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State of Utah
DEPARTMENT OF NATURAL RESOURCES

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July 9, 2008

Gina Rau, Environmental Manager (801) 984-3770
COVOL Engineered Fuels, LC
10653 South River Front Parkway, Suite 300
South Jordan, Utah 84095

Subject: Wellington Dry-Coal Cleaning Facility, COVOL Engineered Fuels, LC, C/007/0045,
Task ID #2899, Outgoing File

Dear Ms. Rau:

The Division has reviewed your application to operate the COVOL Dry-Coal Cleaning Facility. 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 COVOL'S response to that particular deficiency.

A determination as to the presence/absence of an alluvial valley floor will be determined upon a site visit by Division personnel in consultation with COVOL representatives.

Please call Steve Christensen (801) 538-5350 or myself (801) 538-5325 if you have any questions.

Sincerely,

Daron R. Haddock
Permit Supervisor

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Attachment
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Deficiency List
Task ID #2899
Wellington Dry-Coal Cleaning Facility

The members of the review team include the following individuals:

Priscilla Burton (PB)
Steve Christensen (SC)
David Darby (DD)
Joe Helfrich (JH)
Wayne Western (WW)

R645-301-112.320: Include an organizational chart to illustrate the family tree. i.e. How are Headwaters Energy Services Corp and Headwaters, Incorporated related ? (PB)

R645-301-112.230: Provide the name address and telephone number of the person who will pay the abandoned mine fee and/or discuss the status of the abandoned mine fee. (PB)

R645-301-112.400: Please explain why the application lists only one pending associated permitted site in KY under affiliated company COVOL Fuels No. 2 and one pending unpermitted site in KY for affiliated company COVOL Fuels No. 3 (Section 1.1.2.4), yet the OSM database indicates 5 permitted mining operations in AL and IN are operated by COVOL Engineered Fuels, LC. and three permitted sites in KY are operated by affiliated companies. (PB)

R645-301-114.100: Provide a description of the ownership documents (type and date of execution) and identify the specific lands to which the document pertains. (PB)

R645-301-117.100: A copy of the publication or affidavit of publication must be made part of the application within 4 weeks of the last date of the publication. (PB)

R645-301-122: Provide with the application a copy of letter from Mary Ann Wright to W. Layne Ashton, COVOL Engineered Fuels, LC, September 13, 2004 stating initial determination that mining would not be taking place at this site. •Provide with application, a copy of the October 16, 2006 letter from Steve Alder to Craig Galli, which outlines the permitting requirements. •Provide the environmental audit as an appendix to the application. (PB)

R645-301-142: The application must indicate on a map the portion of the operation developed prior to the permit application dated January 15, 2008. (PB)

R645-301-220: The application should include a statement that prior to any future disturbance, a soil survey consisting of one soil sample/2 acres and analysis according to the Division guidelines will be conducted • Photographs of pre-mining resources should be added to the application to supplement the Carbon County soil survey information. • Soil Map must indicate Map Unit 80 Persayo/Chipeta complex and Map Unit 59 Killpack Clay Loam (green line) based on 1988 Carbon County Soil Survey. Soil Map must designate

elevations (the light brown and dark brown lines). (PB)

R645-301-422: Please include in the application correspondence with the Division of Air Quality regarding notification of the onset of production. (PB)

R645-301-231.400: Please include in the application the date of topsoil pile construction and seeding. (PB)

R645-301-242.200: Due to high clays and sodicity, grading work and chiseling when soil is dry must be indicated in the reclamation plan. (PB)

R645-301-242.200: Greasewood, and rabbit brush do not belong in the seed mix for this ridge location, please adjust the seed mix in Table 3-1 accordingly. (PB)

R645-301-728 and -731.300: The Permittee must clarify whether acid- or toxic-forming materials are to be present at the site. If acid- or toxic-forming materials are present, the Permittee should address how they will be handled. The Permittee should discuss (if applicable) the potential for acid- or toxic-forming materials to produce hydrologic impacts. In addition, the Permittee should provide some discussion as to how it will be determined whether acid- or toxic-forming materials are brought to the site. (SC)

Page 7-8 of the application states, "No acid- or toxic-forming materials are present at the COVOL Dry-Coal Cleaning Facility". The first paragraph of page 7-11 indicates, "No acid or toxic materials are disposed of at the site." The fifth paragraph of page 7-11 states, "Acid- and toxic-forming materials are not permanently stored at the COVOL Dry-Coal Cleaning Facility. In the event that acid- or toxic-forming materials are brought to the facility, they will be handled appropriately." (SC)

R645-301-724: The Permittee should amend their water right information. According to the application on page 7-3, "The only water right field in the vicinity of the facility is for stock watering on Miller Creek." The water right (#91-3294) is depicted on Figure 7-2, *Surface Water Rights and Permitted Facility Discharge Locations*. However, according to the Utah Division of Water Rights (Dwri) Database, water right #91-3295 is located from a point at N 660 ft. W 660 Ft. from the SE corner of Section 14, T15S, R10E. Water right #91-3295 is a point-to-point diversion for the purpose of stock watering. Water rights #91-3294 and #91-3295 were located in the database utilizing the Dwri's Point of Diversion (POD) query. By utilizing a township, range, section search of the Dwri's Place of Use (POU) query, the database produced 69 entries located within T15S, R10E, and Section 14. The Permittee should amend water quality references within the text of the application to reflect additional water rights within the adjacent area as well as amend Figure 7-2. (SC)

