



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

Michael O. Leavitt
 Governor
 Ted Stewart
 Executive Director
 James W. Carter
 Division Director

355 West North Temple
 3 Triad Center, Suite 350
 Salt Lake City, Utah 84180-1203
 801-538-5340
 801-359-3940 (Fax)
 801-538-5319 (TDD)

March 31, 1995

TO: Daron Haddock, Permit Supervisor

FROM: Sharon Falvey, Senior Reclamation Hydrologist *SFF*

RE: Soldier Canyon Mid-term Review Response, Submitted March 13, 1995, Soldier Creek Coal Company, Soldier Canyon Mine, ACT/007/018 94B, File #2, Carbon County, Utah

SYNOPSIS

The Midterm Permit Review (December 6, 1994) determined whether previously approved changes were appropriately incorporated into the plan and, whether all existing permit conditions were addressed. As part of that review completeness issues were addressed per Division Order 92-A. The response to Division Order 92A (Amendment 93-A), was determined adequate on December 2, 1993. Division Order 92A was approved on the stating that all deficiencies identified in the November 25, 1992 deficiency memo were to be addressed and were not determined resolved until thoroughly reviewed. Therefore, the Midterm Review determined which requirements were necessary to address unresolved issues from the November 25, 1992 deficiency response.

The Permittee provided an additional change, by removing the commitment to monitor the Alternate Sediment Control Areas (ASCA) if practicable. The Division recently has considered ASCA to have water quality monitoring requirements apply when the Division of Water Quality has included these areas in the UPDES permit.

The following were identified as outstanding deficiencies, based on the previously described scenario, and were to be addressed in this amendment.

ANALYSIS

The following were determined incomplete responses to D.O. 92-A:

1. *A permanent wasterock site, currently approved according to the R645 requirements, should be provided by the Permittee until approval of the proposed waste rock site is granted. The Permittee did not meet the requirements of D.O. 92-A #2, as required by R645-300-143.*



(See January 8, 1992 letter from the Division of Water Rights.)

Analysis:

The Permittee responded to this issue within the context of the response letter: not, the plan. The Permittee stated that the Soldier Creek Mine is not currently producing waste rock beyond that being disposed of underground. Currently exploration work is being completed at the Dugout Canyon Mine. The Permittee anticipates future permitting and development of a wasterock site to be used by the Dugout and Soldier Canyon Mine.

During the interim period, if Soldier Canyon Mine does produce some incidental waste rock which needs surface disposal, the company will amend the Skyline Mine and Soldier Creek mine permits to allow disposal of waste rock at the Approved Skyline Mines Scofield site.

Findings:

The Permittee has not fulfilled the requirements of this deficiency.

2. *Table 7.24-2 page 7-8 does not reflect Sunoco as owner of water right title 91-203. The Permittee has since changed owners and the proper water right owner should now be identified. The Permittee did not meet the requirements of D.O. 92-A #3, as required by R645-300-143. The Permittee has not met the requirements of R645-301-724.100. (See January 8, 1992 letter from the Division of Water Rights.)*

Analysis:

The Permittee changed Page 7-8 to reflect current owner of water rights Title 91-203 as Sagepoint Coal Company, which is a subsidiary of Coastal States Energy Co.

The remainder of Table 7.24-2 will be amended and brought up to date when the Soldier Canyon Mine Permit is amended to include the Alkali Coal Lease. Therefore, the 39 water rights, filed with the Division of Water Rights, within and adjacent to the Life of Mine Boundary have not been incorporated by the Permittee (See January 8, 1992 letter from the Division of Water Rights).

Finding:

The Permittee has not met the identified requirements.

3. *The Permittee did not meet the requirements of D.O. 92-A #4, as required by R645-300-143. The Permittee has not met the requirements of R645-301-724.100. Soldier Creek Coal Company must provide a commitment in the Mining and Reclamation Plan to coordinate with the Division of Water Rights immediately upon the determination that a water source has been impacted by mining operations. (See January 8, 1992 letter from the Division of Water Rights.)*

Analysis:

In Section 7.31 "General Requirements", the Permittee provided the following commitment; "Should mining operations have an impact on a water established water right, this information will be coordinated with the Utah Division of Water Rights."

The commitment made by the Permittee meets this requirement. It is assumed the Permittee will also be coordinating with the Division and other concerned or governing agencies.

Findings:

The Permittee meets the requirements of the identified deficiency. It is assumed the Permittee will also be coordinating with the Division and other overseeing agencies.

