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Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

May 2, 2011

Greg Hunt, Agent
Carbon Resources, LLC
16577 Columbine Lane
Cedaredge, Colorado 81413

Subject: Deficient Permit Application, Carbon Resources LLC, Kinney #2 Mine, C/007/0047, Task ID #3779, Outgoing File

Dear Mr. Hunt:

The Division has reviewed your application to operate a coal mine facility at the Kinney No. 2 mine site in Scofield, Utah.

The Division has determined that there are deficiencies that must be addressed before a determination can be made that the requirements of the R645 Coal Mining Rules have been met and an approval can be granted. Those deficiencies are listed as an attachment to this letter.

Each deficiency identifies its author by that author's initials in parentheses; such that your staff can directly communicate with that individual should any questions arise relative to the preparation of Carbon Resource's response to that particular deficiency.

Priscilla Burton [PB]
James Owen [JCO]
April Abate [AA]
Steve Christensen [SC]
Joe Helfrich [JCH]

In order to complete a timely and efficient review of your application please highlight all text changes in red-line strike-out and include a reference to the chapter and page or map, exhibit, etcetera where the changes are located. These references are typically included in the cover letter with the application.

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114 -5801
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UTAH DNR OIL, GAS & MINING

During the review of your application the review team noted that there were inconsistencies in the table of contents, conflicting statements in the text, and typographical errors in several chapters of the application. Some of these may not have been included in the following list of deficiencies; therefore, it is important that you thoroughly review your application - including all changes made in response to these deficiencies - for any such inconsistencies before resubmitting the document to the Division.

Please respond to these deficiencies as soon as possible such that we may efficiently process your application.

Sincerely,

Daron R. Haddock

Daron R. Haddock
Coal Program Manager

DRH/JCH/sqs
Attachment
cc: Price Field Office
O:\007047.KN2\WG3779\Latest round deficiency letter.doc

Deficiency List

Task ID #3779
Kinney #2 Mine

The members of the review team include the following individuals:

Priscilla Burton-[PB]
April Abate-[AA]
Steve Christensen- [SC]
Joe Helfrich- [JCH]
James Owen-[JCO]

ADMIN

R645-301-112*, The Application needs to include a copy of the proof of current registration with the Utah Department of Commerce and a reference in the narrative noting its location, (Chapter 1 page 1-9). This deficiency was previously noted. [JCH]*

R645-301-112.200, *According to the information received by the Division, when trying to Contact Carbon Resources in Sandia Park New Mexico, the phone number had been disconnected. The application needs to include current correct information. [JCH]*

R645-300-141, 301-114.100*, The reviewer is referred to pages 1-18 and 1-19, R645 301-114.100, (Documentation of Ownership). They include legal descriptions of the Fee surface and Leased surface boundaries. Page 1-20 includes a legal description of the of the permit boundary. The text on pages 1-18 and 1-19 of the application include a reference to lease area and permit area boundary maps 11 and 12. However the maps are not to a scale of 1"=1000' that clearly show the boundaries of the lease and permit areas in order to verify the legal description as previously noted in consultation with the applicant. [JCH]*

R645-301-121.200*, The disturbed area boundary is noted in the legends of Maps 13 and 14. The entire boundary needs to be accurately and clearly shown on Maps 13 and 14 as depicted in the corresponding legends. [JCH]*

R645-300-132; R645-301-113*, The entity ID numbers for Carbon Resources, LLC, Western Reserve Coal Company, Inc. and WRCC, LLC. were located in the confidential file. This information noted on pages 1-10and 1-11 is not confidential and needs to be included in the application. [JCH]*

SOILS

R645-301-731.300 and R645-301-536.320, *Section 528.320 states that the maximum time the temporary waste pile will remain on the surface is two years. Section 515.300 of the MRP states that during periods of temporary cessation lasting 30 days or more, one composite waste sample will be drawn from the temporary waste pile. The document does not indicate what parameters*

will be analyzed. Please indicate a list of parameters to be analyzed and indicate that one composite sample will be taken for every 5,000 Tons in the pile. [PB]