R645-301-724.100: The application should provide the data that was utilized in determining the nature and characteristics of the groundwater system in the permit and adjacent area. On page 7-2 of the application, references are made to "logs of nearby wells" as well as groundwater monitoring data obtained from the Savage Coal Terminal. On page 7-4 of

the application the Permittee states, "Based on the findings from groundwater monitoring wells drilled for the nearby Savage coal Terminal, shallow groundwater is saline, contains high levels of dissolved solids, and is generally poorly suited for drinking or irrigation". The referenced data should be provided with the application. (SC)

In addition, the application should provide a discussion as to how the information obtained from the Savage Coal Terminal and "nearby wells" is applicable to the proposed activity. The discussion should address groundwater flow direction within the permit and adjacent area. (SC)

R645-301-724.200: The application should provide the data that was utilized in determining the nature and characteristics of Miller Creek. The application characterizes Miller Creek as "a small perennial stream". The Permittee should provide the data or justification for that determination. In addition, the Permittee should address the nature/characteristics of what appears to be a tributary to Miller Creek located approximately 400 feet west of the southwest sediment pond (See Figure 7-2). (SC)

R645-301-725: The application does not meet the Baseline Cumulative Impact Area Information requirements of R645-301-725. The Permittee must provide the data utilized in characterizing the nature of the ground and surface water systems within the permit and adjacent area. The data is necessary in order for the Division to accurately assess the probably cumulative hydrologic impacts of the proposed operation. (SC)

R645-301-724.100 and R645-301-731.210: The Permittee must provide a justification for not conducting groundwater monitoring within the permit and adjacent area. On page 7-11, the Permittee indicates that "no groundwater monitoring" is to be conducted at the site. The Division must determine whether the proposed operation produces impacts to groundwater resources within the permit and adjacent area. With the absence of groundwater data within the application and with no groundwater monitoring proposed by the Permittee, the Division is unable to make that determination.

It should be noted that the Division might waive groundwater monitoring for the purpose of obtaining baseline information if the Permittee can demonstrate that data obtained from adjacent areas is comparable to conditions found at the site. (SC)

R645-301-724.200 and R645-301-731.220: The Permittee must provide a justification for not conducting surface water monitoring within the permit and adjacent area. On page 7-11, the Permittee indicates, "No streams exist within the permit or adjacent areas. Therefore, only storm water will be monitored." However, Figure 7-2, Surface Water Rights and Permitted Facility Discharge Locations", depicts a tributary to Miller Creek approximately 400 feet from the southwest sediment pond. The application identifies Miller Creek as a small perennial stream (See Page 7-5). (SC)

The Division must determine whether the proposed operation produces impacts to surface water resources within the permit and adjacent area. With the absence of surface water data within the application and with no surface water monitoring proposed by the Permittee, the

Division is unable to make that determination. (SC)

R645-301-722.400: The Permittee should provide a map that depicts the wells located within the permit and adjacent area. On page 7-3 of the application the Permittee states, "No water-supply wells or groundwater monitoring wells exist in the permit or adjacent areas". This statement appears to contradict information provided in Section 7.2.2.1. The second paragraph of page 7-2 states, "Groundwater monitoring wells and a French drain installed at the Savage Coal Terminal, located approximately 0.25 miles north of the COVOL Dry-Coal cleaning Facility, were constructed from 6 to 20 feet deep into these materials." If the groundwater information from the Savage Coal Terminal is to be cited as the baseline data for the permit application, a map should be provided that depicts the locations of the monitoring wells relative to the site. (SC)

R645-301-746.200: The application does not meet the Refuse Pile requirements of R645-301-746.200. The application should address how the Permittee will handle/store/dispose of refuse piles.

On page 5-5 the Permittee states, "No permanent refuse piles will be located in the permit area". On page 7-25, the Permittee states, "There are no refuse piles at the facility." These statements appear to contradict each other and should be clarified in the application. (SC)

R645-301-525.480 and -731.530: The Permittee should delete the statement found on page 7-12 under the Water Rights and Replacement heading. Section 7.3.1.8. of the application states, "Since there is no surface mining at the COVOL Dry-Coal cleaning Facility, this section does not apply". The Division finds that the proposed operation falls under the requirements of R645-301-525.480 and -731.530, which require the Permittee to replace/mitigate any State-appropriated water supply that is contaminated, diminished or interrupted. (SC)

R645-301-732.200: The Permittee should discuss where the sediment ponds discharge (if they were to discharge) ultimately reports. Upon review of the application, it's unclear as to where the discharge from the ponds will be routed. Appendices 7-5, 7-6 and 7-7 provide the AutoCAD Modeling runs and hydrologic calculations but does not identify the receiving drainage from the sites sedimentation ponds. (SC)

R645-301-120: The permit application package (PAP) should be formatted by chapter and regulation as in the State of Utah R-645 Coal Mining Rules. (JH)

R645-301-130: 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". (JH)

R645-301-411: 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. (JH)

R645-301-320: 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. (JH)

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. (JH)

R645-301-320: 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. (JH)

R645-301-411: the application needs to include a narrative that describes the current uses of the land by Covol Technologies. (JH)

The applicant needs to redistribute topsoil and retain the drainage control structures until the completion of phase II reclamation.

