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TECHNICAL MEMORANDUM
Utah Coal Regulatory Program

November 24, 2008

TO: Internal File

THRU: Daron Haddock, Coal Program Manager, Task Manager DRH
Steve Christensen, Team Lead SHC

FROM: Ingrid Wieser, Biology, Land-Use, Cultural Resources IWW 4/13/09

SUBJECT: Wellington Dry-Coal Cleaning Facility Application, COVOL Engineered Fuels/ Headwaters, Inc., Permit Application Package, C/007/0045, Task ID # 3075, (Previous TID # 2899), Round 2 Review

SUMMARY:

On January 15, 2008 the Division received an application for the Wellington Dry-Coal Cleaning Facility.

The Division generated a list of deficiencies from the initial permit application package to the Permit Applicant on July 9, 2008. COVOL responded to the deficiencies on October 15, 2008.

This technical memo will address the adequacy of the COVOL responses as they relate to the Biology, Land-Use and Cultural Resource requirements of the State of Utah R645-Coal Mining Rules.

Deficiency List

The Permit Application Package cannot receive a recommendation for approval until the Applicant addresses all of the findings in this Memo.

R645-301-320: The application needs to include a description of the plant *communities* found in and around the project area and needs to provide a map delineating the vegetative communities including the riparian area found adjacent to the project site. (JH) (IW)

- The application needs to include a map delineating the habitats for high value wildlife species and conduct an approved wildlife survey of the permit site and adjacent area for

burrowing owls and big game species. An approved survey protocol can be found at the US Fish and Wildlife Department.

- For clarification purposes, the Applicant needs to make the application clear that the site has been disturbed prior to conducting site surveys for wildlife and vegetation including threatened or endangered species. It needs to be clear that the biological surveys are being conducted on surrounding site areas as a substitution for the total area to be reclaimed. The biological survey in Appendix 3-1 needs to include a summary in the "Findings and Recommendations" section of the Threatened or endangered species found on the adjacent undisturbed site area.

- The Applicant needs to modify Appendix 3-1 to include the habitat requirements and locations of *all* threatened or endangered species found in Carbon County. Appendix 3-1, the biological survey, lists species that are, "Outside of Their Known Range or Lacking Suitable Habitat". This list needs to include each species' *suitable* habitat and why the permit site is not adequate habitat for them. Critical habitat areas are listed for the Humpback chub, the Bonytail chub, razorback sucker, Colorado pike minnow, and the Mexican Spotted owl; however, the biological survey does not include habitat locations for the Southwestern Willow flycatcher, the Uinta Basin hookless Cactus, or the Clay phacelia. (JH) (IW)

R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731: The application needs to include the following maps for the permit site and the adjacent areas:

- The Applicant needs to be aware that the Class I literature search is pending concurrence from the SHPO. According to the agreement between COVOL and DOGM, the applicant is responsible for submitting a class III cultural resource survey on undisturbed area (the area south of loop rd.

- Cultural Resource Map: A map needs to be provided showing the area covered by the literature search, and any cultural resources found and their relation to the permit site.

- Monitoring and Sampling Location: A map must be provided showing the location of monitoring and sampling locations.

- Vegetation reference area: The Permit Applicant is required to provide a map showing the location of the reference area. (JH) (IW)

- Under R645-301-411.141.1, the applicant is required to provide a narrative describing the presence/absence of any public park as well as the locations of any cultural or historic resources located within the permit and adjacent areas. If such sites are identified, provide a map depicting their locations. (JH) (IW)

R645-301-322, -301-333, -301-342, -301-358: The applicant needs to include a statement of acknowledgement that the water consumption from Miller Creek is pending approval by the U.S. Department of Fish and Wildlife even though it is below the 100 acre/ft maximum.

Miller Creek is considered the "adjacent area" of the Permit site, especially because it potentially provides habitat for an endangered species (see appendix 3-1). This section of the Application needs to be modified to omit this contradiction: "No wetland or riparian habitat exists in the permit or adjacent areas...the closest riparian habitat is located along Miller Creek approximately .4 miles south of the permit area." A map of the riparian area and any other high value habitat needs to be provided in the application. All other deficiencies for this section are listed under "Fish and Wildlife Resource Information" regulation R645-301-320. (JH) (IW)

R645-301-412, -301-413, -301-414: The applicant needs to demonstrate that the 9.7 acres south of Loop Rd can be reclaimed. Chapter 3 page 3-10 states that the extent of future revegetation is not currently known" and "The precise areas to be revegetated will be determined in consultation with the future site owner." The Applicant must commit to a revegetation plan approved by DOGM that will restore the area to its original condition; according to the information on page 4-1 of the application, the area was previously undisturbed even though it may have been zoned for industrial use.