BIOLOGY

R645-301-333, *Additional consultation in March of 2011 with the applicant, FWS, DWR and DOGM changed the complexion of the raptor nest protection commitments to a monitoring and mitigation plan with appropriate revisions to the text in chapter three. Paragraph 2 on page 3-41b will need to be revised to include the Division of Oil, Gas and Mining as a consulting agency and a commitment to obtain approval from DOGM for any mitigation plans that may be required as a result of the consultation. [JCH]*

The application will also need to include the approval from the USFWS for the proposed deterrents for nest # 1541. [JCH]

R645-301-333, *The proposed mining activities are located in a watershed that contributes water to the upper Colorado River. Within that section of the river are four endangered fish species, the Colorado pike Minnow, Razorback Sucker, Humpbacked Chub and Bonytail. Page 3-59 of the application needs to be revised to include the figure of 66 acre feet per year, (personal conversation with Greg Hunt 1/5/2011), based on the water rights allotted to Carbon Resources. The figure will then be used by the Division and FWS to determine potential adverse effects to the referenced species and to complete the consultation process with the FWS. This is a DOGM obligation. [JCH]*

R645-301-333, *Chapter 3, Section R645-301.330, Page 3-56, Paragraph 1 needs to include the names of the individual(s) and the data collected during the baseline field surveys used to determine that there were no jurisdictional wetlands located within the proposed disturbed area. In the latest response the applicant has indicated that "CR has made additional commitments in this submittal to conduct additional wildlife studies to respond to the Division's concerns". The applicant's response needs to include a reference to the appropriate chapter and page of the application that address the Division's deficiency,ies). [JCH]*

R645-301, *Page 4.3-5 paragraph two should be deleted as it makes reference to the "Barn Canyon air ventilation shaft" The applicant has noted that the paragraph has been deleted. However the applicant's response needs to include a reference to the appropriate chapter and page of the application that address the Division's deficiency,ies). [JCH]*

LAND USE

R645-301-411, *The text of the "Watershed Zone all of map except as shown below" in the legislated zones and legend needs to be revised as follows: Watershed Zone all of map except as shown in the legislated zones, Land Designations and legend. [JCH]*

R645-301-411, *The Land Use information is included in chapter 4 and on map #4 (Regional Land Use) of the application. The proposed disturbed area includes two zoning classifications*

for the proposed disturbed area, Scofield Commercial and Carbon County Mountain Range. A portion of the area is a reclaimed abandoned mine site and the remaining portion is an undisturbed grass, shrub aspen community both of which are used primarily for wildlife, grazing and outdoor recreation according to the text on page 4-9. These current land uses are included in the Commercial and Mountain Range zones but are components of Watershed zone. However the applicant has stated that "There are no planned facilities associated with the Kinney #2 Mine within the WS zone". The application needs to include a rationale in the narrative that clearly explains and clarifies this information much better than what has been presented to date. [JCH]

***R645-301-412, -301-413, -301-414**, Chapter 4, Section R645-301-412.100, Page 4-18, Paragraph 1 needs to be revised to state that "The post mining land use for the reclaimed area is wildlife, grazing and recreation". The terms Mountain Range, Watershed and Commercial are classifications established by Carbon County and the Scofield Town for zoning purposes described in chapter 4 on page 4-4. [JCH] Try again; you were given the answer.*

ENGINEERING

***R645-301-528.320,** The applicant must change the text in the paragraph on page 5-70 that states that the "coal processing waste storage pile is shown as No.7 on map 13". It should be "No.38". Also, Map 13 should be corrected to include No. 38 depicted in the correct location, the No.18 that is incorrectly labeled must be removed, and the surface facilities list must provide the correct description of No.38. [JCO]*

