



State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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OK

September 24, 2001

Rick Olsen, General Manager
Canyon Fuel Company, LLC.
P.O. Box 1029
Wellington, Utah 84542

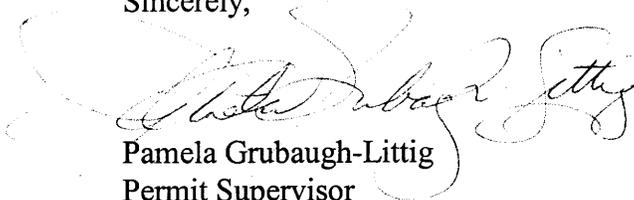
Re: Blasting Plan, Canyon Fuel Company, LLC., Dugout Mine, C/007/039-011-1, Outgoing File

Dear Mr. Olsen:

The above-referenced amendment is hereby approved, effective September 24, 2001. A stamped incorporated copy is enclosed for insertion into your copy of the Mining and Reclamation Plan.

If you have any question, please call me at (801) 538-5268.

Sincerely,



Pamela Grubaugh-Littig
Permit Supervisor

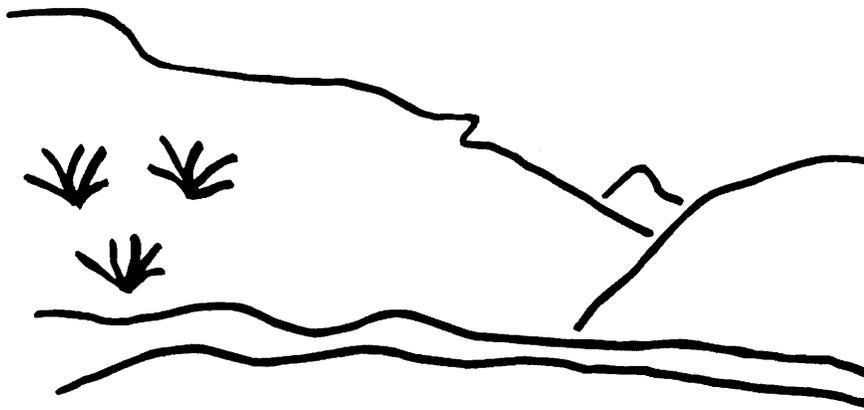
sjd/sd

Enclosure:

cc: Joe Wilcox, OSM
Richard Manus, BLM
Mark Page, Water Rights, w/o enc
Dave Ariotti, DEQ, w/o enc
Derris Jones, DWR, w/o enc
Steve Boyden, SITLA, w/o enc
Price Field Office

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State of Utah



Utah Oil Gas and Mining

Coal Regulatory Program

Dugout Canyon Mine
Blasting Plan
C/007/039-01I-1
Technical Analysis
September 24, 2001

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TECHNICAL ANALYSIS

INTRODUCTION

The permittee has submitted a blasting plan to use more than five pounds of explosive per shot. This plan will be used to remove rock in the existing ditch next to the Dugout Canyon County road. A pipeline will be installed to transport wastewater from the mine to the leach field.

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INTRODUCTION

OPERATION PLAN

OPERATION PLAN

USE OF EXPLOSIVES

Regulatory Reference: 30 CFR 817.61, 817.62, 817.64, 817.66, 817.67, 817.68; R645-301-524.

Minimum Regulatory Requirements:

General Requirements

These requirements apply to surface blasting activities incident to underground coal mining, including, but not limited to, initial rounds of slopes and shafts. Each operator shall comply with all applicable State and Federal laws and regulations in the use of explosives.

All surface blasting operations incident to underground mining shall be conducted under the direction of a certified blaster. Certificates of blaster certification shall be carried by blasters or shall be on file at the permit area during blasting operations. A blaster and at least one other person shall be present at the firing of a blast. Any blaster who is responsible for conducting blasting operations at a blasting site shall be familiar with the site-specific performance standards and give direction and on-the-job training to persons who are not certified and who are assigned to the blasting crew or assist in the use of explosives.