The Permit Applicant indicates that 9.7 acres of the permit area will be revegetated during reclamation and the runoff and sediment control structures in this area will be retained for use by future landowners. The sediment ponds do not currently have access roads for maintenance, therefore, they must be regraded and seeded and an alternate method of sediment control for the entire project site must be submitted and approved. If the Applicant can provide justification for retention of the structures as part of an alternate post-mining land use at the time of reclamation, then the Applicant must provide access roads. (JH) (IW)

Additional post mining land use information is included in the October 15, 2008 submittal, Chapter 4, page 4-3, paragraph 1. The information identifies the post mining

land use of the remaining portion of the disturbed area as "Industrial". The application needs to include the following information:

- Site specific information that describes the type of industrial use the property will be used for at the completion of mining activities,

- The entity responsible for the post mining land use,

- A written request from the entity identifying their needs for the property, and a right of entry agreement between Covol and the industrial site user if other than Covol; or a clear and concise methodology for the reclamation of that portion of the disturbed area , and

- A copy of the Wellington city Agreement for reclamation of the site (JH) (IW)

R645-301-244, -301-353, -301-354, -301-355, -301-356: The July 9, 2008 list of deficiencies presented by the division contained the following: "Page 3-5, Section 3.40 indicates, "Post-operation revegetation of the site is not anticipated". The application needs to be revised to include a reclamation plan for the disturbed area."
In response to this deficiency, the Permit Applicant changed the wording of this sentence to, " Under the post-operation industrial land use, complete post-operation revegetation of the site is not anticipated. The Permit applicant did not address this deficiency and it still applies.

In Section 3.10 of the permit application, the Permit Applicant states that "Given the poor suitability of site soils for agricultural and rangeland purposes, the site will be reclaimed for future industrial use rather than restoring the site to its undisturbed condition." The 9.7 acres south of Loop road was previously undisturbed and needs to by reclaimed to its undisturbed state.

On pg. 3-10 Section 3.40, the Permit Applicant states, "rather than restoring the land to its pre-disturbance land use, it will be restored to a higher or better post-operations industrial land use consistent with the current zoning of the site and adjacent areas. The Permit Applicant needs to reclaim the 9.7 acres south of Loop road to its original undisturbed condition. Refer to the deficiency under the post mining land use section, **R645-301-412, -301-413, -301-414.**

On page 3-11, section 3.41, the Permit Applicant states, " for the sake of developing a reclamation cost estimate, it is assumed in this permit application that the area south of the facility loop road will be revegetated during reclamation. The Permit applicant is responsible for reclamation of 9.7 acres south of Loop road . For the retention of sediment ponds deficiency, refer to the deficiency under the post mining land use section, **R645-301-412, -301-413, -301-414.**

On page 3-12 the Permit Applicant states that, "Assuming that permission can be obtained, the temporary reference and revegetated areas will be inspected for plant growth and erosion at schedule and using methods that comply with the Vegetation Information Guidelines." The Vegetation Information Guidelines provided by DOGM provides a monitoring protocol but not a monitoring schedule. The Permit Applicant needs to modify this section to state that they will use the entire protocol and not just monitor "growth and erosion". The Applicant needs to provide a monitoring schedule approved by DOGM. A reference site must be selected in consultation with DOGM for vegetation success standards. A map that includes the location of the reference site needs to be provided. **(JH) (IW)**

R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731;
The following maps need to be included in the application

Reclamation Facilities Maps

Reclamation Monitoring And Sampling Location Maps

Reclamation Surface And Subsurface Manmade Features Maps

Reclamation Treatments Maps

Surface Ownership Maps (JH) (IW)

TECHNICAL ANALYSIS:

GENERAL CONTENTS

PERMIT APPLICATION FORMAT AND CONTENTS

Regulatory Reference: 30 CFR 777.11; R645-301-120.

Analysis:

The July 9, 2008 list of deficiencies presented by the division contained the following: "The permit application package (PAP) should be formatted by chapter and regulation as in the State of Utah R-645 Coal Mining Rules."

The Permit Applicant responded on October 15, 2008 with a modified section 1.1.1 to indicate how the document was formatted to correspond to each chapter and regulation in the State of Utah R-645 Coal Mining Rules.

Findings:

The Permit applicant's response adequately addresses the minimum regulatory requirements of this section.

REPORTING OF TECHNICAL DATA

Regulatory Reference: 30 CFR 777.13; R645-301-130.

Analysis:

The July 9, 2008 list of deficiencies presented by the division contained the following: "the application needs to be accompanied by the names of the individuals that collected and analyzed the data, the dates of collection, analysis of the data and a description of the methodology used to collect and analyze the data "The site area is not conducive to human historic habitation or use. No cultural resources are known to have existed in the permit area prior to facility construction"."

The Permit Applicant responded on October 15, 2008 and stated that the names of individuals that collected and analyzed the data are provided in Section 1.30. Section 1.30 was updated to include the authors of any data added in response to the July 9, 2008 deficiency list. The Permit Applicant also stated that the dates of collection, analysis of the data and a description of the methodology used to collect and analyze the data are provided in each chapter of the document.

