, the landowner or Surface Managing Agency, the project applicant, and other interested individuals or groups. In addition, any previously unknown National Register of Historic Places (NRHP)-eligible sites potentially discovered during project activities would be mitigated in accordance with the NRHP and BLM rules and regulations in consultation with New Mexico SHPO. If data recovery is necessary to mitigate unavoidable adverse effects of lease development to cultural and/or historic properties, the process would likely recover a substantial amount of data that would preserve important scientific and historical information.

BLM has applied the criteria of adverse effects pursuant to 36 CFR § 800.5(a)(1) and concluded that the leasing does not cause a direct effect to cultural resources or historic properties and will not be adverse provided that the design features enumerated in the EA are adhered to. The FFO did complete consultation with the NM SHPO, the National Park Service (Chaco Culture National Historical Park and National Trails Intermountain Region), Navajo Nation and seven potentially affected chapters (Nageezi, Counselor, Hogback, Nenahnezad/San Juan, Upper Fruitland, Ojo Encino, Torreon, and Pueblo Pintado), Jicarilla Apache Nation, Ute Mountain Ute Tribe, Southern Ute Tribe, the pueblos of Zia, Zuni, Jemez, Acoma, and Hopi, the National Trust for Historic Preservation, the Chaco Alliance and the Old Spanish Trail Association (OSTA).

Only the SHPO, OSTA and the Hopi responded. See the October 2014 Lease Sale EA made available for the protest period (pp. 24-37 and 58-60). Future exploration and development proposals would be analyzed for impacts to these resources. Project redesign or avoidance would be utilized where possible and mitigation utilized where avoidance is not possible. Therefore, the argument has been considered, found to be without merit, and is denied.

**10. Oil and Gas activities would ruin what the local citizens consider a pristine environment and would contribute to increased wildlife habitat fragmentation and wildlife displacement, particularly winter range from big game and the Golden and Bald Eagle Protection Act.**

BLM Response:

The BLM analyzed reasonably foreseeable oil and gas development impacts on wildlife in the October 2014 Lease Sale EA made available for the protest period. As well, the 2008 USFS SFNF EIS describes wildlife that may be present in the Forest Service parcels and the impacts associated with leasing the parcels (EIS pp. 103-157). Both documents conclude that wildlife, whether threatened and endangered species, sensitive species, migratory birds, or common wildlife, have the potential to be affected by oil and gas development, particularly at the surface-disturbance phase. Anticipated impacts include: noise disturbances, habitat fragmentation, modification and/or destruction, and wildlife displacement. Both documents also conclude that the magnitude of effects would be dependent on the rate and location of the oil and gas development and can be alleviate significant losses through site-specific analysis, project design features, and applying COAs and BMPs at the APD phase.

The BLM consulted with the United State Fish and Wildlife Service (USFWS) and the New Mexico Department of Game and Fish (NMDGF) in preparing the 2003 FFO RMP, and the NMDGF in preparing the October 2014 Lease Sale EA. The USFS consulted and coordinated with the USFWS and NMDGF during preparation of the USFS SFNF 2008 and 2012 EISs. Both of these agencies, who have jurisdiction by law and expertise of wildlife in the State, were involved in the review of BLM's and USFS's impact determinations and attachment of relevant stipulations and lease notices. No Surface Occupancy stipulations would protect all wildlife as these stipulations would not allow surface disturbance within the entire parcel or portions of the parcels (e.g. steep slopes, roadless recreation areas). Parcels with CSU3A (Riparian Areas and Wetlands) attached would prevent placing well pads, attendant facilities, access roads and pipelines within wetland and riparian areas, which often support a diverse wildlife population. A timing limitation stipulation (TLS-4), has been attached to parcels that have been identified as occurring within deer and elk winter range. The TLS is intended to protect and limit disturbance from oil and gas activities within prime deer and elk winter range and to minimize risks to health during a critical period.

No new evidence has been provided which indicates there are impacts from leasing the parcels beyond those described in the October 2014 Lease Sale EA or the USFS SFNF 2008 and 2012 EISs. Future exploration and development proposals would be analyzed for impacts to wildlife. Consultation and coordination with USFWS and NMDGF, if necessary, would be in accordance

with all laws, regulations, and policy. Adherence with lease stipulations, project redesign or avoidance, and application of COAs and BMPs would be utilized where possible and mitigation utilized where impacts are not possible. Therefore, the argument has been considered, found to be without merit, and is denied.

