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San Juan Coal Company
New Mexico Coal

August 31, 2001

Dave Mankiewicz
Bureau of Land Management
1235 La Plata Highway, Suite A
Farmington, NM 87401

RE: Protest of Applications for Permit to Drill (APDs)

Dear Mr. Mankiewicz:

As per our August 30, 2001 conversation, San Juan Coal Company (SJCC) hereby requests that certain conditions be placed on any future APDs proposed for the Deep Lease (Federal Coal Lease NM NM 28093) and Deep Lease Extension (Federal Coal Lease NM NM 99144) areas designated for underground mining.

Currently, APD's have been filed by Richardson Operating Company and Dugan Production Corporation for the following locations which are included within SJCC's approved mining plan:

Operator	Location of Proposed APDs
Richardson Operating Company	Sections 30 & 31, T30N, R14W, San Juan County
Dugan Production Corporation	Sections 24, T30N, R15W, San Juan County Sections 17, 18 & 19, T30N, R14W, San Juan County

EXHIBIT
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SJCC protests the issuance of these permits unless the operations authorized under them are conditioned to ensure that the proposed drilling activities are conducted in such a way as to avoid unreasonably interfering with the ability of SJCC to safely extract coal under its two leases.

SJCC's concerns are threefold: (1) the presence of steel casing in the basal coal seam; (2) the potentially adverse impacts of hydraulic fracturing on roof stability; and (3) the increased risk of spontaneous combustion occasioned by hydraulic fracturing. Appropriate restrictions on the manner in which any drilling is conducted are requested in order to deter risks to the health and safety of the underground mining workforce associated with the future development of coalbed methane production in the immediate mine area. Such restrictions are also required to ensure that the activities of the oil and gas operator do not result in making significant portions of the BLM's and State's recoverable coal unminable.

Specifically, the following conditions must be imposed to meet existing MSHA safety standards and prevent the possibility of SJCC's mining operations encountering steel casing within the basal coal seam (8 seam) during longwall and continuous mining activities:

The operator must be required to:

- Use fiberglass casing within the target basal coal seam.
- Alternatively, if steel casing is permitted and used within the target basal coal seam, mill out casing in the wellbore 5 feet above and below the basal coal seam at least 6 months in advance of the date when SJCC's mine plan projects that the area of the wellbore will be mined.
- Clean wellbore to 200 feet below the basal coal seam or bottom of hole, if less
- Plug wellbore from 200 feet below the basal coal seam or bottom of the hole, if less, to surface
- Monument wellbore location, as required
- Identify the hole location at the coal depth intersection
- Use pressurized cores (pre and post drainage) at predetermined distances from the wells to verify the extent of gas desorption
- Place dye in the hole prior to cement filling to identify the extent of damaged ground
- Provide detailed records of well development and plugging and abandonment (P&A) procedures, including the following:
    - Identify hole depth, casing depth, fractured zone (i.e., both vertically and horizontally), water input volume, and water discharge

The longwall system that will mine the majority of the reserves is composed of large, articulated mobile roof supports 1000 feet wide, a chain conveyor system carrying off the mined coal, and a twin drum shear assembly actually cutting and loading the coal from the seam. The 2000 horsepower shear assembly weighs approximately 80 tons and actually cuts the coal with two 3 ½ foot by 7 foot diameter spiked drums each weighing about 5 tons. These drums rotate counter clockwise towards the operator at about 40 to 50 rpm while the shear trams along the coal face at 60 feet /minute. The kinetic energy developed by this system is enormous, and is specifically engineered to cut/break the coal out of the seam in a controlled manner. At the cutting face, fine explosive coal dust and gasses are also produced in the process and controlled by airflow and water sprays. If these drums were to strike steel well casing during production, the casing would likely be shredded, creating showers of sparks, ripping cutter bits off the drums, and throwing the debris down the face in the direction of the shear operators. The sparks could potentially ignite the coal dust and/or methane gasses. If the wells are not cemented shut properly, a disastrous methane explosion could occur.