Findings:

The Permit Applicant's response adequately addresses the minimum regulatory requirements of this section.

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:

The July 9, 2008 list of deficiencies presented by the division contained the following: "The application needs to include a Cultural resource survey for the permit and adjacent area, granted the current permit area is disturbed as was the Savage Coal Terminal prior to conducting archaeological surveys. The portion of the survey to the north may include information from Archaeological surveys included in the Savage Coal Terminal MRP. In order to reference and utilize confidential information from the Savage Coal Terminal MRP, the application should provide documentation that the Savage Services Corporation has given COVOL permission to do so."

The Permit Applicant responded on October 15, 2008 by providing a class I Cultural resource survey for the permit and adjacent areas in Appendix 4-1 and modified section 4.1.1.1 to include a summary of the Cultural resource survey. The Cultural Resource survey shows that no cultural resource sites have been identified. The information provided in the application will be forwarded to the SHPO for their concurrence.

Under Chapter 4 of the signed agreement between COVOL and DOGM, The Permittee agreed to submit a Class I literature search of the upper industrial portion of the permit site as well as a class III cultural resources survey for the lower 9.7 acres south of loop road.

Findings:

The information in the application is not adequate to meet the requirements of this section of the regulations. Prior to approval the following information must be provided in accordance with;

R645-301-411, The Class I literature search needs approval from SHPO. The Applicant must conduct a Class III Cultural Resources survey for the lower 9.7 acres south of loop road according to the agreement on March 13, 2007 between COVOL and DOGM.

VEGETATION RESOURCE INFORMATION

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

Analysis:

The July 9, 2008 list of deficiencies presented by the division contained the following: "The application needs to include a map delineating the vegetative communities and a vegetative survey of the permit and adjacent area, granted the current permit area is disturbed as was the Savage Coal Terminal prior to conducting vegetation surveys. A portion of the survey to the north may include mapping and survey information from the Savage Coal Terminal MRP. Any references to "Savage Services Corporation 1983" regarding vegetation information are outdated. The application needs to include current vegetation resource information for the permit and adjacent areas."

The Permit Applicant responded on October 15, 2008 by providing a current biological survey of the area in Appendix 3-1 and modified Section 3.2.1.1 to summarize the vegetation found in and adjacent to the permit area. Cheatgrass, halogeton and Russian Thistle are believed to have been the dominant species in the permit area prior to development. Noxious plants, Russian olive and Tamarisk, dominate the riparian corridor of Miller Creek, however, ***the report fails to delineate between plant communities. Under Regulation R645-301-322.220 the Applicant is required to provide information on and the location of habitats of unusually high value for fish and wildlife including streams, wetlands and riparian areas.***

Findings:

The Permit Applicant did not meet the minimum regulatory requirements of this section. The Applicant must comply with the following regulation:

R645-301-320: The application needs to include a description of the plant *communities* found in and around the project area and needs to provide a map delineating the vegetative communities including the riparian area found adjacent to the project site. (JH) (IW)

FISH AND WILDLIFE RESOURCE INFORMATION

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

Analysis:

The July 9, 2008 list of deficiencies presented by the division contained the following: "The application needs to include a map delineating the habitats for high value wildlife species and a wildlife survey of the permit and adjacent area, granted the current permit area is disturbed as was the Savage Coal Terminal prior to conducting wildlife surveys. A portion of the survey to the north may include mapping and survey information from the Savage Coal Terminal MRP."

The Permit Applicant modified Appendix 3-1 to include a wildlife survey of the permit and adjacent area. Cottontail rabbit and ants were the only wildlife found within and around the permit area. Prairie dog burrows were found about ½ miles from the site. Critical habitat for endangered or threatened animal species were at least 25 miles away from the project site. The following species were determined by DWR as species that could potentially occupy the site: Black-footed ferret, burrowing owl, white- tailed Prairie dog and Blue head sucker. For Burrowing owls, a pre-construction survey will be conducted by the Permit Applicant if land-disturbing activities are to take place during breeding season (February- August), and postponed if burrowing owls are found at the site until the adults have vacated. To prevent disturbance to possible present Blue head sucker, activities involving diverting or removing water, or discharging substances into Miller Creek must involve consultation with DWR.

For Migratory birds protected under MBTA, a pre-construction survey will be conducted before activities take place during nesting season (February- September). If birds are found, all activities will be postponed until non-nesting season or all chicks have fledged. Also, prey species including cottontail rabbit, jack rabbit, and white tailed prairie dog are present in the site area and care should be taken to avoid predatory raptors.

The Permit Applicant did not provide a map delineating the habitats for high value wildlife species. It is not clear what protocol the biologist followed for the burrowing owl survey described in Appendix 3-1. The Application needs to include a survey of big game presence and habitat on and adjacent to the permit site.

