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State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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ok

October 11, 2001

TO: Internal File  
THRU: Stephen J. Demczak, Reclamation Specialist/Engineering, Team Lead  
FROM: Michael J. Suflita, Reclamation Specialist/Hydrology  
RE: Gilson Well, Canyon Fuel Company, Dugout Mine, C/007/039-AM01H

SSD  
WJD  
JMM

**SUMMARY:**

In response to the original Operator's submittal, the Division sent a Technical Analysis (TA) on January 14, 2000. On August 27, 2001 the Division received a second submittal. This Technical Memo is an evaluation of the Hydrologic aspects of the latest submittal. There are deficiencies needing correction before the amendment can be approved.

**TECHNICAL ANALYSIS:**

**OPERATION PLAN**

**HYDROLOGIC INFORMATION**

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

**Analysis:**

**Ground-water monitoring**

Since the proposed water well is for culinary and other water uses, and is covered by a valid Water Right, it is not a monitoring well. The approved Water Right is included in the submittal. Therefore, no monitoring is required.

TECHNICAL MEMO

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**Diversions**

The water well pad is located between the road and Dugout Creek with the pad being constructed with a bin wall. The creek will need to be shortened slightly to accommodate the construction and will not use a culvert as shown on Dwg. GE4B001. Cross sections of the pad are shown on drawing B-346. Drainage ditch DD-15 is shown across the road from the new pump house.

The ditch design for DD-14 and DD-15, near the pad, used the 10-year, 24-hour design that is consistent with the Division position paper regarding ditches and culverts draining to a sediment pond and exceeds regulation requirements. In this case, the ditches drain to the creek that conforms to regulatory recommendations by diverting runoff away from disturbed areas. Where the slope is less, 6.7%, the ditches are unlined and all other, steeper, sections are concrete lined. The watershed areas, runoff numbers, and Manning roughness coefficients were all checked and found to be appropriate. It appears the ditches are adequately designed.

**Stream buffer zones**

Construction will necessarily occur within 100 feet of Dugout Creek. Otherwise, stream Buffer Zones will not be affected by the proposed work.

**Sediment control measures**

No sediment control measures are shown during construction of the bin wall and other associated construction. These will need to be described and shown, and be provided during construction.

**Casing and sealing of wells**

There is no information in the submittal regarding Casing and Sealing of Wells as required in R645-301-748. Further, there is no information regarding the Permanent Casing and Sealing of Wells as required in R645-301-765. Such information will need to be provided.

**Findings:**

The application does not meet minimum requirements. Accordingly, the Permittee must address those deficiencies as found within this Technical Memo and provide the following, prior to approval, in accordance with the requirements of:

**R645-301-742**, Provide sediment control measures to be used during construction.

**R645-301-748 and -301-765**, Provide information on the casing and sealing of the well and the permanent casing and sealing of the well at reclamation.

## MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

### Analysis:

#### Affected area maps

In the first TA, Plate 7-5, Disturbed Area Diversion was cited as being deficient since the location of the new well was not shown. A new Plate 7-5 showing the well was submitted. However, this new plate shows a line drawing of ONLY the diversions. ALL other information previously shown on the plate has been removed. This includes contour line, roads, mine facilities, disturbed area boundaries, and other highly relevant information. The intent of the previous deficiency was to simply ADD the new well location to the existing map. That still needs to be done, without the loss of information previously contained on Plate 7-5.

There is a discrepancy relative to the newly submitted Plate 7-5. The new well is designated as: "Gilson Water Well (See Appendix 7-9, Drawing GE4B001 & B-346)" Appendix 7-9 does not contain these drawings. They are found in Chapter 5. This needs to be clarified.

Page 7-4, the first paragraph, first sentence, is unclear. The location of 450 feet from what is not included.

Plates 7-1 and 7-2 were updated to show the new well location.

### Findings:

The application does not meet minimum requirements. Accordingly, the Permittee must address those deficiencies as found within this Technical Memo and provide the following, prior to approval, in accordance with the requirements of:

**R645-301-521.100**, Update Plate 7-5 with complete information as described above.  
Clarify page 7-4, first paragraph, and first sentence as described above.

### RECOMMENDATION:

The proposed amendment should not be approved in its present form.