

0007



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

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340
801-359-3940 (Fax)
801-538-5319 (TDD)

October 28, 1993

TO: Pamela Grubaugh-Littig, Permit Supervisor
FROM: Jess Kelley, Reclamation Engineer *JK*
RE: Incidental Boundary Change (IBC), Cyprus Plateau Mining Corporation, Star Point Mine, ACT/007/006-93C, Folder #2, Carbon County, Utah

SYNOPSIS

The permittee submitted this amendment for Division approval on June 7, 1993.

By this amendment, the permittee proposes an incidental boundary change (IBC) to extend the present permit boundary in the northwestern part of the permit area, immediately north of and adjacent to the Gentry Ridge incidental boundary change area which was approved earlier in 1993. This will allow for the mining of approximately 112.5 acres of coal which would otherwise not be retrieved under the present mining plan. This coal is contained in Lease UTU-64263.

I gave my approval to this IBC on July 20, 1993. At that time, however, both the Price office of the U.S. Forest Service (USFS), which superintends the surface area, and the Utah office of the U.S. Fish and Wildlife Service (USFWS) found the IBC unacceptable because, in their judgement, the plans for monitoring, preventing, and mitigating subsidence impacts were inadequate. Thus, in the past months, Ben Grimes of Cyprus Plateau and Carter Reed of USFS have worked together on the formulation of an acceptable subsidence plan.

On October 13, 1993, the permittee submitted to the Division a revised application for the IBC which includes the subsidence plan worked out by Grimes and Reed and addresses USFWS's concerns. This memorandum constitutes my review of that submittal.



ANALYSIS

The main concern of USFS was the possible deleterious effect of subsidence on Little Park Channel, which crosses the proposed IBC in an east-to-west direction, and on Nuck Woodward Canyon, which parallels the western boundary of the IBC. USFS was particularly concerned about Nuck Woodward Canyon both because a perennial stream flows there and also because of its (USFS's) belief that the western side of Castle Valley Ridge above it might be a vertical escarpment and, therefore, probable raptor habitat. USFWS was concerned that the permittee had not adequately addressed the possible effects of subsidence on nesting raptors.

To measure subsidence, the permittee plans to extend the present network of monitoring points to cover the area of the IBC. The placement of subsidence monitoring points is shown on Maps 521.121f and 521.121g1. The coal in the IBC will be cut east to west, figuratively speaking, into two large blocks. The northern block will be crossed from east to west by a line of monitoring points. The southern block will also be crossed from east to west by a line of monitoring points, while another line of monitoring points will extend northward from about the midpoint of the southern edge of the block to join this line near its midpoint. All monitoring points will be placed at 200-foot intervals.

To prevent damage to Little Park Channel, the permittee plans to leave a large barrier pillar beneath the channel to prevent subsidence from occurring above the entries which will be located there. This barrier pillar was designed to have a minimum static safety factor of 2.04 using a 26° angle of draw, which is the largest angle of draw encountered during previous mining in this area.

To prevent damage to the perennial stream in Nuck Woodward Canyon, the permittee has designed the placement of mine workings so that subsidence, projected upward using the conservative 26° angle of draw, will fall several hundred feet short of the stream channel. If this precaution proves inadequate and subsidence approaches too near the stream channel, as measured by the movement of the surface monitoring points, mining in a westerly direction will be stopped.

To address USFS's and USFWS's concerns about the effect of subsidence on nesting raptors, the permittee commissioned a raptor survey of the IBC and the surrounding area. In the course of this survey, no raptor nests were found either within the IBC or close enough to it to be affected by subsidence. The nearest raptor nest, that of a redtail hawk, was found in a tree almost a mile east of the IBC. Little Park Channel was found to be potential golden eagle winter range, but this area will be protected from subsidence by the barrier pillar which will be

located beneath the channel. The west side of Castle Valley Ridge was shown to be a rounded ridge, devoid of escarpments, and therefore not probable raptor nesting area.

The subsidence plan submitted as part of this amendment application has been designed using sound, accepted engineering principles and practices and is in accordance with the R645 rules. I spoke by telephone with Carter Reed of the Price office of USFS on October 28, 1993 and he informed me that the subsidence plan is acceptable to USFS. I also spoke by telephone to Susan Linner of USFWS on November 1, 1993 and she told me that the subsidence plan satisfactorily addresses USFWS's concerns.

RECOMMENDATIONS

It is recommended that the subsidence portion of this amendment be accepted.