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TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

May 30, 2012

TO: Internal File

THRU: Priscilla Burton, Lead *pbm sas*

FROM: Ingrid Campbell, Biologist *IC*

RE: South Fork Breakout Husbandry Practices, Canyon Fuel Company, Skyline Mine, Permit # C007/0005 and Task # 4097

SUMMARY:

On May 14, 2012, the Division received an application from Canyon Fuel Company (CFC) to conduct husbandry/ maintenance work on the South Fork Breakout reclaimed site of the Skyline Mine. According to the cover letter, the site qualifies for phase II bond release but needs more woody species in order to meet the vegetation requirements for phase III bond release.

The application cannot be approved at this time.

Prior to approval, the permittee must provide the following in accordance with:

R645-301-357.302: According to the seed mixes on tables 4.7-4 and 4.7-5, the South Fork Breakout site had 1,050 and 800 shrubs per acre planted during final reclamation. However, this never occurred due to an oversight. In order to document that the low shrub density at the site is not occurring due to low transplant survival, please include a statement in the MRP that woody species transplants were never planted at the South Fork Breakout site.

R645-301-357.320: Additionally, the vegetation survey report indicated a presence of musk thistle, a noxious weed, at the reclaimed site. The permittee must control the noxious weed by hand or by approved herbicide prior to planting shrubs on the site and annually as stated on page 4-44(a) of the approved Mining and Reclamation Plan.

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TECHNICAL ANALYSIS:

RECLAMATION PLAN

REVEGETATION

Regulatory Reference: 30 CFR Sec. 785.18, 817.111, 817.113, 817.114, 817.116; R645-301-244, -301-353, -301-354, -301-355, -301-356, -302-280, -302-281, -302-282, -302-283, -302-284.

Analysis:

Revegetation: Standards For Success

The South Fork Breakout reclaimed site and a reference site were surveyed for vegetation establishment in 2011 by Dr. Patrick Collins of Mt. Nebo Scientific. Dr. Collins noted that a portion of the site was infested with the noxious weed Musk Thistle which should be controlled. The report indicated that the vegetative cover on the reclaimed sites was meeting or exceeding that of the reference area. Also, the report indicated that the vegetative cover was adequate to control erosion on the site. CFC is not requesting phase II bond release at this time.

CFC included a list of woody species tublings recommended by Dr. Collins to transplant and supplement the site in 2012 at a rate of 1800 to 2000 plants per acre. Page 4-46 of section 4.7 of the approved MRP states that "shrub density will be a minimum of 1500 woody plants per acre at bond release." Additionally, all revegetated areas will be qualitatively evaluated on an annual basis and shrub survival will be quantified using permanent transects for the first three years after planting. These monitoring commitments will be added to the master list of commitments for skyline mine.

The seed mix listed in table 4.7-4 and 4.7-5 for the North and South slopes of the South Fork Breakout lists several woody species that were to be planted as tublings. However, in a conversation with Gregg Galecki on May 30, 2012, this was overlooked and tublings were never planted on the site, only seed. Therefore, it can be assumed that the low shrub density at the site is due to low seeding rates, not low transplant survival.

Husbandry Practices R645-301-357.300

R645-301-357.301: The husbandry practices proposed by CFC for the South Fork Breakout are considered normal conservation practices for unmined lands within the region which have land uses similar to the approved postmining land use of the disturbed area. The

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postmining land use for the South Fork Breakout is the same as the premining land use: wildlife habitat and grazing. The proposed husbandry practice is considered a normal conservation practice for this land use.

R645-301-357.302: The husbandry practices proposed for the South Fork Breakout are not necessitated by inadequate grading practices, adverse soil conditions, or poor reclamation procedures. CFC included a vegetation monitoring report conducted by Dr. Patrick Collins that indicates the site has sufficient cover to control erosion. The cover is meeting or exceeding that of the reference area. The woody species density is not meeting the success standard because transplants were never put on the site due to an oversight during reclamation. This information needs to be put in the MRP for future reference.

R645-301-357.303: CFC proposes to use the husbandry practice defined under R645-301-357.310 which does not necessitate a certain extent of area to be treated.

R645-301-357.304: *If it is necessary to seed or plant in excess of the limits set forth under R645-301-357.300, the Division may allow a separate extended responsibility period for these reseeded or replanted areas in accordance with R645-301-820.330.* **R645-301-357.311:** *Trees or shrubs may be replanted or reseeded at a rate of up to a cumulative total of 20% of the required stocking rate through 40% of the extended responsibility period.* The husbandry proposal does require planting in excess of the stocking rate limit but is within the extended responsibility period limit set under R645-301-357.311. However, this is to ensure that the plants will be able to survive without future husbandry practices or interventions. The site was not originally planted with transplanted shrubs. The transplants planted in 2012 must meet the requirements of R645-301-356.232 for final phase III bond release. Therefore, the woody species on the reclaimed site counted to meet the standards for success must be healthy and in place for at least six years (60% of the responsibility period). CFC cannot apply for phase III bond release on this site before 2019. The 2018 growing season will be considered year ten or the second year of the final two year vegetation study required for phase III bond release according to R645-301-357.200.

Findings:

The information provided is adequate to meet the following regulations:

R645-301-357.301: The husbandry practices proposed by CFC for the South Fork Breakout are considered normal conservation practices for unmined lands within the region which have land uses similar to the approved postmining land use of the disturbed area.

R645-301-357.302: The husbandry practices proposed for the South Fork Breakout are not necessitated by inadequate grading practices, adverse soil conditions, or poor reclamation procedures. This should be documented in the M&RP as requested in the deficiency below.

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R645-301-357.303: CFC proposes to use the husbandry practice defined under R645-301-357.310 which does not necessitate a certain extent of area to be treated.

R645-301-357.304 & R645-301-357.311: The proposal does require planting in excess of the stocking rate limit but is within the extended responsibility period limit set under R645-301-357.311. However, the site was not originally planted with transplanted shrubs, so the replanting is not necessary due to low survival. The transplants planted in 2012 must meet the requirements of R645-301-356.232 for final phase III bond release. Therefore, the woody species on the reclaimed site counted to meet the standards for success must be healthy and in place for at least six years (60% of the responsibility period). CFC cannot apply for phase III bond release on this site before 2019. The Division will consider 2018 growing season to be year ten or the second year of the final two year vegetation study required for phase III bond release according to R645-301-357.200.

The information provided is not considered adequate to meet the minimum regulatory requirements for the following regulations. Prior to approval, the permittee must provide the following in accordance with:

R645-301-357.302: According to the seed mixes on tables 4.7-4 and 4.7-5, the South Fork Breakout site had 1,050 and 800 shrubs per acre planted during final reclamation. However, this never occurred due to an oversight. In order to document that the low shrub density at the site is not occurring due to low transplant survival, please include a statement in the MRP that woody species transplants were never planted at the South Fork Breakout site.

R645-301-357.320: Additionally, the vegetation survey report indicated a presence of musk thistle, a noxious weed, at the reclaimed site. The permittee must control the noxious weed by hand or by approved herbicide prior to planting shrubs on the site and annually as stated on page 4-44(a) of the approved Mining and Reclamation Plan.

RECOMMENDATIONS:

This amendment application cannot be recommended for approval at this time.