Critical habitat areas are listed for the Humpback chub, the Bonytail chub, razorback sucker, Colorado pikeminnow and the Mexican Spotted owl, however, the biological survey does not include habitat locations for the Southwestern Willow flycatcher, the Uinta Basin hookless Cactus or the Clay phacelia.

Findings:

The Permit applicant did not meet the minimum regulatory requirements for this section. The Applicant must comply with the following regulation:

R645-301-320: The application needs to include a map delineating the habitats for high value wildlife species and conduct an approved wildlife survey of the permit site and adjacent area for burrowing owls and big game species. An approved survey protocol can be found at the US Fish and Wildlife Department.

Also, for clarification purposes, the Applicant needs to make the application clear that the site has been disturbed *prior* to conducting site surveys for wildlife and vegetation including threatened or endangered species. It needs to be clear that the biological surveys are being conducted on surrounding site areas as a substitution for the total area to be reclaimed. The biological survey in Appendix 3-1 needs to include a summary in the "Findings and Recommendations" section of the Threatened or endangered species found on the adjacent undisturbed site area.

The Applicant needs to modify Appendix 3-1 to include the habitat requirements and locations of *all* threatened or endangered species found in Carbon County. Appendix 3-1, the biological survey, lists species that are, "Outside of Their Known Range or Lacking Suitable Habitat". This list needs to include each species' *suitable* habitat and why the permit site is not adequate habitat for them. Critical habitat areas are listed for the Humpback chub, the Bonytail chub, razorback sucker, Colorado pikeminnow and the Mexican Spotted owl; however, the biological survey does not include habitat locations for the Southwestern Willow flycatcher, the Uinta Basin hookless Cactus or the Clay phacelia.

LAND-USE RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.22; R645-301-411.

Analysis:

The July 9, 2008 list of deficiencies presented by the division contained the following: "the application needs to include a narrative that describes the current uses of the land by Covol Technologies." And "The applicant needs to redistribute topsoil and retain the drainage control structures until the completion of phase II reclamation."

The Permit Applicant modified Section 4.1.1.1 in response to the Division's deficiency. COVOL currently operates a dry coal cleaning facility on a toll basis in accordance with the I-2 zoning. All material is shipped off site once processing is complete.

Findings:

The Permit Applicant's response adequately addresses the minimum regulatory requirements of this section. The topsoil and redistribution and drainage control structure retention will be addressed in another section of the deficiency list.

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

Analysis:

Cultural Resource Maps

On July 9, 2008, a cultural resource map was listed as a deficiency and requested by the Permit Applicant in the deficiency list provided by the Division.

In Response, the Permit Applicant stated that maps have been modified as needed to fulfill this requirement. No cultural resource maps exist in the permit application. However, the Permit Applicant modified the Cultural and Historic Resources Information under Section 4.1.1.1 to include a summary of the added Appendix 4-1 Cultural Resource Inventory. This survey suggests that there are no cultural resource sites within the COVOL facility boundary. It does suggest that there is one cultural resource site identified 500 ft from the COVOL site but that it cannot e mapped due to SHPO data restrictions.

A map needs to be provided showing the area covered by the literature search, and any cultural resources found and their relation to the permit site.

Monitoring and Sampling Location Maps

On July 9, 2008, a Monitoring and sampling location map was listed as a deficiency and requested by the Permit Applicant in the deficiency list provided by the Division.

In Response, the Permit Applicant stated that maps have been modified as needed to fulfill this requirement. No monitoring and sampling location maps exist in the permit application. Section 3.2.3 of the Permit application states that "No maps or aerial photographs will be used to address the biological resources of the permit area."

The Permit Applicant is required to reclaim the entire permit area after the cessation of mining activities on the site regardless of future land use or zoning. A map must be provided showing the location of monitoring and sampling locations.

Permit Area Boundary Maps

On July 9, 2008, a Permit Area Boundary map was listed as a deficiency and requested by the Permit Applicant in the deficiency list provided by the Division.

In Response, the Permit Applicant stated that maps have been modified as needed to fulfill this requirement. No Map of the permit area has been provided, however, the permit area is shown in the *Reclamation Map* plate 5-2. This is adequate for this requirement.

Vegetation Reference Area Maps

On July 9, 2008, a Permit Area Boundary map was listed as a deficiency and requested by the Permit Applicant in the deficiency list provided by the Division.

In Response, the Permit Applicant stated that maps have been modified as needed to fulfill this requirement. No vegetation reference area maps exist in the permit application. ***In consultation with DOGM, a vegetation reference site must be selected inorder to properly reclaim the permit site, and the Permit Applicant is required to provide a map showing the location of the reference area.***

Surface Ownership Maps

The application needs to include surface ownership maps for the entire disturbed area and adjacent areas.

