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STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

INA/005/004#3
Norman H. Bangerter, Governor
Dee C. Hansen, Executive Director
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

December 8, 1987

Mr. Dan W. Guy, Manager
Permitting & Compliance
Beaver Creek Coal Company
P. O. Box 1378
Price, Utah 84501

Dear Mr. Guy:

Re: Conditional Approval of PAP Amendment, Request to Amend Subsidence Control Plan, Beaver Creek Coal Company, Huntington #4 Mine, INA/015/004-87A, Folder No. 3, Carbon County, Utah

The Division has completed its review of the above-referenced PAP amendment received September 16, 1987. These changes have been reviewed by Division Geologist, Richard Smith. The plans are adequate for conditional approval. Please refer to the attached Technical Memorandum for an explanation of the technical review and approval conditions. Also enclosed is a copy the U.S. Forest Service review comments and concurrence with our conditional approval. The informational requirements as outlined in their letter must also be addressed prior to final approval of this amendment request.

Please provide a response to these conditions by January 11, 1988. Thank you for your cooperation in completing this permitting action. Please contact Richard Smith, or John Whitehead should you have questions regarding specifics of this technical review.

Sincerely,

D. Wayne Hedberg
Data Management Coordinator

djh

Attachments

cc: J. Dryden

R. Hagen

G. Morris

P. Rutledge

R. Smith

J. Whitehead

P.F.O.

8992R/10



October 16, 1987

TO: John Whitehead, Permit Supervisor
FROM: Richard V. Smith, Geologist *RVS*
RE: Request to Amend Subsidence Control Plan, Beaver Creek Coal Company, Huntington #4 Mine, INA/015/004, Folder #2, Emery County, Utah

Synopsis of Proposal

The operator requests that all subsidence monitoring be suspended at the Huntington #4 Mine. The operator states that they have been informed by the USFS that vertical movement data cannot be, at this time, derived from aerial photography collected since 1979. Moreover, the USFS has cancelled the 1987 aerial photography program.

Analysis

The operator is committed, in the approved PAP, to providing an annual subsidence monitoring report by January 31 of each year (Section 3.4.8.4, page 3-55). The subsidence report will include vertical movement information derived from the annual aerial photography and results of the bi-annual surface inspection.

Aerial photography collected since 1979 may be utilized to derive vertical movement when problems related to locating subsidence monuments have been resolved.

Recommendations

1. Approve discontinuance of the aerial photography aspects, including submittal of annual data, of the subsidence monitoring plan until the USFS resolves problems with locating monuments. Upon correction of the monument location problem, require the operator to commit to derive and submit vertical movement data from preceding (1980-1986) aerial photography surveys.

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Memo to J. Whitehead
INA/015/004
October 16, 1987

2. Approve discontinuance of the bi-annual surface inspections.
3. Require the operator to commit to:
 - (a) Acquiring additional aerial photography, in cooperation with the USFS, if vertical movement data from preceeding (1980-1986) aerial surveys indicate substantial subsidence. Moreover, commit to providing attendant vertical movement data.
 - (b) Acquiring, in cooperation with the USFS, one suite of aerial photography and providing attendant vertical movement data prior to bond release.
 - (c) Conducting an annual surface inspection to identify material damage to the surface (i.e., slope failure, subsidence cracks). Commit to annually providing the results of the surface inspection.

djh
9206R/26

United States
Department of
Agriculture

Forest
Service

Manti-LaSal
National Forest

599 West Price River Drive
Price, Utah 84501

Reply to: 2820/7140

Date: November 30, 1987

Mr. Lowell Braxton
State of Utah Natural Resources
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

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DIVISION OF
OIL, GAS & MINING

Dear Lowell:

We have reviewed Request to Amend Subsidence Control Plan, Beaver Creek Coal Company, Huntington Canyon #4 Mine, INA/015/004, Folder #2, Emery County, Utah.

Beaver Creek Coal Company requests that all subsidence monitoring be suspended at the Huntington Canyon #4 Mine. The request is based on the facts the Forest Service has not provided any subsidence data to the Company under the aerial photogrammetric subsidence monitoring program, and that the program was suspended in 1987 due to problems with the photogrammetry.

In consultation with the Forest Service, the Division prepared the attached technical memorandum and recommendations dated October 16, 1987. We agree with the recommendations outlined in the memorandum as conditions for approval of the request.

