

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

November 23, 2009

TO: Internal File

THRU: April Abate, Team Lead *AAA 12-16-2009*

FROM: Priscilla Burton, CPSSc, Environmental Scientist *PWB by SAS*

RE: Temporary Seed Mix (for settling pond topsoil stockpile), Savage Industries, Inc., Savage Coal Terminal, C/007/0022, Task ID#3421

SUMMARY:

Topsoil and subsoil from the settling pond expansion was salvaged, stockpiled and seeded in the fall of 2006. After 3 years the settling pond expansion subsoil stockpile has numerous saltbush shrubs in the bottom of deep pocks, but the topsoil pile is devoid of vegetation.

The Permittee would like to reseed the settling pond expansion topsoil stockpile using a simpler, new mix that consists of two wheat grass species, yellow sweetclover and alfalfa. The way the new mix is presented, it will replace the temporary seed mix which has been successful on several previous seedings. Therefore the following deficiency has been written.

R645-301-121.200, The Division does not object to reseeded of the topsoil pile, but does not approve of replacing the existing Table 5-1 Temporary Seed Mix. The list of seed used in supplemental reseeded on the topsoil stockpile should be given a new table number.

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TECHNICAL ANALYSIS:

GENERAL CONTENTS

OPERATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Analysis:

Topsoil Removal and Storage

Billings Silty Clay, eroded soils with extreme SAR values were excluded from salvage during the settling pond construction (represented by SP3 on baseline soils Map 2-4). Only the soils represented by SP1 and SP2 (Killpack and Billings Silty Clay, moist) were salvaged from the location of the settling ponds (mapping units KMB and BIBM listed on Plate 2-4). Based upon the laboratory analysis in App. 2-3, the average SAR value of the salvaged topsoils should be 4.65. The average SAR value of the salvaged subsoils should be 13.04.

Twelve inches of topsoil and twelve inches of subsoil from the settling pond expansion was salvaged, stockpiled and seeded in the fall of 2006. Table 5-1 Temporary seed mix was applied along with potassium fertilizer and two biological enhancements described in Chap 2, pp. 28 and 29. After 3 years the settling pond expansion subsoil stockpile has numerous saltbush shrubs in the bottom of deep pocks, but the topsoil pile is devoid of vegetation.

The same temporary seed mix was applied to the topsoil/subsoil stockpile created in 2002 from the truck loadout expansion. After 7 years, the growth on the loadout expansion stockpile is showing diversity in life form and adequate coverage. The temporary mix was also used last year on a berm behind the pumphouse and after one year there are winterfat and atriplex coming up in this location.

The Permittee would like to reseed the settling pond expansion topsoil stockpile using a simpler, new mix that consists of two wheat grass species, yellow sweetclover and alfalfa. The way the new mix is presented, it will replace the temporary seed mix which has been successful on several previous seedings. The Division does not object to reseeding of the topsoil pile, but does not approve of replacing the existing Table 5-1 Temporary Seed Mix. The list of seed used in supplemental reseeding on the topsoil stockpile should be given a new table number. After a

field visit on November 23, 2009, the Division biologists may also recommend retaining the Atriplex and Ceratoides seed in the mix.

Findings:

R645-301-121.200, The Division does not object to reseeding of the topsoil pile, but does not approve of replacing the existing Table 5-1 Temporary Seed Mix. The list of seed used in supplemental reseeding on the topsoil stockpile should be given a new table number.

RECOMMENDATIONS:

The application should be revised as requested.