STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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March 28, 1985

CERTIFIED RETURN RECEIPT REQUESTED
P-396-996-969

Mr Ben Grimes, Environmental Coordinator
Plateau Mining Company
P.O. Box PMC
Price, Utah

#4

RE: Conditional Approval for Disruption of Refuse Test Plots Attendant to the Unit Train Revision, Plateau Mining Company, ACT/007/006, Carbon County, Utah

Dear Mr. Grimes:

The Division has reviewed your request for permission to disrupt your test plot program attendant to the operational dictates of placing the conveyor for the unit train project. As you recall this request was made on March 18, 1985 when Mr. Clem Parkin and yourself met at the Division office with Susan Linner, Lynn Kunzler and Tom Portle. Subsequent to this meeting Mr. Kunzler and Mr. Portle met with you at the site on March 19 to determine if root penetration into the refuse was occuring. This was considered important in that such penetration would be indicative of utilization of the coal waste by plants to obtain moisture and thus have direct bearing on the necessary depth of topsoil and/or subsoil necessary to afford adequate reclamation.

The reclamation report for 1984 was used in the PMC presentation of March 18, 1985 for rationale as to why this proposed test plot disruption could be done without unduely compromising the information to be derived from test plots. Upon review of the above cited report (see attachment) and reconsideration of the original stipulations , the test plot objectives, and the degree to which information derived to date addresses these objectives the Division has made the following findings and recommendations.

Findings:

1) After the original request to disrupt the test plot program the Division determined that the minimum amount of time required for meaningful test plot observation was 3 years and reserved the right to evaluate that information prior to signing off on the disruption without test plot replacement on some other portion of the operation (see memo by Mr. Lynn Kunzler dated August 1, 1984).

2) In correspondence dated September 23, 1983 PMC acknowledged the value of the test plot program and stated their commitment to this program.

Upon review of the stipulations which required initial implementation of the test plots and the degree to which they have been satisfied, the Division has uncovered certain deficits in the information itself and in the procedures employed in their implementation (see attachment). Specifically, the data to date reveals information about germination and establishment, but does not address the long-term survival of plants. Also, the use of a non-uniform topsoil cover over the refuse has limited the value of information gained to date.

In light of these findings the Division can approve the PMC request for test plot disruption in accord with the following provisions:

Stipulation UMC 817.24-1-TLP

1. PMC must assure that the integrity of the greatest possible portion of the current test plots be maintained pursuant to stipulation 9-22-3. A revised map showing the actual extent of test plot disruption shall be submitted to the Division immediately after such disturbance takes place. Further, data shall be obtained from these remaining plots for at least 8 additional years to establish the survival of species in these conditions. Such data shall be reported to the Division on an annual basis.

2. To maintain the integrity of PMC's response to 9-22-3 the permittee shall make every effort to re-establish the lost test plots on suitable portions of the refuse in the adjacent areas. A plan to accomplish this shall be provided to the Division for review and approval by May 1, 1985.

3. PMC shall submit a analysis of how existing test plots specifically address the concerns identified by special stipulation #6 by April 22, 1985. Test plot designs, maps and methods necessary to remedy inadequicies identified in the design and implementation of the existing test plot program shall be submitted to the Division for its review and approval on or before May 15, 1985.

This approval will become effective upon the Division's receipt of written commitment by PMC to the above stipulation. Should you have any questions regarding this approval and its attendant conditions please feel free to contact me, Tom Portle or Lynn Kunzler of my staff.

Sincerely,

Samuel P Braxton

L. P. Braxton
Administrator
Mineral Resource Development
and Reclamation Program

TLP/jvb
cc Allen Klein
Clem Parkin
D. Wayne Hedberg
Lynn Kunzler
Susan Linner
Tom Portle
0179R

Kathy

Attachment 1

Evaluation of Results of 1984 Reclamation Report:

Table 5

Both the cover and the production on the topsoil stockpile are greatly superior to that of the subsoil stockpile.

%cover = 54 v. 34
Production = 1688 #/ac v. 495 #/ac

Table 11

The 10 inch topsoil + 10 inch subsoil appears to be the best overall treatment.

-Perennial forbs did significantly better than other treatments.

Shrubs did best in the 10 inch subsoil (no weeds)
There was significantly less cover in the subsoil treatment.

The 20 inch subsoil treatment had significantly less cover than all other treatments. except coal waste.

Table 12

Treatment	% cover	% cover w/o weeds
10 in. topsoil	18.77	9.2
10 in. subsoil	17.68	17.68
10 in. top + 10 in. sub	18.8	18.8
20 in. topsoil	18.9	13.8
20 in. subsoil	14.5	14.5
coal refuse	7.36	7.36

10 in. topsoil + 10 in. subsoil - no weeds
20 in. topsoil -27% weeds
10 in topsoil -51% weeds

Usefulness of results:

1) The lack of uniformity in applied topsoil (weeds) is enough to cause doubt as to the usefulness of results for reclamation prediction.

2) The use of "fresh" (not stockpiled) topsoil introduces a condition which will not be encountered in the post-mining situation.

3) The quality of the topsoil used in this project appears to be noticeabaly less than the stockpiled soil materials as evidenced by the wide variation in weed seeds.

Information Gained From The Study To Date:

-The refuse does not appear to be phytotoxic.

-The refuse may have an ability to act to add to the pool of plant-available moisture as evidenced from field observations on 3/19/85 and on forthcoming data on saturation %.

-Perennial forbs did well in the increased depth treatment.

-A unanticipated weed problem accentuated by fertilization may have impacted the value of the study - some form of weed control is probably needed or weed free soil should be used.

Satisfaction Of Study Objectives And Goals:

Condition 9-22-3

-Determined that germination, establishment and site stabilization is possible in soil covered coal waste.

-Questions about the most economical use of soil were not as yet answered.

-Post-mining conditions of topsoil and subsoil redistribution were not approximated.

Condition #6

-Indication that greater than 10 inch cover will be necessary for growth of perennial forbs.

-Topsoil (when weed free) appears to be a much better media than subsoil.

-The ratio of topsoil to subsoil actually in storage at the minesite has not been and should be tested.

-Excess fertilizer may accentuate weed problems.

Conclusions and Recommendations:

- Topsoil and subsoil should come from existing stockpiles.

- At least one treatment should be planned to approximate the ratio of topsoil to subsoil available at the minesite.

- If weed problems are noted, control measures should be implemented immediately.

- The 200#/ac fertilizer treatment should be abandoned in new treatments.

- Coal waste and underlying materials should be fertilized.

0179R