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# TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

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November 14, 2012

TO: Internal File

THRU: April Abate, Lead <sup>JCA</sup> 11/16/2012

FROM: Ingrid Campbell, Environmental Scientist III <sup>IC</sup>

RE: Northwater Mitigation Plan, Canyon Fuel Company, SUFCO, Permit C/041/0002, Task ID #4202

## SUMMARY:

On June 15, 2010 the Division received an application from Canyon Fuel Company (CFC) for Mitigation Activities related to the Northwater Springs area. Three springs (Pines 105, 311 and 310) appeared to dry up as a result of CFC's undermining activities in 2005 and 2006. In preparation for mitigation, in 2009, CFC drilled 5 wells in order to conduct slug tests to monitor how much water could be pumped to the surface to replace the loss of water from the springs. Minimal groundwater was discovered. In 2009, CFC installed a submersible solar pump in the perennial flowing section of the East Fork of Box Canyon (a stream below the three effected springs). This pump delivered water back to Pines 105 in order to fill a trough for cattle grazer use. CFC also installed two additional trough locations.

In 2010, CFC proposed to pump water from a spring near the confluence of the Main Fork of Box Canyon and the East Fork of Box Canyon. The Division reviewed this plan as "2010 Mitigation Activities" Task # 3580. On May 23, 2012, the Division sent CFC a list of deficiencies which did not receive a response.

On July 12, 2012, CFC sent the Division a new application for the Northwater Mitigation Plan. The Division reviewed CFC's response and sent back another letter of deficiencies because CFC failed to respond to the original list. This memo is a review of their final response submittal which the Division received on October 18, 2012.

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**TECHNICAL ANALYSIS:**

**ENVIRONMENTAL RESOURCE INFORMATION**

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

**HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 783.12; R645-301-411.

**Analysis:**

CFC did not include additional cultural resource inventories with this application for mitigation. However, the area is included in the original disturbed area for SUFCO mine and CFC has submitted cultural resource studies in the original permit application and other amendments. These studies are located in Appendix 4-2 of the confidential volume 1 of the M&RP. Archeological- Environmental Research Corporation (AERC) conducted a cultural resource inventory (project SUFC-97-3) of Box Canyon in 1997. Archeologists conducted an intensive evaluation which consisted of walking a series of 5 to 10 meter wide transects across surfaces within a 130 foot wide distance from the exposed canyon rims. AERC discovered sites 42SV2431, 42SV2428, 42SV2430, and 42SV2429, within the box canyon area. These sites consisted of the following:

42SV2428: a 10x10 meter lithic scatter containing primarily secondary flakes. AERC concluded that this was a non significant site with no research potential and or eligibility for listing.

42SV2429: A dispersed lithic scatter that is non-significant with no research potential or eligibility for listing.

42SV2430: a rock shelter measuring 15 meters deep by 30 meters wide. AERC determined the site to be significant and potentially eligible for listing in the National Register.

42SV2431: a dispersed lithic debris scatter that is not considered significant and is not eligible for listing.

Installation of the troughs at the two locations will not involve any earthwork. Access roads are in place at both locations. Therefore, no cultural or historic resources will be affected as a result of this mitigation proposal.

**Findings:**

The information provided is considered adequate to meet the minimum regulatory requirements for the cultural and historical regulations.

## VEGETATION RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.19; R645-301-320.

**Analysis:**

CFC states that vegetation in the canyon bottom throughout the area seems unchanged since undermining. CFC has submitted a qualitative monitoring report of the Pines Tract annually in the annual report.

The US Forest Service submitted official comments to the Division on May 18, 2012. (See incoming document 05182012.pdf). The FS feels that the riparian vegetation has been negatively impacted by the loss of water at the springs in the Northwater springs area. Therefore, they suggested that the riparian vegetation be monitored initially and every 2-3 years until 2030 to determine the extent of vegetation losses. Additionally, they recommended that a mitigation project to enhance riparian vegetation in the Quitcupah or Muddy Creek drainages be completed by the company within 5 years. The Division feels that the mitigation project at an alternate site is adequate mitigation for the potential loss of vegetation at the Northwater springs area. Monitoring of the riparian vegetation at the Northwater springs area is not necessary since the mitigation project will be located elsewhere and will be comparable to the potential loss that northwater may incur.

CFC has no quantitative data to determine whether or not the riparian vegetation has been or will be impacted by the loss of water from undermining. However, CFC must either replace the water at the springs or complete a mitigation project elsewhere on the FS land as suggested by the FS. Therefore, the language in the application regarding impacts to riparian vegetation was removed.

**Findings:**

The information provided in the mitigation plan is considered adequate to meet the requirements of this section.

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**FISH AND WILDLIFE RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 784.21; R645-301-322.

**Analysis:**

According to data stored with the DWR, an active golden eagle territory is located near the Northwater springs area. This territory includes nests 1235, 813, 812 and 323. Nest 1235 was active in 2008.

TetraTech's Daved Steed inventoried the SUFCO subsidence areas and the East Fork of Box Canyon Water Lines and Troughs Installation area on May 9, 10 and 21, 2012. Northern Goshawk vocalization surveys and special status and management indicator species inventories were conducted. No historic raptor nests were active. And no new nests were located. No goshawks, special status species or management indicator species were found.

**Findings:**

The information provided is considered adequate to meet the regulatory requirements for this section.

**OPERATION PLAN**

**FISH AND WILDLIFE INFORMATION**

Regulatory Reference: 30 CFR Sec. 784.21, 817.97; R645-301-322, -301-333, -301-342, -301-358.

**Analysis:**

**Bald and Golden Eagles**

TetraTech's Daved Steed inventoried the SUFCO subsidence areas and the East Fork of Box Canyon Water Lines and Troughs Installation area on May 9, 10 and 21, 2012. No historic raptor nests were active. And no new nests were located.

**Findings:**

The information provided is considered adequate to meet the minimum regulatory requirements for this section.

## RECLAMATION PLAN

### PROTECTION OF FISH, WILDLIFE, AND RELATED ENVIRONMENTAL VALUES

Regulatory Reference: 30 CFR Sec. 817.97; R645-301-333, -301-342, -301-358.

#### Analysis:

CFC has monitored the riparian areas associated with Northwater Springs and Joe's Mill Spring with established photopoints since the areas were affected by undermining. According to CFC, the areas have enough water to support vegetation. In years previous to 2011, the riparian areas appeared to have reduced vegetative growth and vigor. However, these were years with very low precipitation. The 2011 growing season had significantly high levels of precipitation, and the riparian areas had much higher vegetative growth and vigor. (See annual reports, Pines Tract Vegetation study for SUFCO).

CFC provided a commitment in the Mining and Reclamation plan to complete, within 5 years, a mitigation project that includes enhancement of a comparable riparian area in the Muddy Creek or Quitcupah drainages in consultation with the Forest Service and the Division.

#### Findings:

The information provided is considered adequate to meet the regulatory requirements for this section.

## 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: General Requirements

The pipe will be placed above ground and placed by hand or by horseback, so minimal disturbance will occur. The pump houses and solar panels will be small and placed on already disturbed ground. No topsoil removal will take place. If the pumps are removed during reclamation of the mine, seed from the seed mix listed in the MRP will be used.

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**Findings:**

The information is considered adequate to meet the regulatory requirements for this section.

**RECOMMENDATIONS:**

This application is recommended for approval at this time.

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