Findings:

The Permit Applicant failed to provide any of the requested maps listed in the July 9, 2008 Deficiency list. The Applicant must comply with the following regulations:

R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731: The application needs to include the following maps for the permit site and the adjacent areas:

- Cultural Resource Map: A map needs to be provided showing the area covered by the literature search, and any cultural resources found and their relation to the permit site.
- Monitoring and Sampling Location: A map must be provided showing the location of monitoring and sampling locations.
- Vegetation reference area: The Permit Applicant is required to provide a map showing the location of the reference areaSurface Ownership Maps: *The application needs to include surface ownership maps for the entire disturbed area and adjacent areas.*

OPERATION PLAN

PROTECTION OF PUBLIC PARKS AND HISTORIC PLACES

Regulatory Reference: 30 CFR784.17; R645-301-411.

Analysis:

On July 9, 2008 the division listed the following as a deficiency of the Permit Application: "The applicant did not address this section of the regulations."

The Permit Applicant did not modify the application to include the location or protection plan of public parks and historic places.

Findings:

The Permit Applicant did not meet the minimum regulatory requirements of this section and needs to address the following regulation:

R645-301-411.141.1, the applicant is required to provide a narrative describing the presence/absence of any public park as well as the locations of any cultural or historic resources located within the permit and adjacent areas. If such sites are identified, provide a map depicting their locations. (JH) (IW)

FISH AND WILDLIFE INFORMATION

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

Analysis:

Protection and Enhancement Plan

The July 9, 2008 list of deficiencies presented by the division contained the following: "Page 3-12, Section 3.5.8 states that "The plan is designed to minimize disturbances and adverse impacts on fish, wildlife and their related environments. COVOL will periodically educate their employees about wildlife needs and their importance" The application needs to include information in this section that explains how the plan is designed to minimize disturbances, what wildlife needs are and how Covol will periodically educate their employees about wildlife needs and their importance."

The Permit Applicant also updated Section 3.3.3 and Section 3.5.8. The updated Section 3.3.3 includes a summary of recommendations from Appendix 3-1. It lists potentially impacted sensitive species, and how COVOL will minimize disturbance to the species and their habitat.

COVOL will conduct periodic staff meetings to make employees aware of sensitive species and their prey base. Consultation with DOGM and DWR will occur before any activities that may disturb sensitive species or their habitat.

Endangered and Threatened Species

The July 9, 2008 list of deficiencies presented by the division contained the following:

"Appendix 3-1 of the application includes a letter from the Division of Wildlife Resources, DWR, regarding species of concern. As noted in the letter and personal communication with Chris Wood, DRW habitat manager for the southeastern region, the information is not to be considered a substitute for on-the-ground biological surveys. The application needs to include a survey of the adjacent area for threatened and endangered species of plants and wildlife to ensure compliance with the Endangered Species Act. The application needs to be accompanied by the names of the individuals that collected and analyzed the data, the dates of collection, analysis of the data and a description of the methodology used to collect and analyze the data to support the following statement noted on page 3-12, Section 3.5.8.1 of the application; There are no known endangered or threatened species within the permit area."

"Mining operations may affect the habitat of the following endangered fish species, Colorado Pike minnow, Razor back sucker, Humpback chub and Bonytail chub. The application needs to include calculations for water consumption expressed in acre-feet per year as required by the USFWS's Colorado fish Recovery Program. Water consumption in excess of 100 acre feet per year will require a mitigation fee as determined by the FWS."

The Permit Applicant updated this section by adding a biological survey conducted by Christopher Jensen on October 9, 2008. The Permit Applicant also updated Section 3.3.3 and Section 3.5.8. The updated Section 3.3.3 includes a summary of recommendations from Appendix 3-1. It lists potentially impacted sensitive species, and how COVOL will minimize disturbance to the species and their habitat.

To prevent disturbance to the bluehead sucker, COVOL will not divert from or discharge water to Miller Creek, a possible habitat for the species. If these activities are required, COVOL will consult with DWR for approval. COVOL will conduct preconstruction surveys for burrowing owls or migratory raptors in the site and postpone activity if any are found until after nesting season. Section 3.5.8 has been updated to include a description of how COVOL will educate their staff about species of concern and the mitigation requirements.

In response to the latter half of this deficiency, the Permit Applicant modified Section 3.2.2.2 to include water consumption. The Permit Applicant stated that they owned shares for 6 acre-feet of water per year and their actual usage was 4.1 acre-feet of water. This is well below the maximum of 100 acre feet per year required by the

USFWS's Colorado Fish Recovery Program. ***The permit applicant needs to be aware that the approval of this water usage is pending consultation with the U.S. Department of Fish and Wildlife.***

All other remaining deficiencies for this section are referred to in the previous section "Fish and Wildlife Resource Information" as regulation R645-301-320.

