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*Outgoing*  
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**From:** Steve Christensen  
**To:** OGMCOAL; vmiller@archcoal.com  
**Date:** 3/11/2008 10:56 AM  
**Subject:** Dugout (C/007/0039): Finalized Meeting Notes  
**Place:** OGMCOAL  
**Attachments:** Finalized\_Mtg\_Notes\_02\_08\_08.doc

Hey Vicky,

Attached are the finalized meeting notes from our sit down on February 8th, 2008 to discuss the expansion to the Dugout permit.

Steve

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**utah ogm coal program meeting notes**

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**Date:** February 8, 2008  
**Time:** 11:00 A.M.  
**Location:** DNR-Salt Lake City

**To:** Internal File, Dugout Mine, C0070039

**From:** Steve Christensen

**Attendees:** DOGM- Pam Grubaugh-Littig, Steve Christensen  
Dugout- Chris Hansen, Erik Petersen, Vicky Miller

**Purpose:** Discuss hydrologic baseline requirements for pending lease expansion.

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**MEETING SUMMARY:**

On February 8<sup>th</sup>, 2008 the aforementioned attendees met at the Division of Oil, Gas and Mining's (the Division) Salt Lake City office to discuss the hydrologic baseline issues associated with Canyon Fuel Company's (the Permittee) proposal to add an additional 240 acres to the Dugout Mine permit area.

The Permittee had previously submitted an amendment to expand the Dugout Mine permit by approximately 560 acres. Due to safety concerns, the SITLA tract has been removed from the proposed permit expansion. In addition, longwall mining will not be conducted in the areas of Section 17 of the area included in the proposed permit expansion.

Mr. Christensen provided a handout to each of the attendees outlining the baseline and subsidence regulations associated with hydrology that will need to be addressed prior to Division approval of the expansion (See Attached).

Baseline ground and surface water monitoring points were discussed. Springs 321 and 322 will be added as ground water monitoring points and will continue to be monitored as part of this permitting action. These springs were monitored in 2007 in preparation for the proposed permit expansion. In addition, a surface water-monitoring site will be established on the drainage located in Section 17. The monitoring point will be established below the confluence of the east and west fork of this drainage. Vicky Miller indicated that a full year of water data (field parameters) has already been collected on this drainage.

Water rights located within the proposed expansion area were also discussed. Plate 7-2, Water Rights, identifies several water rights located within the proposed expansion. It was agreed that

when conditions permit in late spring/early summer, a field reconnaissance with the water right holders, the Permittee and the Division would be conducted. Based upon that field visit, additional points (ground and/or surface) may need to be added to the water-monitoring plan.

The Pre-Subsidence and Baseline Regulations were discussed relative to the proposed expansion. Ms. Miller provided a revised Plate 5-7, *Proposed Mine Sequence and Planned Subsidence Boundary* that differs significantly from the previously submitted Plate 5-7. As stated previously, the SITLA tract located in the eastern half of Section 16 has been removed entirely from the proposed mine plan due to safety concerns. Additionally, no long wall operations are depicted anywhere within the proposed expansion area. Due to the modified mine plan (i.e. no planned subsidence), it was generally agreed upon that a strict interpretation of the pre-subsidence and baseline regulations was not warranted at this time.

The Permittee will directly address the pre-subsidence and baseline regulations with a written narrative/discussion that outlines the nature and characteristics of the localized perched aquifer systems and surface drainage. The discussion will include inferences from the strike and dip of the local geology as well as discussion of probable recharge areas based upon field observations, topographic analysis and other information.

Ms. Grubaugh-Littig will follow up with Division geologist Dave Darby as to the roof and floor sampling requirements for baseline geologic conditions.

**ADDITIONAL COMMENTS: (This section is intended to provide attendees the opportunity to contribute additional and significant information concerning the meeting content that may not have been mentioned during the meeting.)**

Skc

8/7/2006

Utah OGM Coal Program Meeting Notes

3

## **Subsidence Control Plan:**

### ***Renewable Resource Lands definition:***

**30 CFR Ch. VII 701.5:** Means *aquifers and areas for the recharge of aquifers and other underground waters*, areas for agricultural or silvicultural production of food and fiber and grazing lands.

**R645-100:** Means *aquifers and areas for the recharge of aquifers and other underground waters*, areas for agricultural or silvicultural production of food and fiber, and grazing lands. For the purposes of R645-103, RENEWABLE RESOURCE LANDS means geographic areas which contribute significantly to the long-range productivity of water supply or of food or fiber products, such lands to include aquifers and aquifer recharge areas. Note- R645-103 deals with 'areas unsuitable for coal mining'.

### **Pre-Subsidence Regulations:**

**R645-301-525.110** - A *map* of the permit and adjacent areas at a scale of 1:12,000, or larger if determined necessary by the Division, showing the location and type of structures and *renewable resource lands* that subsidence may materially damage or for which the value or reasonably foreseeable use may be diminished by subsidence, and showing the location and type of ***State-appropriated water*** that could be contaminated, diminished, or interrupted by subsidence.