HYDROLOGY

***R645.724.100 and .200**, Table 7 should be updated to include water quality parameter sampling for all groundwater monitoring wells in the monitoring well network and ephemeral drainages within the permit area. [AA]*

***Division Response:** The applicant committed to sampling all wells containing a static water level where it was feasible to sample. However, according to Table 7 provided on page 7-16, all monitoring well data indicate that they will be gauged for water level only. No changes were made to indicate that all wells will be tested for water quality parameters (??).*

Table 7 outlines the operational water monitoring program for the mine. The table only depicts column headers for "water level", "flow", "water quality" and "water presence" measurements. Flow is only one component of the required suite of field parameters which also include at minimum: pH, specific conductivity corrected to 25 deg C, flow or depth to water measurements. These parameters should all be consolidated under a "Field measurements" column instead of flow or water level. Furthermore, it would be clearer in the table to label the column "Laboratory Analytical Parameters" instead of "Water Quality" since field and laboratory measurements can all be fall under the label of "Water Quality". The Division sees no point in a separate column for "Water Presence", which pertains to the ephemeral channels. Each of these ephemeral channels are included in the table and it is understood they will be

monitored for the presence of water on a quarterly basis like all the other sample points. While it is helpful to clarify water sampling points that were initially mislabeled, Table 7 is probably not the appropriate place to include a series of footnotes on what data points were mislabeled in the early stages of the data gathering process. Going forward as the mine becomes operational, all sample nomenclature will be well established and this may confuse future readers of this document. ***Please make the necessary corrections to Table 7 – Operational Water Monitoring Plan are needed to insure that the information presented is clear and concise.***

R645.724.100 and .200, *As a result of CR-06-03-ABV being decommissioned, only six months worth of baseline data were collected from this well. If extraction of the Hiawatha seam is expected to make its way eastward right up to fault that delineates the western side of the Eagle Canyon graben, then the Permittee must provide a commitment to install a replacement well in order to measure any possible negative effects that adjacent mining would have on the groundwater found within Eagle Canyon Graben. [AA]*

Division Response: *The applicant has committed to providing an in-mine well to measure the water quality within Eagle Canyon as mining extends eastward towards the western boundary of the western boundary fault. The MRP was updated on page 7-16 to show this commitment. This well is to pierce the gouge zone of the fault and will be equipped with a differential pressure gauge and valve to monitor water levels and water quality parameters. During the Division's meeting with Carbon Resources, the Division requested that a schematic drawing of this proposed in-mine well be provided. This was not provided in the most recent round of review of the application.* ***Please provide a well schematic diagram. Furthermore, this well should be added to the operational water monitoring plan.***

R645.724.100 and .200, *Eagle Springs 1, Eagle Springs 1A, Eagle Spring 2, Eagle Spring 3 are located within the permit boundary, and should be added to the operational water monitoring plan. [AA]*

Division Response: *More information has come to light in this latest round of review which indicates that Eagle Springs 1, Eagle Springs 1A, Eagle Spring 2, Eagle Spring 3 were only monitored initially when the Spring and Seep Survey of the area was conducted in 2006 by Rock Logic Consulting, LLC. These springs were initially shown to have "estimated" flows of less than 0.5 gallons per minute. Since the survey was completed in 2006, these springs have not been monitored despite the fact that they are within the limits of the permit boundary.* ***Additional baseline data of Eagle Springs 1, Eagle Springs 1A, Eagle Spring 2, Eagle Spring 3 all within the permit area is still needed and would be considered critical to monitor and characterize for baseline, such that any negative impacts from coal mining can be evaluated.***

R645.724.100 and .200*, Monitoring of Aspen Spring began in June 2008 and then resumed in June 2010. The data presented indicates that flow was "not measured or at a trickle". Several dates on the analytical data table were listed but no information was given. Field parameter data were given despite flow measurements not being recorded. How can field parameter data be collected if no water is flowing? If dates are given with no information, the table should note*

that the spring was monitored but not flowing. Please clarify this information and update the analytical tables accordingly. It is important to note that even if a sample location is dry and not flowing, it is still imperative that it be recorded as data collected. For example, Eagle Spring has been monitored consistently since 2005 yet according to Table 6, it appears that data collection is sporadic because only dates when water quality data were available are shown. [AA]

