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STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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December 5, 1988

TO: Susan Linner, Permit Supervisor

FROM: Daron Haddock, Reclamation Specialist

RE: TDN Responses, Diversion Designs and Small Area Exemptions, Hiawatha Mine Complex, U.S. Fuel Company, ACT/007/011-88F, Carbon County, Utah, Folder #2.

SUMMARY:

As a result of TDN's issued during the August 1988 oversight inspection, U.S. Fuel was required to submit designs for their major surface water diversions. Diversion designs and calculations have been received for the Middle Fork loadout yard, the upper rail yard and the South Fork mine yard.

The TDN's also required U.S. Fuel to address areas in their disturbed boundary that do not drain to a sediment pond. A list of all areas not draining to a sediment pond has been submitted along with plans to treat these areas as small area exemptions using alternate sediment control.

ANALYSIS:

On August 18, 1988, oversight inspector Henry Austin issued TDN X-88-2-116-2 part 2 of 3 for failure to construct surface water runoff diversions in accordance with UMC 817.43. The diversions cited include: Middle Fork diversions to sediment pond, diversions to upper rail yard sediment pond, and the diversion to mine #6 sediment pond.

As follow up action to the TDN the division required U.S. Fuel to submit designs showing that the diversions meet UMC 817.43. The required designs and calculations were received at the Division office on November 3, 1988. A review of the designs and calculations show that the diversions in question are all capable of passing the design flow, and in most cases appear to be way oversized.

One area that was not addressed is the issue of channel linings and channel protection, as discussed in UMC 817.43 (f)(1) and (2). As noted in the oversight inspection report, scouring is evident in the diversions. Channel linings may not be adequate to prevent erosion. Therefore, the issue of channel linings should also be addressed.

(As a side note to this discussion, there is some confusion within the regulations as to rip rap requirements. UMC 817.43 (f)(1) makes reference to paragraph UMC 817.72 (b)(1)(iv), which does not exist. The division should clarify this regulation.)

On August 25, 1988, TDN X88-2-116-3 part 1 of 1 was issued for failure to pass all surface drainage from disturbed areas through a sediment pond. In regard to the areas that do not drain to a sediment pond, U.S. Fuel has submitted Appendix III-17 which describes 10 areas that use alternate sediment control as small area exemptions. Five of the areas are Topsoil piles, all of which are stable and have been vegetated. There should be no problem with the topsoil piles being exempt from reporting to a sediment pond.

Other areas listed for small area exemption status are, the Middle Fork substation and water tank area, the South Fork water tank area, and the North Fork ventilation portal pad, all remote locations which have been adequately protected by vegetation or silt fence. Again, there should be no problem exempting runoff from these areas from passing through a sediment pond.

Another listed area, the Middle Fork timber yard, has Gabian filter baskets and gravel berms used to treat runoff. Disturbance is minimal in this area with timbers being the only item stored. The alternate sediment control should be adequate for this area which should qualify for small area exemption status.

The final area (east of lower rail yard and north of refuse pile) drains to two catchment basins which have been sized to completely contain the 10 yr, 24 hr. storm event. The South catchment basin had not been designed or shown on the maps; thus TDN X-88-116-2 part 3 of 3 was issued. Rather than certify this catchment basin as a sediment pond, the operator opted to use the catchment basins in this area as alternate sediment control and classify the area as a small area exemption. Due to the small area drained, these catchment basins should be adequate for handling sediment control in this area, as evidenced by the operators design calculations. There is, however, still a concern with the south catchment basin. In the past, coal has been stockpiled directly above the basin within it's drainage zone. During large storms, coal has been washed into the basin partially filling it and thus reducing it's capacity. In order for the alternate sediment control to function properly in this area, coal should not be stored directly above this catchment basin.

RECOMMENDATION:

There appears to be no problem with the submitted calculations and designs for the diversions. The diversions are all adequately sized to pass the design storm. There is, however, still a question regarding channel scouring and it is recommended that U.S. Fuel address the issue of channel linings. The division should clarify the regulations with regard to rip rap requirements as discussed in UMC 817.43 (f)(1).

It is also recommended that small area exemption status be granted for the 10 areas described in Appendix III-17 with the following stipulations.

1. Storage in the Middle Fork Timber yard be limited to timbers with no other materials being allowed.
2. Alternate sediment control measures must be maintained and, in the event they become ineffective, additional measures will be required.
3. Coal cannot be stored in the area draining to the south catch basin, which is east of the lower rail yard and north of the refuse area.