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# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340

June 7, 1988

Mr. Barry Grosely  
Kaiser Coal Corporation  
P. O. Box 10  
Sunnyside, Utah 84539

Dear Mr. Grosely:

Re: 1987 Annual Report Review, Wellington Preparation Plant,  
Kaiser Coal Corporation, ACT/007/012, Folder No. #2, Carbon  
County, Utah

The Division's technical staff has reviewed Kaiser Coal Corporation's 1987 Annual Report for the Wellington Preparation Plant, received April 4, 1988. Several deficiencies and inadequate stipulation responses have been noted. Please refer to the attached technical memorandum for a summary of the deficient and technically inadequate information.

In addition to these concerns, it should also be noted that Kaiser has not responded to stipulation UMC 817.131-(1)-SCL to the Mid Term Permit Review, which was due April 29, 1988. Also, Kaiser committed to submit Chapter 1 of the reformatted Mining and Reclamation plan by May 31, 1988. This has not been received. If these items are not received prior to the next inspection, enforcement action will result.

Please provide your response to the attached technical concerns by July 8, 1988. If you have any questions, please contact Lynn Kunzler, Reclamation Biologist, James Leatherwood, Reclamation Soils Specialist or myself. Thank you for your cooperation in completing this permitting action.

Sincerely,

A handwritten signature in cursive script that reads "Susan C. Linner".

Susan C. Linner  
Reclamation Biologist/  
Permit Supervisor

SCL/as  
Attachments  
cc: L. Kunzler  
J. Leatherwood  
H. Sandbeck  
1356R/23



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May 23, 1988

TO: Sue Linner, Permit Supervisor/Reclamation Biologist  
FROM: James Leatherwood, Reclamation Soils Specialist  
Re: Stipulation Response Review, UMC 817.22 - (1) - JSL,  
Wellington Preparation Plant, Kaiser Coal Corporation,  
ACT/007/012, Folder No. 2, Carbon County, Utah

Summary

The 1987 Annual Report for the Wellington Preparation Plant, received April 4, 1988, has been reviewed. The report did not include a revised Sampling Schedule and Parameters Plan as required by Mid-Term Permit Condition UMC 817.22 - (1) - JSL.

Analysis

The above mentioned report did not include a revised Sampling Schedule and Parameters Plan for the test plot program. The annual report did include a response to condition UMC 817.22 - (1) - JSL. For further review of the condition response please see May 23, 1988, Memo to Sue Linner.

Recommendation

The operator must updated the Mid-Term Permit. The revised Sampling Schedule and Parameters Plan should be clearly defined within the text of the permit application package.

JL/as  
cc: L. Kunzler  
0534R/18



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May 23, 1988

TO: Sue Linner, Permit Supervisor/Reclamation Biologist  
FROM: James Leatherwood, Reclamation Soils Specialist  
Re: 1987 Annual Report Review, Wellington Preparation Plant,  
Kaiser Coal Corporation, ACT/007/012, Folder No. 2, Carbon  
County, Utah

Summary

The 1987 Annual Report for the Wellington Preparation Plant, received April 4, 1988, has been reviewed against Mid-Term Permit condition UMC 817.22- (1) - JSL. The soil data reported in the annual report is unclear and does not completely follow condition UMC 817.22 - (1) - JSL.

Analysis

The soil analysis from the slurry pond test site has been reviewed. The location of the sampling was not specified in the annual report. Therefore, any potential effects caused by either organic amendments, soil depth, or space variability cannot be accounted for. All sample locations should be delineated in a test plot map and described in the narrative of the report.

The sampling methodology is unclear. It appears that condition UMC 817.22 - (1) - JSL was not followed. Part 1, A of the condition required the sampling of the upper six (6) inches of the coarse slurry in the coarse slurry over fine slurry test plots. It appears that samples 1C and 4A meet this request. However, samples 1A and 3B state are identified as the "low 3" coarse slurry" and "upper 3" coarse refuse". Are these samples of the coarse refuse? Condition UMC 817.22 - (1) - JSL calls for the upper six (6) inches to be sampled, not three (3) inches.

The condition requested that the topsoil materials be sampled. None of the samples are identified as topsoil.

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Memo to Sue Linner  
ACT/007/012  
May 23, 1988

Recommendation

The location and soil sample representation is unclear. The Division suggest that the test plot soils be sampled again. Each sample point should be located on a test plot map. Each sample point must include a topsoil and coarse or fine slurry sample as defined by UMC 817.22 - (1) - JSL. Each sample should be clearly defined as topsoil, coarse refuse and fine refuse.

