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DIVISION OF OIL, GAS AND MINING

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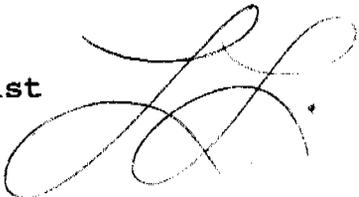
TO: File

THROUGH: Daron Haddock, Permit Supervisor

FROM: Lance Lawson, Reclamation Soil Specialist

DATE: 17 September, 1993

RE: Application for Permit Change - Exploration Drilling,
Southern Utah Fuel Company, Folder #2, 041/002-93C,
Sevier County, Utah



SUMMARY

Southern Utah Fuel Company has submitted a Application for a Permit Change which addresses exploration drilling for their Mine Permit area. This review is for completeness and correctness of methods that affect the soil resource of the areas of impact.

In reviewing the Application for a Permit Change, the Operation Plan Chapter 2 Soils, was used in reference for methods stated and in conjunction with the reference to the Plan. Comments in the following write-up are directed at the Application for a Permit Change and not the Operation Plan.

ANALYSIS

6.4.3.2 Soils

Proposal

SUFCO has proposed that the disturbance from wheel tracks of the drill rigs that they plan to use in the exploration drilling will come under R645-301-232.400, and be classified as minor disturbance. SUFCO has also proposed that the wheel tracks be treated as described in Chapter 2 Soils Section 2.3.2.4.

SUFCO is also proposing that the topsoil and subsoil stockpiled will not be vegetated for protection from wind and water erosion due to the short duration of stockpiling.

Analysis

Regulation R645-301-232.400 does not mention wheel tracks as being minor disturbances to the soil resource. It is also noted that Chapter 2 Soils Section 2.3.2.4 just restates the regulation previously mentioned.



Depending on the type of wheel track, weight (and weight distribution) of the drill rig used, and the soil resource characteristics of the soils impacted by the wheel tracks, the soil resource could be detrimentally compacted and displaced. Detrimental compaction and displacement can increase the potential of wind and water erosion, and detrimentally impact the long-term productivity of the soil resource.

It is recommended that estimated increases in bulk density be calculated, for the potentially impacted areas, to determine potential compaction impacts to the soil resource. Also, in areas of moderate to severe compaction, ripping and/or cultivating the soil is recommended in addition to the soil resource being scarified prior to revegetation. This will help in negating the detrimental effects of compaction on revegetation efforts.

It is also recommended that the topsoil and subsoil stockpiles be covered with some type of matting to help reduce the potential of wind and water erosion. Even though planned stockpiling is estimated to be for a short period of time, detrimental loss of the soil resource can take place due to wind and water erosion, if the soil resource is left unprotected.