

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

September 22, 2009

TO: Internal File

THRU: Jim Smith, Permit Supervisor *JS 10/26/09*
April Abate, Team Lead *AAA 10-26-2009*

FROM: April Abate, Environmental Scientist III/Hydrologist. *AAA 10-26-2009*

RE: Mid-Term Review, Hiawatha Coal Company, Inc., Hiawatha Mine, C/007/0011, Task #3352.

SUMMARY:

The Division is conducting a midterm review of the Hiawatha Mine permit, in accordance with R645-303-211 (letter dated July 21, 2009 from Division to Hiawatha Coal Co.). This memo address item #3 on the midterm notification letter.

3. A review of the applicable portions of the permit to ensure that the mine plan contains commitments for application of the best technology currently available (BTCA) to prevent additional contributions of suspended solids to stream flows outside of the permit area.

A midterm inspection was conducted on September 16, 2009. The field inspection included an evaluation of Slurry Ponds 1 and 5A and the status of any future operations. The surface facilities along South and Middle Fork Roads were evaluated and any potential future mining operations to occur in these areas were discussed. Sediment Pond D008 was evaluated. The North Fork Road was evaluated to visit the reclaimed U.S. Fuel intake ventilation portal. The ditch on the north side of Slurry Pond #4 was examined and the erosion control measures performed in the Fall of 2008 evaluated.

The following deficiencies were found based on the midterm review:

[R645.301.528.330] and [R645.301.528.332 & 334]: The definition of noncoal waste includes abandoned mining machinery. Exhibits V-5, V-6 and V-7 need to be updated to show the current waste storage conditions. Non-coal waste areas should either be redesignated on the maps, or the waste should be relocated to designated noncoal waste storage areas in accordance

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with R645.301.521.124. Drums contained within the waste oil and grease storage adjacent to the truck maintenance shed should be evaluated for oil and/or hazardous substances and disposed of in a proper manner in accordance with R645.301.528.332 & 334.

[R645.301-742.200]: The reclaimed ventilation portal area no longer requires the silt fencing to support sediment control in that area. The silt fences are recommended for removal.

Additional maintenance is needed in the areas of Slurry Pond #4 on its northeast side where active down cutting has been evident. Ongoing erosion problems were noted where the addition of rip rap extending further to the west where the problems begin is needed. Smaller diameter rip rap boulders than the ones currently emplaced may be more effective in mitigating the erosion problem.

Deep rilling was noted in an area situated between the Utah Rail right-of-way and the northwest corner of Slurry Pond #4 draining above the culvert into a catch basin above Miller Creek. Additional work appears to be needed to include building up and extending the berm along the catch basin in this area.

RECOMMENDATIONS:

Deficiencies for item #3 have been identified that require attention and is therefore not recommended for approval.

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cc: S. Demczak

TECHNICAL ANALYSIS:

OPERATION PLAN

SPOIL AND WASTE MATERIALS

Regulatory Reference: 30 CFR Sec. 701.5, 784.19, 784.25, 817.71, 817.72, 817.73, 817.74, 817.81, 817.83, 817.84, 817.87, 817.89; R645-100-200, -301-210, -301-211, -301-212, -301-412, -301-512, -301-513, -301-514, -301-521, -301-526, -301-528, -301-535, -301-536, -301-542, -301-553, -301-745, -301-746, -301-747.

Analysis:

Disposal Of Noncoal Mine Wastes

During the September 2009 midterm inspection, several noncoal waste areas were observed on the site and described below:

South Fork Road: Noncoal waste mainly consisting of unused mining equipment was located on the south side of South Fork Road near the King VI mine yard. This area was adjacent to a vegetation test plot that was enclosed in barb wire. The area designated for noncoal waste shown on Exhibit V-7 is shown to the west of the storage shed. The noncoal waste is presently being stored in an area designated as a "temporary coal waste storage area".

