



State of Utah

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DIVISION OF OIL, GAS AND MINING

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March 14, 1994

To: File

From: Tom Munson 

RE: Bond Release Related to Erosion and Sediment Control, Mountain Coal Company, Huntington #4, ACT/015/004 and Gordon Creek #3+6, ACT/007/017, Folder #2, Carbon and Emery Counties, Utah

An analysis related to past and present erosion rates from reclaimed mine sites was submitted by Mountain Coal Company using a Sediment Production Comparison generated by the Civil Software Design Sedcad + Program, Version 3 (1992). The runoff volume, peak flow and sediment concentration were compared between past and present activities. The final results were given in terms of concentration (mg/l) or tons of sediment generated.

SEDCAD RESULTS

Gordon Creek 3 & 6

	Pre-mining	Post-Mining
Tons of Sediment Generated	16.8 tons	7.7 tons
Peak Sediment Concentration	29725 mg/l	17966 mg/l

Huntington # 4

	Pre-mining	Post-mining
Tons of Sediment Generated	450.2 tons	449.7 Tons
Peak Sediment Concentration	196,524 mg/l	193,187 mg/l

The initial results of this computer analysis indicates that the sediment loads from the reclamation activities are no different than the pre-mining conditions. It appears that the model is sensitive to different input parameters whether it be soils-related or watershed-related. Use of this modeling procedure does not mean that this is the only tool to assess erosion. Since the Universal Soil Loss Equation used in SEDCAD does not allow for gully erosion, it is important that an on-site assessment be made to ascertain any significant rill or gully erosion.



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Recommendation

A site visit should be held to ascertain that on-site conditions are erosionally stable. The specific field method to assess this field stability will be determined prior to this site visit. The SEDCAD analysis should be approved and this information used as supporting documentation in any Phase II bond release document.