4. *The following are inadequate response to the requirements of Stipulation 6.*
 - a) *The Permittee must include a map survey showing the potential recharge areas in the permit. Fracture zones identified in the mining process should be identified and referenced as potential recharge zones as required by R645-301-724.600, Survey of Renewable Resource Lands.*
 - b) *The LOM area when used should be used consistently throughout the plan; see pages 7-25 and 7-34. Provide consistent representative information for the estimated groundwater storage and recharge in LOM area and Hydrogeologic basins.*
 - c) *The monitoring "assessment", to take place throughout the year during the mining process, was not described as to the degree of the assessment; i.e., what parameters will be monitored/described this proposal does not meet the requirements of R645-301-731.210 and R645-301-730.*
 - d) *The following potential hydrologic impacts are not assessed through the existing in-*

mine monitoring plan and therefore the Permittee does not meet the requirements of R645-301-731.211.

- i. The interception of perched aquifers which issue as a spring would not be monitored through the proposed in-mine monitoring schedule. The proposed annual inventory potentially misses "unusual" in-flows if an area is closed prior to completing the inventory. A qualitative analysis to identify the source characteristic of the intercepted aquifer would be unavailable.*
 - ii. The Permittee has not described how the proposed annual sampling plan is adequate to determine seasonal variations in-flow thus potential impacts on the hydrologic balance, including variations due to recharge functions.*
 - iii. The Permittee has not demonstrated that flows of 50 GPM will adequately monitor for all potential impacts as required under R645-301-731.210. The Permittee has not described how the proposal will meet the quality and quantity and frequency sampling requirements. The Permittee should commit to a minimum time period in which to notify the Division and other agencies of these high magnitude inflows.*
- 5. The Permittee does not have a series of wells to describe the aquifer below the lowest seam to be mined. However, Spring 6 emanates from the Aberdeen tongue below the coal seams in Dugout Canyon and may describe this system. The Permittee should discuss the area of recharge to this Spring 6 using site specific information as required by R645-301-731 and R645-301-731.211. Hydrogeologic structures from drill logs, and/or relative location and flow direction may support the conclusion that this spring will not be impacted.*

Analysis:

The Permittee realizes the identified issues are complex and does not feel there is enough data presently available to adequately respond to these questions. Additional studies are being conducted by Dr. Mayo, under contract by the Permittee, to develop an updated PHC for the Soldier Canyon Mine and proposed Alkali Tract lease area.

On April 6, 1995, an informal meeting will be conducted between Dr. Mayo, the mine representatives and DOGM, to discuss the processes and approach to be used by Dr. Mayo to address these issues and construct the PHC. The deficiencies listed above have not been addressed at this time.

Finding:

The Permittee has not met the requirements of this section.

6. *The Permittee should either properly redevelop the Well 6-1 or follow the requirements for well closure as required by R645-301-731.215. Redevelopment is required for the Permittee to maintain this well as is proposed in the current mine plan. This well could provide important information through bond release to determine flooding of the mine workings.*

Analysis:

The Permittee proposes the final disposition of Well 6-1 be determined as part of the contract with Dr Mayo.

Findings:

The Permittee has not met the requirements of this section.

7. *The Permittee has provided Figure 7.31-9 for Well 6-1. The scale used to present the information is inadequate. The Permittee should present a scale in feet rather than thousands of feet to provide a clear figure per R645-301-121.*

Analysis:

The Permittee has enclosed a revised Figure 7.31-9. This figure more accurately represents the well water elevations. The Permittee has presented a scale of 5 feet per tick mark.

Findings:

The Permittee has met the intent of this deficiency and has clearly represented the water elevation for this well.

8. *The figure heading, in Figure 7.24.7, incorrectly describes the information presented. The Permittee provides the depth to water from the well casings not the water level elevation as indicated. Because the elevations have no relative base elevation the presentation of data is*

unclear. The Permittee has not met the requirements of R645-301-121.

Analysis:

The Permittee has enclosed a revised Figure 7.24.7. This figure more accurately represents the well elevation. The Permittee has presented the wells with a relative base elevation.

Findings:

The Permittee has met the intent of this deficiency and has represented the water well elevations with relative base elevations.

Additional Requirements:

- 1) *The Permittee's present plan indicates drill hole 6-1 is expected to remain as a viable water monitoring point beyond the originally proposed 1993 longwall extraction. The Permittee committed to reassessing well monitoring sites in conjunction with the re-evaluation of the long-term mine plan. The Permittee is not conducting the operations according to the approved permit R645-300.142. Therefore, reassessment should be completed at this time.*

Analysis:

The Permittee is currently assessing well monitoring sites in connection with their contract with Dr. Mayo.

