

January 20, 1987

Revised 1/22/87

TO: File

FROM: Kathryn M. Mutz, Reclamation Biologist *KMM*

RE: Justification for Information Requests Made to Plateau Star Point Mines in Reply to Response to Deficiency Review ACT/007/006, Folder #2.

UMC 783.19 Vegetation Information (KMM)

1. The attempt to address deficiency comment (a)(i) without correlating Tables 15, 16 and 17 as requested, but by lumping categories in Table 16, has confused the issue more.

Revised Table 16 indicates that the numbers do not include the Gentry Mountain disturbance. Before the figure was revised by "lumping vegetation types" the figures did include the exact acreages of the Gentry Mountain area. While the acreages are not large (less than 50 acres) the discrepancies should be corrected.

It is still not clear from the deficiency response how sampling can be done (Table 17) in vegetation types which are not in the permit area (Table 15). Table 15 should be annotated to indicate which permit area vegetation types (designations on Table 15) include which "disturbance types" (designations on Tables 16 and 17). The Division recognizes that all types may not match perfectly because of the different personnel involved.

Revised Table 16 does not include all "scheduled to be disturbed" types as indicated on page 783-68A since the Gentry Mountain types were removed (see pages 783-70A and 73A). Please correct this.

Please add the note to Table 17 as proposed on p. 28.

The last paragraph of revised page 783-68A should be revised to reference the appropriate 1:4800 scale map, i.e., "disturbed by prior mining activity" - Map 34; "proposed to be disturbed" - Maps 35 and 36; "location of reference areas" - Maps 34 and 36.

2. Map 34, Sheet 6, still needs to be revised to designate "Subsoil Stockpile - Pinyon Juniper Reference Area" including east and west aspects and to delete the abandoned P-J Reference Area.

Correct reference to "Map 33" on page 783-141. It should be "Maps 34 and 36". Please include on page 783-141 the indication that all reference areas were marked with steel posts or indicate where else in the MRP it can be found.

3. The saga of woody plant density standards presented in the response (p. 34-41) described the problem as requested. Since this description was not a "page substitution", please revise page 784-53, last paragraph, to indicate that using reference areas "as the basic means of determining revegetation success" refers only to cover and production and that the 2200/900 standard will be used for woody density except at Corner Canyon where the reference area will be the standard. The saga appears to indicate that the Mudwater Canyon site must meet the 2200/900 standard since the note on revised Table 70 deals only with the cover success standard. If this is not the case, please clarify. Please include the saga in an exhibit so that future reviewers will not ask the same questions.

Please specify on or about page 784-53 that the 2200/900 density standard refers to 'shrubs per acre' not to 'stems per acre' in the sense used for 1981 data collection (p. 783-75A). While the Division rules refer to 'stems per acre', they count only one stem per plant which is comparable to 'shrubs per acre' used for 1982 sampling (p. 783-77A)

UMC 784.13 Reclamation Plan: General Requirements (KMM)

1. The Division is not ignoring permits and approvals previously issued by requesting justification for introduced species in seed mixes. The permit renewal document must "stand alone" providing all the data and analysis necessary, according to the regulations, to grant the approval. Since the Star Point Mines permit has been a complicated exchange of written and verbal communication over several years and many people, it is essential that the renewal permit clearly provide the basis for the operations and reclamation plans. In this case the request is for introduced species justification, required by UMC 817.112, which was presumably supplied (in writing or verbally) when the approvals of introduced species were made.

Use of introduced species is permitted on a case by case basis depending on the seeding location, land use and other components of the mix. That the species was allowed in some other mix or for test plot purposes is not adequate justification. The specific reasons for its 'desireability' must be stated in each case. Please note, the Division sees no problem with use of small amounts of introduced species as proposed in Tables 70 - 73, but the justification for their use must be provided in the MRP.

Please revise Table 71 to correspond to page 784-47, as requested, i.e. include Desert wheatgrass in the table.

Deep root growth and vigorous growth are certainly important qualifications for topsoil stockpile species although perhaps no more important here than for protection of the thin layer of topsoil of reclaimed areas. Native species with these characteristics should be considered including Great Basin wildry (instead of Russian

wildrye), and Thickspike, Slender and Streambank wheatgrasses. Since "All species proposed for permanent reclamation have been documented in site specific monitoring and applicable scientific literature as being adapted to the variety of slope aspect and soil conditions encountered at this site" (response p. 50) it would seem that a mixture of some of these natives and introduced species could be found that would perform on the relatively benign site conditions of the topsoil pile.

2. Response pages 57-59 indicate that a summary of the revegetation plan is not necessary because all the information requested is currently provided in the MRP (PAP). The reclamation plan is not clear, however, and requires a summary because (1) reclamation seed mixtures correspond to 'facilities areas' rather than vegetation types (see p. 784-41), (2) success criteria do not correspond directly to reference areas and (3) different 'facilities areas' have been mapped and described in other documents over the years but are not delineated in the permit renewal document either on Map 44 or Table 67. For example, where does the Unit Train Loadout (seed mix 71) end and the conveyor (seed mix 73) begin? What current map or table indicates the location of the Lion Deck portal area (seed mix 72) or where its access road begins and ends (seed mix 73)?
3. Test plots are not located on Map 33 as stated (response p. 59). Map 34 contains labels but incomplete locations of test plots. Please revise Map 34 and reference it in the reclamation section of the MRP.

The Division is not interested in another four inch binder submission on test plots. It is, however, important to include in the MRP a summary sheet of what test plot programs are completed, in progress or planned for the future since they will determine depth of reclamation topsoil, have some influence on final seed mixes and indicate whether or not wildlife mitigation projects are successful. A one page summary sheet should be sufficient to address this issue in a concise manner. References to specific annual reports can be substituted for exhibits requested (item #8).

4. The revised proposal (response p. 56) to delete the use of organic mulch on areas that are drill seeded is acceptable to the Division as the general procedure. As indicated in Exhibit 40, soil "mulch" can be the most important mulch. Organic mulch cannot be deleted on flat areas if these areas are not drilled. In addition the Division may require mulch on a case by case basis if problem areas are evident or if revegetation projects completed over the next permit terms indicate problems. Incorporation of organic mulch into the surface soil may also be required on a case by case basis if soil analysis indicate that organic matter would be beneficial.
5. The MRP does not adequately address timing of revegetation. PMC has committed to seeding after topsoiling but must commit to seeding and planting in the first normal period for these activities, i.e. late fall or early spring (UMC 817.113). A contingency plan should be included for erosion control measures if backfilling and graded is not completed at a time convenient to proper seeding.

6. The MRP includes contradictory statements about drilling versus broadcast seeding rates. Revised language for page 784-41 indicates that the table values are for drill seeding (Response p. 53). MRP p. 784-40 indicates the opposite. Please clarify or modify the seeding rates with an end result of drill seeding 50-80 or broadcasting 100-150 seeds per square foot of grasses and forbs (i.e. do not include the shrub seeds in this figure).