An anticipated blast design shall be submitted if blasting operations will be conducted within 1,000 feet of any building used as a dwelling, public building, school, church or community or institutional building or 500 feet of active or abandoned underground mines. The blast design may be presented as part of a permit application or at a time, before the blast, approved by the Division. The blast design shall contain sketches of the drill patterns, delay periods, and decking and shall indicate the type and amount of explosives to be used, critical dimensions, and the location and general description of structures to be protected, as well as a discussion of design factors to be used, which protect the public and meet the applicable airblast, flyrock, and ground-vibration standards. The blast design shall be prepared and signed by a certified blaster. The Division may require changes to the design submitted.

Preblasting survey

At least 30 days before initiation of blasting, the operator shall notify, in writing, all residents or owners of dwellings or other structures located within 1/2 mile of the permit area how to request a preblasting survey. A resident or owner of a dwelling or structure within 1/2 mile of any part of the permit area may request a preblasting survey. This request shall be made, in writing, directly to the operator or to the Division, who shall promptly notify the operator. The operator shall promptly conduct a preblasting survey of the dwelling or structure and promptly prepare a written report of the survey. An updated survey of any additions, modifications, or renovations shall be performed by the operator if requested by the resident or owner.

The operator shall determine the condition of the dwelling or structure and shall document any preblasting damage and other physical factors that could reasonably be affected by the blasting. Structures such as pipelines, cables, and transmission lines, and cisterns, wells, and other water systems warrant special attention; however, the assessment of these structures may be limited to surface conditions and other readily available data. The written report of the survey shall be signed by the person who conducted the survey. Copies of the report shall be promptly provided to the Division and to the person requesting the survey. If the person requesting the survey disagrees with the contents and/or recommendations contained therein, he or she may submit to both the operator and the Division a detailed description of the specific areas of disagreement. Any surveys requested more than 10 days before the planned initiation of blasting shall be completed by the operator before the initiation of blasting.

General performance standards

The operator shall notify, in writing, residents within 1/2 mile of the blasting site and local governments of the proposed times and locations of blasting operations. Such notice of times that blasting is to be conducted may be announced weekly, but in no case less than 24 hours before blasting will occur. Unscheduled blasts may be conducted only where public or operator health and safety so require and for emergency blasting actions. When an operator conducts an unscheduled surface blast incidental to underground coal mining operations, the operator, using audible signals, shall notify residents within 1/2 mile of the blasting site and document the reason. All blasting shall be conducted between sunrise and sunset unless nighttime blasting is approved by the Division based upon a showing by the operator that the public will be protected from adverse noise and other impacts. The Division may specify more restrictive time periods for blasting.

Blasting signs, warnings, and access control

OPERATION PLAN

The operator shall conspicuously place signs reading "Blasting Area" along the edge of any blasting area that comes within 100 feet of any public-road right-of-way, and at the point where any other road provides access to the blasting area and at all entrances to the permit area from public roads or highways, place conspicuous signs which state "Warning! Explosives in Use," which clearly list and describe the meaning of the audible blast warning and all-clear signals that are in use, and which explain the marking of blasting areas and charged holes awaiting firing within the permit area.

Warning and all-clear signals of different character or pattern that are audible within a range of 1/2 mile from the point of the blast shall be given. Each person within the permit area and each person who resides or regularly works within 1/2 mile of the permit area shall be notified of the meaning of the signals in the blasting notification.

Access within the blasting areas shall be controlled to prevent presence of livestock or unauthorized persons during blasting and until an authorized representative of the operator has reasonably determined that no unusual hazards, such as imminent slides or undetonated charges, exist and access to and travel within the blasting area can be safely resumed.

Control of adverse effects

Blasting shall be conducted to prevent injury to persons, damage to public or private property outside the permit area, adverse impacts on any underground mine, and change in the course, channel, or availability of surface or ground water outside the permit area.