Division Response: *The applicant was asked to clarify the monitoring data pertaining to Aspen Spring since it was not clear how analytical parameters could be collected but flow data was not. The applicant addressed this deficiency by indicating that this location is actually a pond otherwise referred to as "Eagle Pond 1" and that the spring feeds a small pond presumably from the bottom where it is not possible to measure a flow. The applicant has indicated that since Aspen Spring is located in the same general region as the cluster of Eagle Springs 1, 1A, 2 and 3, that it can be the spring that is "representative" of all the springs. The problem is that since it has come to light that Aspen Spring is actually a pond, a representative spring sample cannot be obtained without a flow measurement. Furthermore, Eagle Pond 1, aka Aspen Spring would now be considered surface water sampling point and not a groundwater sampling point and any laboratory analytical measurements would not accurately characterize a sample collected from a pond versus a groundwater sample from a spring that would more accurately reflect groundwater geochemistry. To add further to the confusion, during this round of review where the applicant contends that Aspen Spring is also referred to as "Eagle Pond 1". However there is no reference in the 2006 Spring and Seep Survey to Eagle Pond 1. The closest characterization of Aspen Spring in the 2006 report is Eagle Spring 2. Therefore, it is unclear exactly which of the springs and seeps identified in the survey is definitively Aspen Spring.* ***Since Aspen Spring is a pond, it cannot be considered the representative spring and will need to be removed from the plan as such. If this pond is confirmed to be tied to the surface water right in the area (see deficiency #5 to follow) then it will require some type of water level monitoring protocol to ensure that there is no water loss to this water right.***

R645-301.731.800, *Surface water right information needs to be expanded upon to address the surface water rights within the permit boundaries. The application needs to be updated to include updates to Map 31 explaining the "See Note 1" comment next to water right number 91-3588. Additional information about the status and nature of the two individual water rights is needed on page 7-53 of the application. [AA]*

Division Response: *The applicant contends in their deficiency guidance document that the surface water right identified within their proposed permit area is Aspen Spring and is one in the same with the surface water right #91-4026 located at the bottom of Eagle Canyon. However there is no explanation tying this water right to Aspen Spring explained anywhere in the MRP. In fact, on page 7-58, the water right is characterized as a stockwater right on an unnamed spring with no mention of an associated pond. The information on the water right taken directly from the Utah Division of Water Rights database included in Exhibit 13 indicates that water right #91-4026 is an unnamed spring used for stockwatering. The original adjudication map does show the water right as a spring with an associated pond, but again there is no discussion that definitively concludes that this water right is Aspen Spring, other than what has been*

discussed in the deficiency guidance document prepared by the applicant. ***Please state in the MRP which surface water sampling point is associated with surface water right No. 91-4026.***

R645-731.500, *Sludge materials that end up in the sediment pond are combinations of underground development waste and non-coal waste as defined in the regulations under R645-100-200 and R645-301-528.331, -542.741 and -747.100. Non-coal wastes include, but are not limited to, grease, lubricants, paints, flammable liquids, garbage, abandoned mining machinery, lumber and other combustible materials generated during mining and reclamation activities. Non-coal waste streams are not an accepted form of waste allowed to be discharged into underground mine workings as per R645-731.511 & 512.* ***It is recommended that this sentence be removed and language associated with the applicant's intent to haul sediment pond sludge offsite be inserted.*** *[AA]*

Division Response: *The applicant indicated in their deficiency response document that no non-coal waste materials would be disposed of in abandoned underground workings. However, the correction was not made to the language in the MRP stated on page 7-114 pertaining to sludge materials from the sediment pond being disposed of in abandoned underground workings. Please remove language in the MRP stating that non-coal waste materials will be disposed of in underground workings.*