Even during development, potentially dangerous encounters with steel casing could occur if wellbores exist in areas of advancing entries. The continuous miner machines (CMs) also utilize rotating drums about 3 feet in diameter and 11 feet long to rip the coal from the seam. As on the longwall face, the hardened picks will generate showers of sparks in the dusty and gassy face if they should strike casing.

Further, while the exact location of the well casing underground is critically important, small hole deviations of a few degrees off vertical at 800 feet deep could translate into an unknown well/seam intersection spread over an area of 40 feet diameter or more.

The potential risk of spontaneous combustion due to conventional hydraulic fracturing of the coal seam causes SJCC to request that a moratorium be placed on hydraulic fracturing of the basal coal seam until that risk can be further evaluated. As you recall, we indicated that Jacques Abrahamse (SJCC Ventilation Engineer) has expressed serious concerns with respect to degasification activities ahead of the mine. The primary concern with hydraulic fracturing of the coal seam is that it tends to open up the micropores in the coal, exposing greater surface area to oxidation and thereby enhances the potential for spontaneous combustion. In order to evaluate the risk of spontaneous combustion adequately, it will be necessary to monitor the first mining district panel development very closely. SJCC proposes that future CBM development by conventional hydraulic fracturing should be precluded until all reasonable possibilities of endangering the mining workforce and operations have been investigated and eliminated. Sufficient data to perform a thorough risk assessment is needed. Therefore, at a minimum, a moratorium on hydraulic fracturing is needed until SJCC and BLM have had the opportunity to evaluate the results of running the first longwall panel (Panel 101) (scheduled for May-June 2003) and to obtain the results of evaluations of additional testing on core samples to substantiate the volume of CBM within the basal coal seam and possible changes to coal characteristics from fracturing activities. The latter could take place as early as this fall, 2001.

A second hazard posed by hydraulic fracturing is that it may result in compromising the stability of the roof coal within the underground workings. As the longwall miner progresses into the panel the potential for roof falls from previously fractured coal may be enhanced.

This letter is to advise BLM of the broad outlines of the problems that need to be addressed before CBM well permits are granted in the areas directly affected by SJCC's approved mine plan. SJCC will supplement this letter with detailed technical information that gives rise to our concerns with regard to spontaneous combustion and roof conditions due to hydraulic fracturing. We will also provide you with an analysis of the legal and policy reasons why the BLM is authorized and required to impose the conditions that we suggest.

We are concerned that since longwall coal mining is new to the San Juan Basin SJCC and BLM need to proceed with caution to gain an ample site specific understanding of local mining conditions before additional hydraulic fracturing is permitted to occur within the underground mine permit area. The overall impact of hydraulic fracturing on the health and safety of our workforce and the mineability of the 8 seam coal is not fully known at the present time, and should be determined with reasonable certainty before operations are permitted which could endanger lives or preclude the efficient mining of the BLM's and State's coal reserves.

The conditions that we propose are particularly appropriate since it appears that there may be other, safer, techniques of extracting the CBM within the mine area. Alternative degasification technologies (e.g., CDX Gas), proposed by Dugan Production Corporation utilize horizontal drilling techniques that require no hydraulic fracturing or downhole casing for CBM extraction. The viability of this technology is being

further investigated and test drill holes utilizing either a wire line to extract the cores or if appropriate, pressurized cores have been considered in Section 24 of the Deep Lease to collect desorption data and determine the volume of methane in the basal coal seam.

We also wish to emphasize that until the problems outlined in this letter are investigated and resolved SJCC will oppose any proposed increase in permitted well density.

Should you have any questions on these issues, please feel free to contact me at 505-598-2107.

Yours sincerely,

Lynn Woomer
Technical Services Coordinator
Projects Development Group

CC: Rock Funston
Scott Langley
John Mercier
Jacques Abrahamse
Charles Roybal
Craig Carver
Shannon Hoefeler (BLM – Farmington District Office)
Steve Hayden (NM Oil Conservation Division)