**(30 CFR Ch. VII 784.20 (a)(1))** - A *map* of the permit and adjacent areas at a scale of 1:12,000, or larger if determined necessary by the Division, showing the location and type of structures and *renewable resource lands* that subsidence may materially damage or for which the value or reasonably foreseeable use may be diminished by subsidence, and showing the location and type of ***drinking, domestic, or residential water supplies*** that could be contaminated, diminished, or interrupted by subsidence.

**R645-301-525.120** - A *narrative* indicating whether subsidence, if it occurred, could cause material damage to or diminish the value or reasonable foreseeable use of such structures or *renewable resource lands* or could contaminate, diminish, or interrupt ***State-appropriated water supplies***.

**(30 CFR Ch. VII 784.20 (a)(2))** A *narrative* indicating whether subsidence, if it occurred, could cause material damage to or diminish the value or reasonable foreseeable use of such structures or *renewable resource lands* or could contaminate, diminish, or interrupt ***drinking, domestic, or residential water supplies***.

**R645-301-525.130** - A survey of the condition of all non-commercial buildings or occupied residential dwellings and structures related thereto, that may be materially damaged or for which the reasonable foreseeable use may be diminished by subsidence, within the area encompassed by the applicable angle of draw; as well as *a survey of the quantity and quality of all State-appropriated water supplies within the permit area and adjacent area that could be contaminated, diminished, or interrupted by subsidence*. If the applicant cannot make this survey because the owner will not allow access to the site, the applicant will notify the owner, in writing, of the effect that denial of access will have as described in R645-301-525. The applicant must pay for any technical assessment or engineering evaluation used to determine the pre-mining conditions or value of such non-commercial buildings or occupied residential dwelling and structures related thereto and the quantity and quality of State-appropriated water supplies. The applicant must provide copies of the survey and any technical assessment or engineering evaluation to the property owner, the water conservancy district, if any, where the mine is located and to the Division.

(30 CFR Ch. VII 784.20 (a)(3)- A survey of the condition of all non-commercial buildings or occupied residential dwellings and structures related thereto, that may be materially damaged or for which the reasonable foreseeable use may be diminished by subsidence, within the area encompassed by the applicable angle of draw; as well as *a survey of the quantity and quality of **drinking, domestic, or residential water supplies** within the permit area and adjacent area that could be contaminated, diminished, or interrupted by subsidence.* If the applicant cannot make this survey because the owner will not allow access to the site, the applicant will notify the owner, in writing, of the effect that denial of access will have as described in R645-301-525. The applicant must pay for any technical assessment or engineering evaluation used to determine the pre-mining conditions or value of such non-commercial buildings or occupied residential dwelling and structures related thereto and the quantity and quality of State-appropriated water supplies. The applicant must provide copies of the survey and any technical assessment or engineering evaluation to the property owner, the water conservancy district, if any, where the mine is located and to the Division.

8/7/2006

Utah OGM Coal Program Meeting Notes

5

## Baseline Regulations:

### Adjacent Area Definition:

**30 CFR Ch. VII 701.5:** Means the area outside the permit area where a resource or resources, determined according to the context in which adjacent area is used, are or reasonably could be expected to be adversely impacted by proposed mining operations, including probable impacts from underground workings.

### R645-100: 30 CFR Verbatim

## Maps

**R645-301-722-** Cross-Sections and Maps. The application will include cross sections and maps showing:

**R645-301-722.100-** Location and extent of subsurface water, if encountered, within the proposed permit or adjacent areas. For UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, location and extent will include, but not limited to areal and vertical distribution of aquifers, and portrayal of seasonal differences of head in different aquifers on cross-sections and contour maps; (30 CFR Ch. VII 783.25 (a)(6) verbatim)

**R645-301-724.100-** Ground Water Information. The location and ownership for the permit and adjacent areas of existing wells, springs and other ground-water resources, *seasonal quality and quantity* of ground water, and usage. Water quality descriptions will include, at a minimum, total dissolved solids or specific conductance corrected to 25 degrees C, pH, total iron and total manganese. Ground-water quantity descriptions will include, at a minimum, approximate rates of discharge or usage and depth to the water in the coal seam, and each water-bearing stratum above and potentially impacted stratum below the coal seam. (30 CFR Ch. VII 780.21 (b)(1) verbatim)

**R645-301-724.200-** Surface water information. The name, location, ownership and description of all surface- water bodies such as streams, lakes and impoundments, the location of any discharge into any surface-water body in the proposed permit and adjacent areas, and information on *surface-water quality and quantity sufficient to demonstrate seasonal variation and water usage*. Water quality descriptions will include, at a minimum, baseline information on total suspended solids, total dissolved solids or specific conductance corrected to 25 degrees C, pH, total iron and total manganese. Baseline acidity and alkalinity information will be provided if there is a potential for acid drainage from the proposed mining operation. Water quantity descriptions will include, at a minimum, baseline information on seasonal flow rates. (30 CFR Ch. VII 780.21 (b)(2) verbatim)