Airblast shall not exceed the maximum limits specified in the regulations at the location of any dwelling, public building, school, church, or community or institutional building outside the permit area. The maximum airblast and ground-vibration standards shall not apply at structures owned by the permittee and not leased to another person or at structures owned by the permittee and leased to another person, if a written waiver by the lessee is submitted to the Division before blasting.

Flyrock traveling in the air or along the ground shall not be cast from the blasting site: more than one-half the distance to the nearest dwelling or other occupied structure; beyond the area of control; or beyond the permit boundary.

In all blasting operations, except as otherwise authorized, the maximum ground vibration shall not exceed the values approved by the Division. All structures in the vicinity of the blasting area, such as water towers, pipelines and other utilities, tunnels, dams, impoundments, and underground mines shall be protected from damage by establishment of a maximum allowable limit on the ground vibration, submitted by the operator and approved by the Division before the initiation of blasting.

The maximum allowable ground vibration shall be reduced by the Division beyond the limits otherwise provided by this section, if determined necessary to provide damage protection. The Division may require an operator to conduct seismic monitoring of any or all blasts and may specify the location at which the measurements are taken and the degree of detail necessary in the measurement.

Records of blasting operations

The operator shall retain a record of all blasts for at least 3 years. Upon request, copies of these records shall be made available to the Division and to the public for inspection.

Analysis:

General

The permittee has submitted a certified blaster certificate from Shane Campbell, Badge Number 118. This certified blaster is the contractor who is currently constructing the leach field.

The permittee has described the blasting design in the amendment. The blasting design consists of cross-sections that give stemming height, hole sizing, depth of hole, type of explosive, and delays.

The amendment has noted that the certified blaster will have one other person present at the firing of a blast.

OPERATION PLAN

The permittee's blasting will not be conducted within 1,000 feet of any building used as a dwelling, public school, church, or community or institutional building outside the permit area.

The permittee will not blast within 500 feet of an active or abandoned underground mine.

The certified blaster has signed the blasting design and it was submitted with the amendment.

Pre-Blasting Survey

The pre-blast survey must be described in the permit application for underground coal mining and reclamation activities using more than five pounds of blasting agent or explosives. The permittee has stated, "A pre-blast survey of the power transmission line within the blast area will be inspected for structural damage."

Performance Standards

The permittee has committed to conduct blasting between sunrise and sunset.

The permittee has stated that a schedule will be posted at the mine site and will be given to the local government and public utility (UP&L).

The permittee has published the blasting schedule in the local newspaper giving detail of the blasting area and this was included in the amendment. The information meets the requirements of this section.

Blasting Signs, Warnings and Access Control

In the amendment, the permittee has committed to have the blasting signs comply with the sign specification of coal rule R645-301-521.200.

The permittee will conspicuously place signs that read, "Blasting Area" along the end of any blasting area that comes within 100 feet of any public road right-of-way.

The permittee has made a commitment in the amendment to place signs that state "Warning! Explosives in Use" along the county road.

"Warning" and "all-clear" signals of different character or pattern that is audible within half a mile range is required. The permittee has addressed this rule by using audible signals with three short horn blasts for "warning" and one long horn blast for "all clear".

The permittee has stated, "Access control will be exercised preventing anyone from

entering the blasting area.”

Control of Adverse Effects

The permittee will control adverse blasting effects by the use of blasting mats for flyrock. Air blast and ground vibrations will not have adverse effects since the nearest building is one-half mile away from the blast site.

Record of Blasting Operations

The application states, “That no structures exist within a distance that would present concerns from airblast or ground vibration.” The nearest structure that I am aware of is the truck loadout at Dugout mine. This is approximately one-half mile from the blasting area.

The permittee will use blast mats, which will prevent flyrock from damaging the power line. This action will reduce the maximum peak-particle velocity.

The permittee has submitted a blasting record form to be filled out after each shot. This form is adequate to meet the requirements of this section of the Coal Rules.

Findings:

Information provided in the proposed amendment is considered adequate to meet the requirements of the blasting section in the R645 Coal Rules.

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