R645-301-120, *The Permittee must delete the Monitoring Well discussion on pages 7-12 thru 7-14. The previous technical analysis directed the Permittee to address the various water level reading discrepancies. It was the intent of the Division to simply have the well data revised to accurately reflect the characterization of the groundwater system. An explanation of the errors and confusion is not required information for an approved Mining and Reclamation Plan (MRP). [SC]*

R645-301-724.100, *The Permittee must provide additional baseline data to characterize the springs and seeps located within the permit boundary (specifically Eagle Springs 1, 1A, 2, 3 and Aspen Spring). The previous two technical analyses (#2989 and #3646) identified baseline deficiencies relative to the Eagle Springs. In addition, the previous technical analysis (Task ID #3646) identified a deficiency relative to the baseline data collection of Aspen Spring. The Permittee was asked to provide documentation as to how these resources were characterized (i.e. provide the frequency/dates of monitoring visits and associated data). In response, the Permittee has indicated that the water monitoring data obtained at Angle Spring (2005 and 2006) combined with the data collected at Aspen Spring (aka Eagle Pond 1 in 2008 and 2010) provides the baseline data necessary to characterize the nature of these springs/seeps (i.e. Angle Spring, Eagle Springs 1, 1A, 2 and 3) as they all discharge from the fault system within the Eagle Canyon Graben. However; no flow data has been obtained from Aspen Spring. The Permittee indicates on page 7-31 that "it has never been possible to measure flow" from Aspen Spring. In addition, Eagle Springs 1, 1A, 2 and 3 have not been monitored. In the absence of the baseline spring data, the Division is unable to make a finding that the springs/seeps and associated groundwater have been adequately characterized. [SC]*

R645-301-724.100, *The Permittee must address a statement on page 7-11. The Permittee states that Aspen Spring is "named Eagle Pond 1 in the Spring and Seep Survey". The Seep and Spring Survey in Exhibit 9 does not appear to identify nor discuss Eagle Pond 1 or Aspen Spring. [SC]*

R645-301-724.100, *The Permittee must address why field data in Figure 17, Field Data for Eagle Spring (aka Miller Spring), Sulfur Spring, Aspen Spring and Res-1 has been removed from the application. The previous application's Figure 17 contained flow, conductivity and pH field measurements for these hydrologic resources. The application currently under review does not appear to include this information. [SC]*

R645-301-724.100, *The Permittee must address statements on pages 7-21, 7-135 that refer to Figure 17, Field Data as containing field data for monitoring wells. Figure 17 contains information for Mud Creek, Miller Outlet and Angle Spring only. [SC]*

R645-301-724.100, *The Permittee must revise the data provided for CR 06-02 in Exhibit 10, Surface and Ground Water Field Measurements. Based upon the monitoring well completion diagram in Exhibit 11, Monitoring Well Completion Details, all depths are measured from the ground surface elevation of 8,336.7'. The diagram for CR 06-02 shows a depth to the top of the screen as 422.7'. 8,336.7' – 422.7'= 7,914'. However, the data in Exhibit 10 shows the top of the screen to be 7,894.0'. [SC]*

R645-301-724.100, *The Permittee must revise the 1st sentence of paragraph three in Exhibit 20. In discussing the ephemeral drainages within the permit and adjacent area, the Permittee states, "The reason these drainages were excluded from the baseline monitoring suite is simply because flowing water never observed in any of them during the baseline monitoring period." The application has been revised to document 21 field visits where flow was not observed in the 7 ephemeral drainages discussed in Exhibit 20 (See Exhibit 10 and Figure 17). The recorded field observations constitute baseline monitoring of these drainages. Additionally, the Permittee should revise the last paragraph of page 8 of Exhibit 20 to reflect the number of site visits (21 visits, not 22) documented in Figure 17 and Exhibit 10. [SC]*