R645-301-411: The application needs to include the following maps for the adjacent areas:

Archaeological site,
Cultural Resource,
Monitoring and Sampling Location
Permit Area Boundary and
Vegetation reference area (JH)

R645-301-411: The applicant needs to address this section of the regulations. (JH)

R645-301-322, -301-333, -301-342, -301-358: 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. (JH)

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. (JH)

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. (JH)

Mining operations may affect the habitat of the following endangered fish species, Colorado Pike minnow, Razor back sucker, Humpback chub and Boneytail 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. (JH)

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. (JH)

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 preybase for the eagles. This section of the application, 3.5.8.2, needs to be revised to acknowledge the preybase species. (JH)

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. (JH)

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". (JH)

R645-301-412, -301-413, -301-414: 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. (JH)

According to the information in Chapter 4, page 4-2, Section 4.1.1.2, "No previous mining occurred in the permit area". (JH)

The post mining land use plan as described in Chapter 4, page 4-2, section 4.1.2.1 needs to recognize that reclamation must occur as an initial step in the process. (JH)

R645-301-244, -301-353, -301-354, -301-355, -301-356: 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. (JH)

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. (JH)

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). (JH)

R645-301-521.131: The Permittee must include a map that shows the subsurface ownership for the permit and adjacent areas. (WW)

R645-301-521.190: The Permittee must include a legal description of the permit area in Chapter 1 of the MRP or reference that information in Chapter 1. The Permittee must also include a table in Chapter 1 that states the number of federal, state and fee acres. The Division often needs that information for reports. The Permittee must also show on Plate 5-1 or similar map a commonly used coordinate system such as township, range and section or state plane coordinate system or UTM. (WW)

R645-301-521.152: The Permittee must show on the existing surface configuration map the topography 100 feet beyond the limits of the mining disturbance. Plate 5-1 does not show the existing topography 100 feet beyond the disturbed areas. (WW)

R645-301-526.116: The Permittee must identify in the application where they will conduct mining and reclamation activities within 100 feet of the right-of-way of a public road except where mine access or haul roads join that right-of-way. (WW)

R645-301-521.160: The Permittee must identify the roads on the surface facilities map, Plate 5-1 and give a brief description of each road including the roads that branch off from the main road. (WW)

R645-301-527.230: The Permittee must include maintenance plan for the roads for the life of mine. (WW)

R645-301-527.240: The Permittee must include a commitment to repair the roads if they are damaged by a catastrophic event. (WW)

R645-301-528.320: The Utah Coal Rules define coal processing waste as earth materials which are separated from the product coal during cleaning, concentrating, or the processing or preparation of coal. The term by-product stock, aggregate, alternative product and debris are not defined in the Utah Coal Rules and should not be used to describe coal that has been processed. The Permittee must accurately describe the types of coal or waste that will be produced during coal processing and where they will be stored. In Section 7.4.6.1 of the MRP, the Permittee states that there is no coalmine waste that is permanently stored on site. That information is confusing. Any coal mine waste generated on site or shipped to the site must either be disposed of on site in a refuse pile or returned to a permitted refuse pile and disposed of via Division approval. (WW)

R645-301-521.100: The Permittee must show on Plate 5-1 and other relevant maps the type of coal products that will be stored on site. (WW)

R645-301-521.190: The Permittee must indicate the amount of coal that will be stored on each coal storage area both in the text of the MRP as well as on all relevant maps. The Permittee state in the MRP and on all relevant maps the amount of coal that will be stored on each coal storage area. (WW) **R645-301-528.323:** The Permittee must replace the term debris with one defined in the Utah Coal Rules when describing how to control burning and burned waste utilization. Note: Coal mine waste fires require special handling techniques. Fire extinguishers are not able to handle most coal fires. (WW)

R645-301-553: The Permittee must give the Division a detailed backfilling and grading plan. The plan must include volumes of materials to be moved, haul distances and grades. (WW)

R645-301-542.600: The Permittee must state how they will deal with coal processing waste that was used as road base. Such materials cannot be left on the roads at reclamation. (WW)

R645-301-542: The Permittee must give the Division detailed maps and cross sections that show, the final surface configuration, the facilities that will remain after final reclamation including all surface and subsurface manmade features. (WW)

R645-301-830.130: The Permittee must provide the Division with a detailed reclamation cost estimate for reclaiming the site. The Division needs this information to determine the

amount of bond that should be posted. (WW)

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