Middle Fork Road: Noncoal waste mainly consisting of unused mining equipment was also noted at the end of Middle Fork Road adjacent to the Former King IV and King V portal and fan areas. This area *is* designated as noncoal waste storage areas on Exhibit V-9 but not on the surface facilities detail map for Middle Fork Road (Exhibit V-5). A small 5-gallon bucket of paint was observed in the mine yard that appeared to be the subject of vandalism.

Waste Oil and Grease Storage Area: This area is located at the split between Middle and South Fork Roads on the site adjacent to the truck maintenance building. This is a paved area with several 55-gallon drums stored within a secondary containment enclosure. Several 55-gallon drums were contained within a concrete secondary containment structure but the condition of the drums appeared to be degraded (i.e. dented, rusted, no lids).

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Findings:

[R645.301.528.330] and [R645.301.528.332 & 334]: The definition of noncoal waste includes abandoned mining machinery. Exhibits V-5, V-6 and V-7 need to be updated to show the current waste storage conditions. Non-coal waste areas should either be redesignated on the maps, or the waste should be relocated to designated noncoal waste storage areas in accordance with R645.301.521.124. Drums contained within the waste oil and grease storage area should be evaluated for oil and/or hazardous substances and disposed of in a proper manner in accordance with R645.301.528.332 & 334.

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, -300-148, -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:

Hiawatha Coal Company occasionally mines coal fines from Slurry Pond #1 in the Hiawatha Mine permit area depending upon prevailing market conditions. The mine remains in active status as a result of this and thereby must to continue to monitor hydrologic resources and meet performance standards.

Hiawatha Coal Company updated their water monitoring plan June 6, 2003. Water monitoring stations have been established throughout the permit area to determine the impacts of the mining operation on the hydrologic balance. Table 7-14 identifies the surface and ground water monitoring sites and provides a description of their location. The locations of monitoring sites Exhibit 7-1. HCC currently monitors four stream sites on a monthly basis. There are six springs monitored on the permit area. Samples are analyzed according to Table 7-12 or Table 7-15 for both streams and springs.

The Permittee currently monitors springs SP-2, SP-4, SP-5, SP-11, SP-12 and SP-13 two times per year for operational parameters (Table 7-15), in June and October, or when access permits.

The Permittee is required to monitor Stream Sites ST-1, ST-2, ST-2B, ST-3, ST-3A, ST-3B, ST-4, ST-4A, ST-4B, ST-5 on a monthly based during the months of April through October. Operational parameters are monitored in April and September or subsequent months as access dictates. Field parameters are measured in the other months.

Thirteen UPDES sites are permitted and monitored at the Hiawatha Mine. These points have been assigned EPA identification numbers D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D012 and D013. Monitoring requirements for these points are given in Tables 7-13 and 7-17. Exhibit 7-1 of the MRP. Two of the sites are mine water discharge from the Mohrland Portal. The MRP shows the locations of mine water discharge points monitored by Hiawatha Coal Company. Mine water production at sites D001 and D002 continues to be monitored (Mohrland UPDES sites). Point D010 is a discharge from the King 4 mine ventilation portal in North Fork Canyon. Point D013 is from an overflow pipe from the King 6 water tank in South Fork Canyon. The King 6 mine is currently inactive and the water tank is not being used.

The Permittee sends all monitoring data to the Utah Division of Oil Gas and Coal Mining Database.

Gravity Discharges From Underground Mines

The Permittee has identified Site D001, Mohrland Portal, as a gravity discharge site. Point D001 is located at the Mohrland Portal (King No. 2 Mine) in Cedar Creek Canyon. This discharge is monitored twice a month from April through September and once a month during the rest of the year. D002 is overflow from the Hiawatha Town water tanks. This water originates from the Mohrland Portal via the Mohrland Pipeline. Sampling is done once a month. When mining resumes, the sources for the water discharge at the Mohrland Portal will be tested for age according to the method used in the Mayo Report (Appendix 7-21). Point D012 is at a valve on the Mohrland Pipeline. Water is monitored at this point whenever the pipeline must be drained for major repairs.