JL/as  
cc: L. Kunzler  
0534R/15-16



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April 18, 1988

TO: File

FROM: Lynn Kunzler, Reclamation Biologist *LK*

RE: Review of Kaiser Coal Corporation's 1987 Annual Report for the Wellington Preparation Plant, ACT/007/012, Folder #6, Carbon County, Utah

A cursory review of the above referenced report has revealed several inconsistencies and problems that need to be corrected, as discussed below.

The annual report includes precipitation data from the Price Warehouse Station. While this data may be correct, it is not representative of the precipitation at the Wellington Prep. Plant. As a result, in the vegetation monitoring report, incorrect assumptions are made that the site receives 10 to 12 inches annual precipitation vs. the 6 to 8 inches of annual precipitation as was established by U.S. Steel Corp. from on-site data.

Page 12 of the annual report shows a seedmix that is identified as "Final Reclamation - Seed Mix". This seed mix was approved on November 14, 1986 for temporary stabilization for the 1986 fall seeding only. This must be corrected in the annual report.

The vegetation monitoring section of the annual report describes two methodologies that were employed, namely a reconnaissance survey of each reclamation site (which included some quantitative sampling) and, quantitative sampling. Quantitative data was collected utilizing a 10-pin frame placed every 5 meters along a randomly located 50 meter transect. While this is an approved sampling procedure, it is inappropriate for this site. First, it greatly over-estimated the actual ground cover of vegetation as observed by DOGM personnel and would lead to false assumptions. I.e., The report text states that reclaimed areas are in poor condition, with vegetation sporadically distributed and plant vigor being marginal. However, the data indicates 25 -30% vegetation cover which would be considered good to excellent cover for the native salt desert plant communities. Which is correct? The data or the text?

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April 18, 1988

The major portion of the vegetation monitoring involved sampling of four vegetation testplots that were established in fall of 1984 (surface facilities testplot) and the fall of 1985 (coarse refuse, coarse slurry, and fine slurry testplots). These testplots were established to determine reclamation feasibility as required by UMC 786.19(b), and are an integral part of the approved permit.

The three testplots established in 1985 were irrigated during the 1987 season. However, the irrigation discussion in the report is nothing more than a copy of the 1986 irrigation report, including the downtime due to a water main break. As per the approved plan, irrigation was to be different the second year with a tapering off of the frequency that water was to be applied (hardening of the plants to water dependancy that is usually associated with irrigation). The 1987 irrigation report must be submitted.

Sampling of the testplots was not in accordance with the approved plan. Not all treatments were sampled. Of the data collected, it is impossible to determine what treatment it was collected from. Data was collected utilizing a different methodology (pin frame vs. quadrat) which makes it nearly impossible to draw correct conclusions about the data. Testplots were combined as a 'treatment' (coarse slurry and fine slurry testplots) rather than seperately, representing two different reclamation situations that exist on the site.

Sampling (monitoring) of the testplots as approved and implemented during the 1985 and 1986 seasons, involved sampling of vegetation cover by estimating the % ground cover within randomly located 1 - meter<sup>2</sup> quadrats. A minimum of 5 quadrats per each treatment were utilized. While this may or may not be a statistically adequate sample (the 1985 data collection met sample adequacy with as few as 7 samples per treatment), it was determined to be of sufficient size to adequately determine the mean cover (additional samples would refine the standard deviation).

Ideally, the same individual would conduct the sampling each year, thus reducing sampler bias and increasing the probability of correct assumptions as data is compared from year to year. While this cannot be mandated, the importance of sample consistency was discussed in the 1986 Annual report, which concludes, "while the data collected are relatively precise within a given year, they may not be accurately comparable between years due to observer bias. Utilizing the same methodology, however, yeilds a more comparable cover estimate than by utilizing a different sampling methodology".

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April 18, 1988

The identification of some species is in question. For example, the data from the slurry testplots shows that crested wheatgrass (Agropyron cristatum) is an important species on the testplots. However, this species was not seeded nor was it identified (found) in previous sampling or in the topsoil borrow area for the testplots. Has the testplots been contaminated, and if so, from what source? If this species was incorrectly identified, how many other species were also mis-identified?

As discussed above, this is a major departure from the approved plan. By failing to follow the approved plan, it may be impossible to make a determination of reclamation feasibility as required by UMC 786.19(b) at the time of permit renewal, thus requiring additional time or testplots before any additional disturbance could be allowed at the site.

cc: S. Linner  
1414R/18-20