**11. The geology in this lease sale is the same as the geology in previously deferred lease sales.**

BLM Response:

Lease parcels may be deferred based on any number of reasons and geology may have no bearing whatsoever on the cause of deferment; geology may merely be incidental. And, though certain aspects of geology may be similar, such as stratigraphy, hydrocarbon potential may be quite different from one area to the next.

In accordance with the BLM-USFS Memorandum of Understanding (MOU) dated March 14, 2006 (BLM MOU WO300-2006-07), the BLM must not issue any lease over the objection of the USFS, and the USFS can require the inclusion of appropriate stipulations (30 U.S.C. § 226(h)). The USFS determined that leasing the parcels was in conformance with the 1987 SFNF Forest Plan and there were no extraordinary circumstances that would preclude leasing the parcels. The BLM appropriately relied upon the USFS's analysis of the proposed lease parcels and their lack of objection of offering parcels. Therefore, the argument has been considered, found to be without merit, and is denied.

**12. The BLM needs to update the Resource Management Plan (RMP) to address hydraulic fracturing, water pollution, and soil resources.**

BLM Response:

The scope of BLM's obligations under the Federal Land Policy and Management Act (FLPMA) to prepare a land use plan (or RMP) is provided in our regulations at 43 CFR § 1601.0-1, which describes:

*...a process for the development, approval, maintenance, amendment and revision of resource management plans, and the use of existing plans for public lands administered by the Bureau of Land Management.*

Importantly, "public lands" are defined as (43 CFR §1601.0-5(1)):

*...any lands or interest in lands owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management...*

Because these parcels are within the administrative boundary and jurisdiction of the USFS, the FFO BLM RMP is not applicable and the BLM is not required to prepare an RMP to address lands administered by the USFS. In accordance with the 2006 BLM-USFS MOU, the issuance



of leases located on USFS-administered surface estates will conform to the applicable Forest Plan.

The USFS completed a supplemental EIS for Oil and Gas Leasing in 2012 and has not identified the need to amend or revise the EIS or their Forest Plan. As such, the Forest Service has determined they have a valid EIS and Forest Plan that supports leasing of the parcels proposed for lease.

The need to amend the FFO RMP has no bearing on leasing parcels on USFS-administered surface estates. The BLM appropriately relied upon the USFS's analysis of the nominations and their concurrence for offering parcels. Therefore, the argument has been considered, found to be without merit, and is denied.

### **13. The Santa Fe National Forest 20-year Reasonable Foreseeable Development (RFD) is out of date and does not identify these parcels as part of that development.**

#### BLM Response:

The SFNF Forest Plan, approved in 1987, provides broad direction regarding leasing and the management of oil and gas development on USFS surface estate. However, since the approval of the Forest Plan, it was determined that the Forest Plan and its analysis (1987 EIS) did not address the potential environmental effects of future leasing and development on the SFNF sufficiently enough to make new lease issuance decisions. A Forest Plan Amendment<sup>5</sup> and analysis (2008 EIS)<sup>6</sup> was subsequently prepared. A Supplement<sup>7</sup> to the 2008 EIS was completed in 2012 to update the Air Quality section, as well as address threatened, endangered, and sensitive species.

The protestors allege the SFNF 2012 EIS and the ROD are outdated and reference information provided by the FFO BLM 2001 Reasonable Foreseeable Development Scenario (RFDS). The RFDS completed for the FFO RMP included USFS lands; however, when the SFNF began the plan amendment process, they had their geologist modify<sup>8</sup> the RFDS to be more specific to their lands. The SFNF RFDS estimated the number of locations on a township and range basis. The locations were predicted using current and anticipated spacing units for formations beneath the study area, in addition to the locations of historical wells. The supplemental RFDS projected 20 wells (11 wells producing from the Pictured Cliffs Formation and 9 wells producing from the Mancos formation) over a 20 year period (2008-2027) (2008 USFS SFNF EIS pp 62-65).

