



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

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TO: Internal File

FROM: James D. Smith, Sr. Reclamation Specialist and Team Lead JPS

RE: Technical Analysis for Amending the Surface Facility Map for the Cottonwood Fan Portal Area, Energy West Mining Company, Cottonwood/Wilberg Mine, C/015/019-AM01C

SUMMARY:

Besides being adjacent to each other, the Cottonwood/Wilberg and Trail Mountain Mines have been linked through the Belt Portal Tunnel and the Diesel Roadway Portal (the Trail Mountain Access tunnel or TMA). From the Belt Portal Tunnel, the Cottonwood/Wilberg conveyor system transported Trail Mountain coal through East Mountain to the truck load-out at the Cottonwood Mine main facilities area. The TMA allowed direct vehicle access between the mine and the Trail Canyon surface facilities, by way of Emery County Road 506 in Cottonwood Canyon.

Energy West submitted a notice of Temporary Cessation of Operations for the Trail Mountain, Cottonwood, and Wilberg Mines to the BLM on February 8, 2001. A letter specifically addressing closure of the Cottonwood/Wilberg Mine was sent to the Division May 22, 2001 (received May 24)

Proposed amendment C/015/019 AM01D is for modification of Map 3-13 to show removal of silt fences along ditch DD-4 and removal of two of the three silt fences in the unnamed ditch along the east side of the county road, addition of the buried six-inch pvc drain pipe from the TMA portal seal to the drop inlet that reports to Cottonwood Creek, and the weir and valve assembly in that pvc pipe.

TECHNICAL MEMO

Utah Coal Mining Rules require a coal mine operator to demonstrate steps to be taken to minimize disturbance to the hydrologic balance within the permit and adjacent areas and to prevent material damage outside the permit area. The following is an technical analysis by UDOGM of probable impacts from removal of these silt fences and installation of the pvc pipe.

The proposed changes in the reclamation plan indicated by the chnages to Map 3-13 are adequate to minimize disturbance to the hydrologic balance within the permit and adjacent areas and to prevent material damage outside the permit area. However, Map 3-13 and Map 5-5 do not provide clear information on the status of several other ditches and culverts that are described in the text and shown on other maps as being part of the drainage control for the Cottonwood Fan Portal area.

TECHNICAL ANAYLSIS:

RECLAMATION PLAN

MINE OPENINGS

Regulatory Reference: 30 CFR Sec. 817.13, 817.14, 817.15; R645-301-513, -301-529, -301-551, -301-631, -301-748, -301-765, -301-748.

Analysis:

During temporary cessation the Trail Mountain Access tunnel is designated as a drain, and the Utah Division of Water Quality approved moving the outfall for UPDES 0022896 001 from Grimes Wash to the Trail Mountain Access tunnel in Cottonwood Canyon on July 30, 2001. A 6-inch drain was installed in the seal of the TMA to release water from the mine, rather than have the water accumulate behind the seal, and a six-inch pvc pipe buried to carry any mine discharge to Cottonwood Creek.

A mine seal was also constructed inside the Belt Portal Tunnel to complete sealing of this area of the mine. No mine water discharge occurs at this location.

Locations of the seals and six-inch pipe are shown on Plate 3-13.

Findings:

Mine Openings Reclamation Information is considered adequate to meet the requirements of this section.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 784.14, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-301-512, -301-513, -301-514, -301-515, -301-532, -301-533, -301-542, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-733, -301-742, -301-743, -301-750, -301-751, -301-760, -301-761.

Analysis:

Gravity discharges

During temporary cessation the Trail Mountain Access tunnel is designated as a drain, and the Utah Division of Water Quality approved moving the outfall for UPDES 0022896 001 from Grimes Wash to the Access Tunnel in Cottonwood Canyon on July 20, 2001. A 6-inch drain was installed in the seal of the TMA to release water from the mine, rather than have the water accumulate behind the seal, and a six-inch pvc pipe buried to carry any mine discharge to Cottonwood Creek.

Diversions

A buried six-inch pvc pipe carries the discharge from the TMA portal-seal drain to the drop inlet to Cottonwood Creek. A shutoff valve assembly and a weir are included in the pipe system. This pipe does not carry storm runoff so it is not required to meet design criteria of the rules. The amount of flow has been estimated by the operator and the six-inch pipe determined to be adequate to carry anticipated flow.

Although ditch DD-4 was originally designed as a temporary diversion, it is now planned to retain it and UD-3 as permanent diversions to prevent disturbance of the steep-slope reclamation in the area revegetated in 1981 (page 25). Ditch UD-3 is simply identified as "undisturbed ditch" on Plate 3-13. The MRP states on page 25 of the Hydrology Section that there is additional information on the status of ditch DD-4 included as an attachment at the end of the section; no attachment and no additional information could be located at the end of the Hydrology Section nor in Appendix A of that section.

Sediment control measures

Four sediment fences (silt fences) are proposed for removal from ditch DD-4, which crosses area reclaimed in 1998. DD-4 reports to a sedimentation pond, so removal of these fences should not result in additional sedimentation of Cottonwood Creek or other off-site impacts.

A ditch along the east side of Emery County Road 506 in Cottonwood Canyon carries runoff from the road and also disturbed runoff from the mine's subsoil pile. Runoff then reaches Cottonwood Creek through a drop inlet at the end of the ditch. Mine vehicles and other

TECHNICAL MEMO

equipment have routinely crossed the road in going between the TMA and the Trail Mountain Mine surface facilities, and sediment that falls from the vehicles onto the road makes its way to the ditch. Utah Coal Mining Rules do not require the operator to treat runoff from roads. Use of the road as a crossing and the resulting sediment on the road from this traffic have been greatly reduced because of mining cessation. The operator installed and currently maintains three silt fences in the ditch to trap sediment before it reaches the drop inlet and Cottonwood Creek. Two of the three sediment fences are proposed for removal. The remaining silt fence, just up gradient from the drop inlet, should be sufficient to handle sediment from the subsoil pile: discharge from the drain in the TMA portal seal will not flow in the ditch nor be treated by the remaining silt fence.

Sedimentation ponds

Energy West is planning on reclaiming the sedimentation pond south of the Old Johnson Mine in 2002. This pond is where drainage from DD-4 reports. Because of this pond, removal of the silt fences in DD-4 should not result in any added sediment in Cottonwood Creek.

Findings:

Hydrologic Reclamation Information is considered adequate to meet the requirements of this section.

RECOMENDATIONS:

The proposed changes in the reclamation plan indicated by the chnages to Map 3-13 are adequate to minimize disturbance to the hydrologic balance within the permit and adjacent areas and to prevent material damage outside the permit area. Explanations in the text would be beneficial, but are not determined to be necessary to understand these changes.