

8/31/07

~~Haiwatha Coal Co.~~
Elliott Lintner
Mark Reynolds

OGM
Dawn H
K. H

- Pete Hess had a phone call of refuse being hauled
- May 16, 07 - inspection - dike had been mined
- lowered by 10' on N. side - MSHA impoundment.
- June 20 - issued. / pond still listed as active - no docum.
- from MSHA ^{replace} option ~~abandon~~ -
to show closure.

~~Mark~~ MSHA violations on Pond #5

EF. — Are taking fines & will continue — wanted
to pull fines out from beneath the dam!

Joe Hel. inspector — asked Oeff within MRA? ^{He agreed.}
— EF thought this was within the plan.

~~Haiwatha Coal~~ contracting of?

KH ~~is~~ reclamation was to start / should do notice
Plan now is to abandon the Pond #1 —
they will breach embankment, and mine fines
22' or higher

MR. Inside ^{was} dropped lower now, so safer.
Clay 5. — constructed pre-8MRA —
Exhibit 5-13-B — design.

When the final grade has been achieved with a stable area having positive drainage, the topsoiling operations can begin. Initially the regraded surface will be ripped about every 5 feet to a depth of 18 to 24 inches. Stockpiled or substitute soil material will then be hauled to and spread over the regraded area. The substitute topsoil will be transported to the slurry pond area by scrapers, belly dump and/or end dump trucks and spread by a bulldozer. Grade stakes will be placed on 200 foot centers to aid in establishing a uniform layer. The topsoil will be spread in such a way that the surface will be rough and variable, rather than smooth. The degree of roughness will depend upon the equipment used for spreading the required topsoil and fertilizer. After fertilizing or prior to hydroseeding, the topsoil will be disced or lightly scarified if its surface has compacted over time.

After the topsoil has been spread over the area, random samples will be collected to determine the required amounts of nutrients and soil amendments for the redistributed topsoil. A minimum of twelve random samples will be collected and composited for each slurry pond site. The composite samples will be submitted for laboratory analyses to determine the nutrient levels. The nutrient parameters to be measured are discussed under R645-301-231.300 "Soil Testing Plan". This sampling will also serve as a final check to verify that the designated minimum amount of topsoil has been uniformly spread over the area.

After completion of the topsoil preparation, the seed will be applied by either broadcasting, drilling or hydroseeding. The final step will be application of a mulch at the rate of at least 1.0 tons per acre. The mulch will be either crimp-disced into the soil or bound to the soil with a binding agent. If hydroseeding is used, seed may be applied simultaneously with the mulch, but after the fertilizing operation.

Vegetation is currently growing on the coal refuse embankments and on areas contiguous to the embankments. The presence of vegetation plus the laboratory analysis substantiate that higher than acceptable limits of toxic or acidic elements are not present in the refuse or slurry.

As proven by laboratory analyses of trace metals, the coal refuse is non-toxic and non-acid forming, therefore, does not require burial. Field trial test plot studies based on 6, 12 and 16 inch cover of topsoil and conducted in accordance with DOGM and OSM recommendations have been implemented (see Appendix III-5). Based on these studies a 16 inch cover of topsoil will be used for reclamation of the slurry ponds and refuse embankments. U. S. Fuel has demonstrated with a 7 year test plot study that the coal refuse can successfully be revegetated utilizing 16 inches of substitute topsoil over the "worst case" coal refuse material.

However, after rough grading to final contour but prior to topsoil placement, the refuse material on Slurry Pond #1 will be sampled again and analyzed for the following parameters: pH*, electrical

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- original pages -
from Mark R.
- red line struck out? where?

reduced to about five horizontal to one vertical. Borrow area "A" will be utilized to provide substitute topsoil for slurry pond #5.

Similarly, for final reclamation of slurry ponds #1 and #5A the coal refuse embankments will be used to fill in the ponds. Starting at the top of the slurry pond embankments the coal refuse material will be moved to the interior of the slurry ponds, then spread and compacted. The ponds will be shaped as close as possible to the final contours, depending upon how many coal fines, if any, remain in the ponds. If this configuration cannot be met due to the removal of coal fines, an amendment will be submitted to the Division before any substantial changes are made to the regrading plan. On top of the ponds the grade may be shallow, whereas the outer slopes will have a maximum grade of 3 horizontal to 1 vertical. The final thickness of the stabilized refuse piles will vary from 0 to approximately 40 feet in depth.

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