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STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dr. G. A. (Jim) Shirazi, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

August 23, 1983

REGISTERED RETURN RECEIPT REQUESTED

Mr. Robert Eccli
Sr. Mining Engineer
U. S. Fuel Co.
P. O. Box A
Hiawatha, Utah 84527

RE: Revegetation Monitoring
King VI Mine
ACT/007/011
Folders No. 2 & 4
Carbon County, Utah

Dear Mr. Eccli:

The Division is in receipt of your August 16, 1983 letter which transmitted your 1983 Revegetation Monitoring Report.

After reviewing this report, the Division finds that it does not meet the requirements of stipulation 7-81-2 of the King VI Reclamation Plan or the Division's June 9, 1983 letter for the following reasons:

1. Although the requirement for meeting statistical adequacy at the 90% confidence/10% precision level for the first year was waived (see the June 9, 1983 letter), one sample point (quadrat) per area is not acceptable. A minimum of 10 plots per area should be sampled.
2. Large quadrat size (ie. $1m^2$) creates parallax problems when visually estimating cover. U. S. Fuel was to use a $.5m^2$ quadrat as per the approved monitoring plan
3. When estimating cover by species, total vegetative cover is not additive - ie, if there is overlap, this practice could, and often does add to over 100% cover, even when total vegetation cover is less than 40%. U. S. Fuel must supply total vegetation cover as well as cover by species.
4. Percent Composition is a "relative" term and has been incorrectly applied in your report. Percent Composition should always add to

Mr. Eccli
August 22, 1983
Page 2

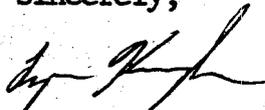
100% and indicates what percent of the total cover, (total cover may be only 10%), production, or whatever is contributed by the various species.

5. With regard to the variances to certain procedures in the approved monitoring plan for first year sampling (See the June 9, 1983 letter), the Division was of the understanding that U. S. Fuel had contracted with Bio-West Inc. to perform the work. Bio-West had made several contacts with the Division regarding the sampling procedures. The June 9, 1983 letter was in response to what they had planned. EIS made no contact with the Division that I can document and from the submitted report it appears that they did not understand what was to be done.
6. Of a minor note, several species names were misspelled - causing some confusion as to what species were actually observed. Also several introduced wheatgrasses were on the seed mix, yet the monitoring report has lumped them all together (ie, Agropyron spp.) If U. S. Fuel intends to use the monitoring data as justification for these (or any other) introduced species, the data must be provided for each species.

In conclusion, it is necessary for U. S. Fuel to collect additional data to make the monitoring report acceptable. Please resample the various areas prior to September 9, 1983 and submit a revised report prior to September 30, 1983. A minimum of ten quadrats per area should be used. Quadrat size should be consistent on each area but must be no larger than $.5m^2$ or smaller than 20cm X 50cm in size. Species observed in each area should be reported even though they may not be observed in the various quadrats. Cover by species (including overlap) as well as total cover of vegetation (excluding overlap), litter, rock and bare ground should be reported. Data for individual species should be reported by genus and species name and not grouped together as a type (ie, Agropyron spp.)

Please have your consultant contact me prior to field work to help ensure an acceptable report. Should you have any questions, please don't hesitate to call.

Sincerely,



LYNN KINZER
RECLAMATION BIOLOGIST

LK/jvb

cc: Allen Klein, OSM
Mary Boucek, DOGM
David Lof, DOGM