Bald and Golden Eagles

The deficiencies found by the division on July 9, 2008 stated,

"The application needs to be accompanied by the names of the individuals that collected and analyzed the data, the dates of collection, analysis of the data and a description of the methodology used to collect and analyze the data to support the following statement noted on page 3-12, Section 3.5.8.2 of the application: "No suitable bald or golden eagle habitat exists in the permit or adjacent areas."

"Sections 3.2.2 and 3.2.2.2 indicate that two species of jackrabbit, desert cottontail and white tail prairie dog are known to exist near the Covol facility thus providing a prey base for the eagles. This section of the application, 3.5.8.2, needs to be revised to acknowledge the prey base species."

The Permit Applicant added Appendix 3-1, a biological survey conducted by Christopher Jensen on October 9, 2008, which satisfies the requirements for this section.

The Permit Applicant modified Section3.3.3 to include prey base species in the plan to minimize disturbances. The Permit Applicant also modified Sections 3.5.8 and 3.5.8.2 to state that they will educate their employees about prey base species.

Wetlands and Habitats of Unusually High Value for Fish and Wildlife

The July 9, 2008 list of deficiencies presented by the division contained the following:

"Appendix 3-1 of the application includes a letter from the Division of Wildlife Resources, DWR, regarding species of concern. It lists three sensitive species that occur within the general vicinity of the Covol facility, burrowing owl, bluehead sucker and white tailed prairie dog. The application needs to include a narrative that includes protection measures to be taken to avoid disturbances to habitats of high value for fish and wildlife, (burrowing owl, bluehead sucker and white tailed prairie dog), a map that shows the habitat for these species in relation to the permit area boundary and a burrowing owl survey.

"The application needs to be accompanied by the names of the individuals that collected and analyzed the data, the dates of collection, analysis of the data and a description of the methodology used to collect and analyze the data to support the following statement noted on page 3-12, Section 3.5.8.2 of the application:" No wetland or riparian habitat exists in the permit or adjacent areas".

The Permit Applicant added Appendix 3-1, a biological survey conducted by Christopher Jensen on October 9, 2008, and modified Section 3.2.2.2 and 3.3.3 to describe measures that will be taken to avoid disturbances to habitats of high value for fish and wildlife. On page 3-19 section 3.5.8.4, the statement, "No wetland or riparian habitat exists in the permit or adjacent areas…the closest riparian habitat is located along Miller Creek approximately .4 miles south of the permit area."

Miller Creek is considered the "adjacent area" of the Permit site, especially because it potentially provides habitat for an endangered species (see appendix 3-1). This section of the Application needs to be modified to omit this contradiction. A map of the riparian area and any other high value habitat needs to be provided in the application. All other deficiencies for this section are listed under "Fish and Wildlife Resource Information" regulation R645-301-320.

Findings:

The Permit Applicant did not meet the minimum regulatory requirements of this section. The Permit Applicant must address the following deficiencies:

R645-301-322, -301-333, -301-342, -301-358: The applicant needs to include a statement of acknowledgement that the water consumption from Miller Creek is pending approval by the U.S. Department of Fish and Wildlife even though it is below the 100 acre/ft maximum.

Miller Creek is considered the "adjacent area" of the Permit site, especially because it potentially provides habitat for an endangered species (see appendix 3-1). This section of the Application needs to be modified to omit this contradiction: "No wetland or riparian habitat exists in the permit or adjacent areas…the closest riparian habitat is located along Miller Creek approximately .4 miles south of the permit area." ***A map of the riparian area and any other high value habitat needs to be provided in the application. All other deficiencies for this section are listed under "Fish and Wildlife Resource Information" regulation R645-301-320.***

RECLAMATION PLAN

POSTMINING LAND USES

Regulatory Reference: 30 CFR Sec. 784.15, 784.200, 785.16, 817.133; R645-301-412, -301-413, -301-414, -302-270, -302-271, -302-272, -302-273, -302-274, -302-275.

Analysis:

The July 9, 2008 list of deficiencies presented by the division contained the following: "The applicant needs to demonstrate that the disturbed area can be reclaimed prior to obtaining approval for an alternative post mining land use as required by R645-301-413.100. Chapter 3, page 3-1, paragraph 2, indicates that "Reclamation of the site will make it available for future industrial use rather than restoring the site to its undisturbed condition". Industrial use is a zoning classification and not necessarily an indicator of the land status prior to the applicant's activities. According to the information on page 4-1 of the application, the area was previously undisturbed even though it may have been zoned for industrial use. That being the case the applicant is required to reclaim the disturbed area to its original condition. If that is not the case the applicant needs to clarify the information in this section of the application.