The Geometrics Section of Engineering at our Regional Office is trying to isolate the cause of residual values in aerotriangulation which exceed theoretical and acceptable standards. Hopefully, the problem can be isolated and corrected so that accurate data regarding subsidence can be obtained and the program can be resumed.

In our letter to Beaver Creek Coal Company, we requested two copies of an accurate map of the final underground mine workings registered to the surface and underground coordinate system. We are presently working with a scale of 1 inch = 100 feet. The maps should be at this scale but, if they are not available, a scale of 1 inch = 200 feet would be adequate. This information is needed to register the underground workings with the surface data generated from the control monuments and photogrammetry. The maps must be submitted as soon as possible.

Sincerely,

W. H. Bailey

for
GEORGE A. MORRIS
Forest Supervisor

Enclosures

United States
Department of
Agriculture

Forest
Service

Manti-LaSal
National Forest

599 West Price River Drive
Price, Utah 84501

Reply to: 2820
7140

Date: August 20, 1987

Bert Jeanselme
Beaver Creek Coal Co.
P.O. Box 1378
Price, Utah 84501

Dear Bert:

Enclosed is your set of the 1986 color aerial photography for subsidence monitoring with an accompanying photo index map. Please note that the scale is 1:6000 as compared to 1:4800 for prior years.

Due to the unavailability of Forest Service aircraft and photo crews, the 1986 photography was contracted out to Intermountain Aerial Surveys (IAS). IAS uses a 6" focal length camera as opposed to the 8 1/4" focal length camera used by the Forest Service. Using the 6" camera at 1:6000 scale, the desired accuracy should be obtained.

A Bill for Collection for \$668.33 (No. 1251) was sent to Beaver Creek Coal Co. on September 25, 1986, to cover the estimated cost of the 1986 photography as follows:

\$1,715.04 estimated 1986 cost - \$1,046.71 balance in account = \$668.33

The actual cost of the 1986 photography was as follows:

\$ 453.27	Flight Cost
\$ 279.00	Color Prints (3 sets)
\$ 465.00	Film Positives (1 set)
<u>\$1,197.27</u>	
\$ 228.68	Administration (19.1%)
<u>\$1,425.95</u>	Total

The actual amount owed for the 1986 photography is as follows:

\$1,425.95 actual cost - \$1,046.71 in account = \$379.24 owed.

A Bill for Collection for this amount is enclosed. The unpaid Bill for Collection (No. 1251) for \$668.33 has been canceled. Please submit a check payable to the USDA Forest Service

We do not plan to conduct the annual photography for this year (1987), therefore, no Bill for Collection for the estimated cost of the 1987 photography is enclosed.

Bridging and point readings for the base year and 1985 photography have been completed by our geometronics group for most of the participating companies. Aerotriangulation results show overall residuals that exceed theoretical and acceptable standards. As a result, point comparisons for the subsequent years which are made to detect subsidence are suspect. At the present time we are unable to isolate the problem. We do not feel that it would be prudent to continue the annual aerial photography until the problem can be isolated and corrected.

The Forest Service will recontrol, retarget and photograph a test area on the Forest to check the results of photogrammetric subsidence monitoring. The results will be applied photogrammetrically to the base year and past annual photography for this area in an attempt to isolate any problem in the original control or photogrammetric process. Hopefully, the problem can be isolated and corrected so that accurate data regarding subsidence on the test area and other mine areas can be obtained and photography can be resumed next year.

Geometronics will continue to process this existing data for you mine area to obtain the most accurate results on subsidence as possible. In order to complete the baseline data and register the surface control with the underground mine workings, we will need an accurate map of the underground mine workings and coordinates. We are presently working with a scale of 1 inch = 100 ft. for the surface maps. Please submit two copies of an accurate, up-to-date map of the mine workings registered to the surface and underground coordinate system at this scale.

We will need to work together to evaluate the results of the program and prepare base maps and subsidence maps which will meet the needs of the company and the Forest Service and help us better understand the mechanisms of mining induced subsidence and associated effects to resources.

If you have any questions, contact the Forest Supervisor's Office in Price, Utah.

Sincerely,

W. H. Bailey

for
GEORGE A. MORRIS
Forest Supervisor

Enclosures