Water-Quality Standards And Effluent Limitations

The Permittee submitted an updated copy of the UPDES Permit No. 0023094 in Appendix 7-5. The permit was approved and issued on October 28, 2004. All discharges of water from disturbed areas will be in compliance with all Utah and federal water quality laws and regulations and with effluent limitations for coal mining contained in 40 CFR Part 434.

Sediment Control Measures

All disturbed areas associated with mining and reclamation operations are protected by sediment control structures. All of the larger disturbed areas are treated by sedimentation ponds or slurry ponds. Other disturbed areas, classified as Alternate Sediment Control Areas (ASCA's), utilize alternative methods of sediment control such as catch basins, silt fences and interim revegetation.

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To minimize disturbance to the hydrologic cycle, sediment ponds and slurry ponds were placed such that disturbed area drainage will flow into and be contained in them. The sedimentation ponds are designed to contain the total flow from a 10 year-24 hour precipitation event. Pond outflows in excess of the 10 year-24 hour event will discharge through a spillway and oil skimmer to treat and control the water. Each pond has been assigned an EP identification number and will be included in Hiawatha's UPDES Permit when it is renewed. To date, none of the ponds have discharged any water. Table 7-18 lists each pond and its location.

Slurry Pond #4 has had some erosion problems on its northeast side where active down cutting has been evident as a result of torrential rainstorms. In the fall of 2008, the Division requested the area be repaired. The Permittee complied by placing rip rap in the ditch. However, based on an inspection of the area in September 2009, the area appears to have ongoing erosion problems where the rip rap could be extended further to the west where the problems begin. Smaller diameter rip rap boulders than the ones currently emplaced may be more effective in mitigating the erosion problem.

Deep rilling was also noted in an area situated between the Utah Rail right-of-way and the northwest corner of Slurry Pond #4 draining above the culvert into a catch basin above Miller Creek. According to the Permittee, some prior regarding maintenance of these slopes was done in 2008, but additional work appears to be needed to include building up and extending the berm along the catch basin in this area.

Table 7-18. Sediment Pond Locations

Pond No.	Location
D003	Upper Coal Storage Yard
D004	North of Slurry Pond No. 1
D005	East of Slurry Pond No. 4
D006	North East of Slurry Pond No. 5
D007	South East of Slurry Pond No. 5
D008	Middle Fork Mine Yard
D009	South Fork Mine Yard
D011	South Fork Truck Loading Facility

Siltation Structures: General

North Fork Intake Ventilation Portal: U.S. Fuel who owned the property at the time reclaimed this portal in 1993. Silt fencing was observed at the base of the reclaimed slope in order to provide alternative sediment control to the area. Page 5-94 of the MRP states that these silt fences are to be removed once the vegetation has been adequately established. The slope was evaluated and determined to support minimal vegetation due to its steepness. However, the silt

fences were in a state of disrepair and were previously recommended for removal by the Division.

Siltation Structures: Exemptions

The Permittee is using best technology currently available (BTCA) to prevent additional contributions of suspended solids to stream flows outside of the permit area. Hydrologic structures (culverts, berms, sedimentation ponds and surface roughening of reclaimed areas) route or contain disturbed surface runoff so it does not contaminate down stream sources.

Findings:

The hydrology issues expressed in Section 3 of the Midterm notification letter of July 21, 2009 address best technology currently available for sediment control practices within the permit area.

[R645.301-742.200] The reclaimed ventilation portal area no longer requires the silt fencing to support sediment control in that area. The silt fences are recommended for removal.

Additional maintenance is needed in the areas of Slurry Pond #4 on its northeast side where active down cutting has been evident. Ongoing erosion problems were noted where the addition of rip rap extending further to the west where the problems begin is needed. Smaller diameter rip rap boulders than the ones currently emplaced may be more effective in mitigating the erosion problem.

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