The Permit Applicant modified Sections 2.4.2.1 and 3.4.1 to indicate the area where soil will be redistributed and revegetated. The Permit Applicant states that, " Due to future industrial use of the site following coal-cleaning operations, the extent of future revegetation is not currently known...precise areas to be revegetated will be determined in consultation with the future site owner." The Permit Applicant indicates that 9.7 acres of the permit area will be revegetated during reclamation and the runoff and sediment control structures in this area will be retained for use by future landowners." The applicant must commit to reclaiming the 9.7 acres south of Loop rd. The sediment ponds need to be reclaimed and an alternate approved sediment control plan for the site needs to be developed. At the time of reclamation, if an approved post mining land use includes using the ponds, then roads need to be built for maintenance.

The Permit Applicant modified Section 4.1.2.1 to state that the site is poorly suited for agricultural use and that native vegetation is poorly suited for rangeland. The Permit Applicant states that they will restore the site to an industrial land use consistent with the current zoning of the site. ***The application must include a reclamation plan of the 9.7 acres south of Loop Road. The land was previously undisturbed and needs to be reclaimed accordingly unless an alternative postmining land use plan is approved.***

Additional post mining land use information is included in the October 15, 2008 submital, Chapter 4, page 4-3, paragraph 1. The information identifies the post mining land use

of the remaining portion of the disturbed area as "Industrial". ***The application needs to include specific information that describes the type of industrial use , the entity responsible for the alternative post mining land use, a written request from the entity identifying their needs for the property, and a right of entry agreement between Covol and the industrial site user or a clear and concise methodology for the reclamation of that portion of the disturbed area .***

Findings:

The Permit Applicant does not meet the minimum requirements for this section. The Applicant must comply with the following regulation:

R645-301-412, -301-413, -301-414: The applicant needs to demonstrate that the 9.7 acres south of Loop Rd can be reclaimed. Chapter 3 page 3-10 states that the extent of future revegetation is not currently known" and "The precise areas to be revegetated will be determined in consultation with the future site owner." The Applicant must commit to a revegetation plan approved by DOGM that will restore the area to its original condition; according to the information on page 4-1 of the application, the area was previously undisturbed even though it may have been zoned for industrial use.

The Permit Applicant indicates that 9.7 acres of the permit area will be revegetated during reclamation and the runoff and sediment control structures in this area will be retained for use by future landowners. The sediment ponds do not currently have access roads for maintenance, therefore, they must be regraded and seeded and an alternate method of sediment control for the entire project site must be submitted and approved. If the Applicant can provide justification for retention of the structures as part of an alternate post-mining land use at the time of reclamation, then the Applicant must provide access roads. (JH) (IW)

Additional post mining land use information is included in the October 15, 2008 submittal, Chapter 4, page 4-3, paragraph 1. The information identifies the post mining land use of the remaining portion of the disturbed area as "Industrial". The application needs to include the following information:

- Site specific information that describes the type of industrial use the property will be used for at the completion of mining activities,
- The entity responsible for the post mining land use,
- A written request from the entity identifying their needs for the property, and a right of entry agreement between Covol and the industrial site user if other than

Covol; or a clear and concise methodology for the reclamation of that portion of the disturbed area , and

- A copy of the Wellington city Agreement for reclamation of the site (JH) (IW)

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 July 9, 2008 list of deficiencies presented by the division contained the following: "Page 3-5, Section 3.40 indicates, "Post-operation revegetation of the site is not anticipated". The application needs to be revised to include a reclamation plan for the disturbed area."

In response to this deficiency, the Permit Applicant changed the wording of this sentence to, "Under the post-operation industrial land use, complete post-operation revegetation of the site is not anticipated. ***The Permit applicant did not address this deficiency and it still applies.***

The Permit Applicant modified Section 3.4.1 to state that the extent of future revegetation is not currently known and will be determined in consultation with the future site owner. ***The Permit Applicant needs to commit to a reclamation plan for the lower 9.7 acres south of Loop road.***

On page 3-11, section 3.41, the Permit Applicant states, " for the sake of developing a reclamation cost estimate, it is assumed in this permit application that the area south of the facility loop road will be revegetated during reclamation. This area, in which runoff- and sediment-control structures will be retained for use by the future landowner, covers 9.7 acres of the permit area. The precise areas to be revegetated will be determined in consultation with the future site owner." ***The Permit applicant is responsible for reclamation of the entire permit site, not only 9.7 acres of it and not only for a cost estimate. The Permit applicant is responsible for removing runoff and sediment control structures as part of reclamation. The Permit Applicant is needs to commit to a reclamation plan approved by DOGM. The areas to be revegetated should***

be the entire permit site and adjacent areas approved by DOGM and not the future site owner.

Pg. 3-17 Section 3.5.6.4 states, "To more adequately support the post-operation industrial land use, the siltation structures will remain on site following closure of the COVOL facility." ***The Permit Applicant is responsible for the removal of siltation structures after at least two years of revegetation success and approval from DOGM. The Applicant is then required to revegetate the area in which the siltation structures occurred.***

Revegetation: Mulching and Other Soil Stabilizing Practices

The July 9, 2008 list of deficiencies presented by the division contained the following: "Page 3-6, Section 3.4.1.2 indicates, "no mulch will be applied" this section of the application needs to be revised to include mulching or other soil stabilizing practices."