Finding:

The Permittee is in compliance with the approved permit but is not in compliance with R645-301-731.215 at this time. The Permittee is currently exploring and formulating new mining proposals to address this issue.

- 2) *Information in the plan is not current and concise information as required by R645-301-121. According to discussion with the Permittee, proposed waste rock site, longwall mining, and processing plant operations identified in the current plan will not be pursued within the upcoming permit term. The Permittee should update the plan to identify the proposed dates of the Fan Portal Area, the waste rock site and the preparation plant construction per R645-*

301-526.113. The Permittee should update the proposed mine sequence and timing due to the change in the proposed longwall mining operations.

Analysis:

The Permittee responded in the associated deficiency response memo stating "...the Soldier Creek Coal Company is not yet in a position to make any major changes in the approved MRP. The approved plans for a waste rock site, longwall mining and processing plant operations are still viable potential operations." For clarification: The Permittee has been informed that the waste rock site and other proposed operations have not been approved by the Division, in the December 6, 1994 midterm review under "Remaining Deficiencies and Requirements". In order to determine if the existing plan is accurate, the Division should review Mining Sequence Maps for the five year permit term. These should be in-line with the current operations.

Findings:

The Permittee is not considered to be in compliance with R645-301-121. Information in the plan is not current and concise.

Recommendation:

The following Pages related to my review should be approved and incorporated into the mining and reclamation plan pages 7-8, 7-36, 7-118, 7-105. Page 7-163 has already been incorporated into the plan. The Permittee removed the commitment to monitor the Alternate Sediment Control areas if practicable from page 7-164. This is in-line with the current Management Direction at the Division and therefore may be incorporated into the plan.

The following are unresolved permit requirements which should be addressed prior to or in conjunction with any additional permitting actions.

1. *A permanent wasterock site, currently approved according to the R645 requirements, should be provided by the Permittee until approval of the proposed waste rock site is granted. The Permittee did not meet the requirements of D.O. 92-A #2, as required by R645-300-143. (See January 8, 1992 letter from the Division of Water Rights.)*
2. *The Permittee did not meet the requirements of D.O. 92-A #3, as required by R645-300-143. The Permittee has not met the requirements of R645-301-724.100. (See January 8, 1992*

letter from the Division of Water Rights.)

3. *The following are inadequate response to the requirements of Stipulation 6.*
 - a) *The Permittee must include a map survey showing the potential recharge areas in the permit. Fracture zones identified in the mining process should be identified and referenced as potential recharge zones as required by R645-301-724.600, Survey of Renewable Resource Lands.*
 - b) *The LOM area when used should be used consistently throughout the plan; see pages 7-25 and 7-34. Provide consistent representative information for the estimated groundwater storage and recharge in LOM area and Hydrogeologic basins.*
 - c) *The monitoring "assessment", to take place throughout the year during the mining process, was not described as to the degree of the assessment; i.e., what parameters will be monitored/described this proposal does not meet the requirements of R645-301-731.210 and R645-301-730.*
 - d) *The following potential hydrologic impacts are not assessed through the existing in-mine monitoring plan and therefore the Permittee does not meet the requirements of R645-301-731.211.*
 - i. *The interception of perched aquifers which issue as a spring would not be monitored through the proposed in-mine monitoring schedule. The proposed annual inventory potentially misses "unusual" in-flows if an area is closed prior to completing the inventory. A qualitative analysis to identify the source characteristic of the intercepted aquifer would be unavailable.*
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Permittee has not described how the proposal will meet the quality and quantity and frequency sampling requirements. The Permittee should commit to a minimum time period in which to notify the Division and other agencies of these high magnitude inflows.

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5. *The Permittee should either properly redevelop the Well 6-1 or follow the requirements for well closure as required by R645-301-731.215. Redevelopment is required for the Permittee to maintain this well as is proposed in the current mine plan. This well could provide important information through bond release to determine flooding of the mine workings.*

6. *Information in the plan is not current and concise information as required by R645-301-121. The Permittee should update the plan to identify the proposed dates of the Fan Portal Area, the waste rock site and the preparation plant construction per R645-301-526.113. The Permittee should update the proposed mine sequence and timing due according to changes in proposed longwall mining operations.*