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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)

DIVISION OF OIL GAS & MINING
FIELD VISIT FORM
TECHNICAL

Date : 11/16/95

Time: 12:00-4:00 P.M.

Mine: Castle Gate

File Number: ACT/007/004, Folder #2

DOG M Staff: Paul Baker and Dave Donnelly

Other Attendees: Johnny Pappas (Cyprus), Bill Minchey (Minchey Digging), Douglas Graham (Weyerhaeuser), Dina Niesley (Geosystems, L.C.), Tom Augusta (Maple Mountain Seeding), two employees of Minchey Digging and one of Maple Mountain Seeding

Purpose: additional
To observe application of Soil Guard Mulch

Observations:

Soil Guard was applied in some areas mainly on the north but some on the south side of the No. 4 Mine canyon in the general area of the highwall. The permittee recently completed some additional grading in the area, and it left some very steep (about 1.5v:1h) slopes that also had a lot of rock. The slopes were intentionally left rough to try to capture moisture and increase vegetation establishment while decreasing erosion. Mr. Graham said he had never applied this product to a slope this rough. He said one would normally apply it at the rate of about 3000 pounds per acre, but he recommended about a 20% increase because of the roughness.

Soil Guard is similar to regular wood fiber hydromulches, but it has coarser fibers that are supposed to bond better making it last about twice as long. The bags of Soil Guard had small bags of tackifier (two types--one was made from Guar gum and the other I don't remember) in them. There were two small plastic bags with the tackifier. The mix was very slimy, described by Ms. Niesley as "elephant snot." Gross, but about right. The hydromulch I have worked with in the past has not been slimy. It seemed just like water with the wood fiber mixed in. I believe the slimy feel was a result of having more tackifier than is usually used, and this is part of what is supposed to make the product last better and work better than others.

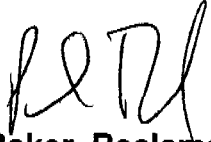
It took quite a while to add the Soil Guard and get it mixed up. It tended to have large clumps that wouldn't mix well. By reversing the auger, the contractor was finally able to get it broken up.

When the hydroseeder was at the place where the mulch was to be applied, about 16 pounds (about 11 pounds PLS) of seed was added. The area to be mulched had already been seeded and mulched with straw, and the extra seed was just a little extra insurance. Mixing seed with hydromulch is not usually recommended because the seed may not be able to make good contact with the soil.

The person spraying the mulch tried to avoid leaving shadows, and he succeeded in most areas. The west side had more shadows than most other places. In a few places, he also tried to apply it to broken up rocks. Although it stuck, I don't have much confidence that anything will grow in some of those places. However, there were also some places that looked difficult to revegetate with conventional means but where there was some soil. These should provide a good test for the mulch. Under normal circumstances, I would expect some plant establishment in these areas but not much.

Recommendations/Conclusions:

I took several pictures and will place them in the file. The Division needs to take more pictures next year and evaluate whether the mulch was beneficial. If so, it could be recommended for seeding very steep, rough areas. It is almost certainly not economical for normal situations where straw or hay can be applied.



Signature: Paul Baker, Reclamation Biologist on November 16, 1995
<Name>, <Title>