The Permit Applicant modified Section 3.4.1.2 to indicate that mulching will occur over the entire area to be revegetated after topsoil has been replaced.

Revegetation: Standards For Success

The July 9, 2008 list of deficiencies presented by the division contained the following: "Page 3-6, Section 3.4.1.2 indicates that "revegetation success will be monitored visually" this section of the application needs to be revised to include a reference area, a map showing the location of the reference area, a monitoring schedule during the reclamation liability period and a statistically valid sampling technique for measuring vegetation success in accordance with the vegetation guidelines, (R645-356.110 Appendix A of the Utah Coal Rules). "

The Permit Applicant modified Section 3.4.1.2 to state that monitoring will comply with Appendix A of DOGM's "Vegetation Information Guidelines". The Permit Applicant states that a permanent vegetation reference area is impossible because the entire permit area is disturbed and surrounding areas are privately owned. The Applicant states that prior to revegetation, they will consult with DOGM to establish a temporary reference area and obtain permission of the applicable landowner to monitor the site. ***The Permit Applicant needs to select a vegetation reference area in consultation with DOGM and must provide a map of the reference site.***

On page 3-12 the Permit Applicant states that, "Assuming that permission can be obtained, the temporary reference and revegetated areas will be inspected for plant

growth and erosion at schedule and using methods that comply with the Vegetation Information Guidelines." ***The Vegetation Information Guidelines provided by DOGM provides a monitoring protocol but not a monitoring schedule. The Permit Applicant needs to modify this section to state that they will use the entire protocol and not just monitor "growth and erosion". The Applicant needs to provide a monitoring schedule approved by DOGM.***

Findings:

The Permit Applicant does not meet the minimum requirements for this section. The Applicant must comply with the following regulations:

R645-301-244, -301-353, -301-354, -301-355, -301-356: The July 9, 2008 list of deficiencies presented by the division contained the following: "Page 3-5, Section 3.40 indicates, "Post-operation revegetation of the site is not anticipated". The application needs to be revised to include a reclamation plan for the disturbed area."
In response to this deficiency, the Permit Applicant changed the wording of this sentence to, " Under the post-operation industrial land use, complete post-operation revegetation of the site is not anticipated. The Permit applicant did not address this deficiency and it still applies.

In Section 3.10 of the permit application, the Permit Applicant states that "Given the poor suitability of site soils for agricultural and rangeland purposes, the site will be reclaimed for future industrial use rather than restoring the site to its undisturbed condition." The 9.7 acres south of Loop road was previously undisturbed and needs to by reclaimed to its undisturbed state.

On pg. 3-10 Section 3.40, the Permit Applicant states, "rather than restoring the land to its pre-disturbance land use, it will be restored to a higher or better post-operations industrial land use consistent with the current zoning of the site and adjacent areas. The Permit Applicant needs to reclaim the 9.7 acres south of Loop road to its original undisturbed condition. Refer to the deficiency under the post mining land use section, **R645-301-412, -301-413, -301-414.**

On page 3-11, section 3.41, the Permit Applicant states, " for the sake of developing a reclamation cost estimate, it is assumed in this permit application that the area south of the facility loop road will be revegetated during reclamation. The Permit applicant is responsible for reclamation of 9.7 acres south of Loop road . For the retention of sediment ponds deficiency, refer to the deficiency under the post mining land use section, **R645-301-412, -301-413, -301-414.**

On page 3-12 the Permit Applicant states that, "Assuming that permission can be obtained, the temporary reference and revegetated areas will be inspected for plant growth and erosion at schedule and using methods that comply with the Vegetation Information Guidelines." The Vegetation Information Guidelines provided by DOGM provides a monitoring protocol but not a monitoring schedule. The Permit Applicant needs to modify this section to state that they will use the entire protocol and not just monitor "growth and erosion". The Applicant needs to provide a monitoring schedule approved by DOGM. A reference site must be selected in consultation with DOGM for vegetation success standards. A map that includes the location of the reference site needs to be provided.

MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

Analysis:

The following maps need to be included in the application:

Reclamation Facilities Maps

Reclamation Monitoring And Sampling Location Maps

Reclamation Surface And Subsurface Manmade Features Maps

Reclamation Treatments Maps

Findings:

The information in the application is not adequate to meet the requirements of this section of the regulations. Prior to approval the following information must be provided in accordance with;
R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731;
The following maps need to be included in the application:

Reclamation Facilities Maps

Reclamation Monitoring And Sampling Location Maps

Reclamation Surface And Subsurface Manmade Features Maps

Reclamation Treatments Maps

Surface Ownership Maps

RECOMMENDATIONS:

The Permit Application Package cannot receive a recommendation for approval until the Applicant addresses all of the findings in this Memo.

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