<sup>5</sup> US Department of Agriculture, Forest Service (USDA-FS). 2008. Santa Fe National Forest Plan.

<sup>6</sup> USDA-FS. 2008. Final Environmental Impact Statement for Oil-Gas Leasing and Roads Management. Santa Fe National Forest, New Mexico. MB-R3-10-6. June 2008. Available at: <http://www.fs.usda.gov/project/?project=11560>

<sup>7</sup> USDA-FS. 2012. Final Supplement to the Final Environmental Impact Statement for Oil-Gas Leasing. Santa Fe National Forest, Rio Arriba and Sandoval Counties, New Mexico. MB-R3-10-17. November 2012. Available at: <http://www.fs.usda.gov/project/?project=11560>

<sup>8</sup> USDA-FS. 2004 Gore, Larry. Reasonably Foreseeable Development Scenario, San Juan Basin Oil and Gas Planning Amendment EIS, USDA Forest Service, Santa Fe National Forest. Cuba, NM

In *Colorado Environmental Coalition* (125 IBLA 210, 218, February 5, 1993), the IBLA board determined:

*...objections raised with respect to the conformity of the Forest Service's actions either with its own internal operating procedures or with laws solely applicable to the Forest Service are not properly considered either by the BLM or this Board*

The IBLA also determined that the USFS consenting to issuance of leases that are allegedly in violation of Section 6(i) of the National Forest Management Act (16 U.S.C. § 1604(i))<sup>9</sup> should not be subject to review by BLM or the IBLA. Plan consistency and sufficiency is within the legal purview of the U.S. Department of Agriculture and does not grant independent or collateral authority to the BLM or the U.S. Department of Interior.

Following IBLA's decision, the BLM is unable to respond to allegations directed at the USFS, as to whether or not their RFDS is sufficient or leasing the parcels is in conformance with the Forest Plan. The BLM appropriately relied upon the USFS's analysis of the lease parcels and their lack of objection of offering parcels, which included a review for consistency with the Forest Plan. Therefore, the argument has been considered, found to be without merit, and is denied.

## **DECISION**

For the reasons stated above, we herein deny the protests. In this protest response decision, the NMSO has issued its final response decision for the 13 parcels within the SFNF and will take Federal action to issue these 13 leases to the successful high bidders.

This Decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR § 4.400 and Form 1842-1 (Enclosure 1). If an appeal is taken, a Notice of Appeal must be filed in this office at the aforementioned address within 30 days from receipt of this Decision. A copy of the Notice of Appeal and of any statement of reasons, written arguments, or briefs must also be served on the Office of the Solicitor at the address shown on Form 1842-1. It is also requested that a copy of any statement of reasons, written arguments, or briefs be sent to this office. The appellant has the burden of showing that the Decision appealed from is in error.

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<sup>9</sup> 6 U.S.C. § 1604(i) Consistency of resource plans, permits, contracts, and other instruments with land management plans; revision—Resource plans and permits, contracts and other instruments for the use and occupancy of National Forest System lands shall be consistent with the land management plans. Those resource plans and permits, contracts, and other such instruments currently in existence shall be revised as soon as practicable to be made consistent with such plans. When land management plans are revised, resource plans and permits, contracts, and other instruments, when necessary, shall be revised as soon as practicable. Any revision in present or future permits, contracts, and other instruments made pursuant to this section shall be subject to valid existing rights.

If you wish to file a Petition for a Stay of this Decision, pursuant to 43 CFR § 4.21, the Petition must accompany your Notice of Appeal. A Petition for a Stay is required to show sufficient justification based on the standards listed below. Copies of the Notice of Appeal and Petition for a Stay must also be submitted to each party named in the Decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR § 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

**Standards for Obtaining a Stay**

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a Decision pending appeal shall show sufficient justification based on the following standards:

1. The relative harm to the parties if the stay is granted or denied;
2. The likelihood of the appellant's success on the merits;
3. The likelihood of immediate and irreparable harm if the stay is not granted; and
4. Whether the public interest favors granting the stay.

*/s/Sheila Mallory, Acting*

Aden L. Seidlitz  
State Director

1 Enclosure  
1 - Form 1842-1

cc w/o enclosure  
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