

August 18, 2003

TO: Internal File

THRU: Karl R. Houskeeper, Environmental Scientist III, Team Lead

FROM: Peter H. Hess, Environmental Scientist III/Engineer

RE: Blasting Plan Revision, Genwal Resources, Inc., Crandall Canyon Mine, C/015/032, Task ID #1646

**SUMMARY:**

The permittee is in the process of constructing new portals on the opposite side of Crandall Creek, across from the original mine location. A Notice of Violation, N03-49-2-1 was issued to the permittee on July 30, 2003 for failure to address the requirements of R645-301-524.100 through -524.700, which are relevant to surface blasting activities incident to underground coal mining, including, but not limited to, initial rounds of slopes and shafts.

The permittee submitted a revision to the currently approved blasting plan to the Salt Lake Division headquarters on August 11, 2003. The assigned reviewer received the submitted information on August 14, 2003 at 4:20 PM.

A review of the information received on August 14, 2003 revealed that several deficiencies existed. The permittee submitted additional, as well as revised, information on August 18, 2003. The submittal made on August 18<sup>th</sup> satisfies the deficiencies noted on August 14<sup>th</sup>, such that the plan revision can be approved.

It is the reviewer's understanding that the permittee wanted a Division approval in place prior to August 18, 2003, such that blasting could commence.

**TECHNICAL ANALYSIS:**

**OPERATION PLAN**

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TECHNICAL MEMO

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## USE OF EXPLOSIVES

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

### Analysis:

#### General Requirements

The permittee's application contains a plate 5-24-1, which depicts the blast hole pattern and spacing for the round to be used in developing the three Dellenbach portal entries. The design also depicts the delay series. A sequence of five delays will be used to pull the thirty-six shot holes toward the center of the entry. The type of explosive to be used is Dyno-Nobel Ira-Coal Gel "B", which is a permissible explosive. The cartridge size of the explosive is 1-1/4 inches by 12 inches. The blast design commits to utilizing 30 inches of stemming material, leaving 4.5 feet of hole available for explosive cartridge. As the Ira-Coal Gel "B" cartridges are 12 inches in length, it is assumed that four cartridges will be utilized per loaded hole. The blast design indicates that a maximum of seven pounds of explosive will be used per hole. As 36 holes are being loaded, the maximum weight of explosives to be used per round calculates to be 252 pounds.

The design was prepared and is signed by Mr. Jason Waite, who is a Utah certified surface blaster, certificate number 127. Mr. Waite's certification remains in effect until January 31, 2005. The permittee has provided a copy of Mr. Waite's surface blaster certificate, at the request of this reviewer.

The information has been submitted and is to be included as APPENDIX 5-24 of the Mining and Reclamation Plan for the Crandall Canyon Mine upon Division approval.

#### Pre-blasting Survey

The permittee's application indicates that there are no structures or dwellings within one mile of the mine permit area. There are no residents within one-half mile of the blasting site. There are no residents or owners of dwellings or other structures located within one-half mile of the permit area. Therefore, the notification process for the requested pre-blast survey is not necessary. The following regulations are not applicable to this blasting plan revision: R645-301-524.310, -524.320, -524.330, -524.340 and -524.350.

### **General Performance Standards**

The permittee's currently approved blasting plan commits to conducting all explosive usage in a manner in accordance with R645-301-524, as well as all Federal laws and regulations in the use of explosives, (R645-301-524.800).

### **Blasting Signs, Warnings, And Access Control**

The permittee published a public notice of the blasting schedule in a local newspaper of general circulation, the *Sun Advocate*, Price, Utah on August 12, 2003. This is well in advance of the 24-hour minimum notification requirement mandated by R645-301-524.430.

The permittee's submittal makes the following commitment; "GENWAL will post blasting notification signs, in accordance with R645-301-524.510, 511, and 512, that is, 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, as well as at all entrances to the permit area from public roads or highways".

Signals, audible within one-half mile of the blast site, will be given prior to and after the blast as outlined in R645-301-465, and according to the blasting area notification sign containing the posted audible warnings.

Access control around the blasting area will be provided by GENWAL who will bar unauthorized access to the blast site immediately prior to and after the blast until the certified blaster responsible for the shot determines that a misfire did not occur.

### **Control of Adverse Effects**

The permittee's application makes the following commitments; "Blasting will be performed such that no fly rock will leave the blast site where practicable. Netting or some other protective means will be used to achieve this where there exists a possibility of this occurrence".

As noted above, the submitted blast design indicates that a maximum of seven pounds of explosive will be used per hole that calculates to 252 pounds of explosive per round. This amount is small, compared to strip mining operations that utilize hundreds of thousands of pounds of ANFO slurry in the overburden removal process. The affects of ground vibration and /or air blast from this construction process will be minor to nonexistent.

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**TECHNICAL MEMO**

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**Records of Blasting Operations**

The permittee's application makes the commitment to maintain "all blasting records required under R645-301-524.700 will be kept at the mine site for at least three years."

**Findings:**

The information provided meets the minimum regulatory requirements of this section.

**RECOMMENDATION:**

The submitted revision to the currently approved blasting plan, as well as the submitted blast design should be approved.