R645-301-725, *The Permittee must address the baseline data deficiencies outlined previously in order for the Division to assess the probable cumulative hydrologic impacts from the proposed operation on ground and surface water systems. [SC]*

R645-301-728, *In order to accurately assess the PHC Determination provided in the application, the Permittee must first address the baseline data deficiencies outlined in the Baseline Information section. Per R645-301-728, "The PHC determination will be based on baseline hydrologic, geologic and other information collected for the permit application". Once the baseline deficiencies have been addressed, the Division will be able to assess the probable hydrologic consequences associated with the proposed mining activity. [SC]*

R645-301-527.123, -527.200, -534.300, -742.323 and -742.423.1, *The Permittee must provide the detailed design information for the two post-mining land use roads. Upon review of the*

application, it does not appear that the required design information for the post mining land use roads depicted on Maps 29 and 29A is provided. It appears the application only provides the design information/discussion for primary roads P1 through P7 in section R645-301-527. It is noted that diversion ditches UDD-1 and UDD-2 (directly adjacent to eastern most post-mining land use road) have been sized for the 100-year, 6-hour event as required for a permanent diversion. Road profiles are provided for roads P1 through P7 on Maps 20-22. It does not appear that a road profile has been generated for the post-mining land use roads. Additionally, any permanent diversions that may be constructed would need to be designed to adequately handle the runoff generated from a 100-year, 6-hour rainfall event. [SC]

R645-301-731.210, *The Permittee first address the deficiencies relative to groundwater baseline data before the Division can make a finding that the proposed operational phase groundwater monitoring plan meets the requirements of the State of Utah R645-Coal Mining Rules. Per R645-301-731.211, the groundwater-monitoring plan must be based upon the PHC determination as well as all baseline hydrologic and geologic information. [SC]*

R645-301- 531, -742.300, -760, *The Permittee must revise the 4th paragraph on page 7-126. The application indicates that ditch DE-2 is a component of the interim drainage control. However; Map 29 does not depict DE-2 as part of the interim drainage control. It appears that the text incorrectly references ditch DE-2 rather than ditch DE-4. [SC]*

BONDING

R645-301-800, *The applicant must demonstrate compliance with all of the regulations pertaining to bonding at such a time as bond calculation and reclamation cost estimates can be evaluated based on the details within an approved permit application. All direct and indirect reclamation costs must be included for proper bond calculation. The Division will evaluate the bonding requirements after technical issues with the permit application have been addressed. [JCO]*

ALUVIAL VALLEY FLOORS

R645-302-320, *According to the information in the application section 3.2.1.2-1 "Facilities Area Vegetation Map contain resource values consistent with the AVF criteria. See page 7.0-5 of the first submittal. The applicant agreed to delete this statement from the text during the deficiency response meetings held at the Division's office in Salt Lake on February 14th and 22nd 2011. [JCH]*

R645-302-320, *In an "E" mail to the Division dated 12/21/2010 the applicant has stated that "Vegetation species in the area adjacent to the permit area west of highway 96 (as stated in the original application) include species consistent with AVF's", yet the text in Chapter 9, Page 9-10, Paragraph 3 states that "Although no species identification has been conducted on the 8.69 acres. It is evident from casual observation that grasses make up the predominant vegetative community". The applicant agreed to delete this statement from the text during the deficiency response meetings held at the Division's office in Salt Lake on February 14th and 22nd 2011; it is*

still in the application. The applicant's response also indicated that "a commitment had been added to chapter 3, page 3-68 stating Patrick Collins (Mount Nebo Scientific) will conduct a vegetation field study during the 2011 field season". There is no commitment in Chapter 3, page 3-68. [JCH]

***R645-302-320,** Page 9-5, the bulleted topics are not included in nor do they appear to be a part of R645-100 as stated in the bold text on the lower portion of the page. The edited text is incorrect [JCH]*

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