STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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March 31, 1987

Mr. Robert Steele
Thomas J. Peck & Sons
1055 North 400 East
Nephi, Utah 84043

Dear Mr. Steele:

Review of Mining and Reclamation Plan, Nephi Gypsum Mine, M/023/011, Juab County, Utah

Thank you again for meeting with us onsite at your gypsum quarry on March 11, 1987. After meeting with you, we have reviewed the Mining and Reclamation Plan that you submitted, along with the additional maps and cross sections which you provided. We concur with your request for a variance on the highwall and slopes in the quarry area, and with your plan of planting seed in the mined out area as the mine bench is lowered. We will, however, require more information on reclamation of the roads and stockpile area before we can grant permit approval.

The following review comments and recommendations identify the specific areas where additional information is required before the permitting process can continue. Each comment is referenced back to the page and question number of your original application. The rule number in parentheses references the section of the Mined Land Reclamation Act Rules addressed by each question. I have enclosed a copy of your original application and a blank MR-1 form for your use.

Page 1, Item 5 (Rule M-3(1)(b))

Nephi City should be listed as a land owner since they own a portion of the property that is being used for roads and stockpiling.

Page 4, Item 14 (Rule M-3(1)(a))

According to the maps submitted, the stockpiles and roads cover approximately seven acres, and the area to be quarried covers approximately five acres. If this is correct, these acreages should be used rather than the figure of one-half acre per year.

Page 4, Item 15 (Rule M-3(3))

A description of the dust suppression system should be included in the narrative.

Page 5, Item 19 (Rule M-3(2)(b))

It is recommended that wildlife be shown as a future land use.

Page 6, Item 20 (Rule M-10(12))

Part 2

The gypsum outcrop probably didn't have much vegetative cover prior to mining, but it appears that the road and stockpile area did. Therefore, a reliable measurement of the percent vegetative cover on the adjacent area needs to be made, e.g., 20% vegetative cover. This information is needed as a guide because you will need to obtain 70% of the original ground cover on disturbed areas (except for the highwall) in order to obtain bond release after reclamation.

Part 3

The major vegetation species on the adjacent areas need to be listed, e.g., bluebunch wheatgrass, big sagebrush, serviceberry, rabbitbrush, etc.

Page 6, Item 21 (Rule M-3(2)(c))

A. The pH of the topsoil on the side areas has to be determined. The Soil Conservation Service or other sources can do this.

C. The steep road areas and the material stockpile area need to be revegetated at the completion of the mining operation. A description of how you will accomplish these items should be included in this plan.

There is sufficient topsoil material on the steep road areas to revegetate that area satisfactorily. On the more level area, (where the stockpiles of material are stored) a suitable soil material of approximately two feet in depth needs to be planned for so that the required vegetation can grow.

If this type of material isn't available under the stockpiles, we recommend that a borrow source of suitable soil material be located so that the material can be hauled in.

Pages 8 & 9, Item 23 (Rule M-3(2)(d))

C. The methods of spreading the topsoil, or upper horizon material, should be stated for the roads and the stockpile area.

1. It is recommended that approximately two feet of suitable soil material be placed on the areas to be reclaimed.

3. It is recommended that 300 lbs/acre of 18-48-0 commercial fertilizer be put on the area at the time of seeding.

5. We will require a commitment to either remove the stockpile of old gypsum fines from the property, or to reclaim them. If reclaimed, we will require that the pile be regraded to a rounded configuration with slopes not exceeding 2:1 ratio (H:V). A suitable soil material should be placed on top (two feet of soil cover is recommended).

D. In addition to scarifying and seeding, it is recommended that water bars be constructed on all mine roads to minimize erosion. Water bar spacing should conform to the following guidelines:

Road Slope (percent)	Water Bar Spacing (feet)
5-10	250
10-15	175
15-20	150
20-25	125

Page 9, Item 24 (Rule M-10(7))

Upon completion of mining activities, it is recommended that a stormwater/debris catch basin be constructed at the base of the mined slope. Design details for the basin should be determined at the time of reclamation when the final configuration of the minesite is known.

Page 9, Item 25 (Rule M-3(2)(e))

E. Revegetation information is required. The following revegetation plan is recommended:

1. Species to be seeded

Bluebunch Wheatgrass	5 lbs/acre
Intermediate Wheatgrass	5 lbs/acre
Smoothbrome Grass	5 lbs/acre
Bitterbrush	5 lbs/acre
Four-wing Saltbush	5 lbs/acre

2. Rate of seed application - 25 lbs/acre.

3. Season to be planted - Fall.

4. Seedbed preparation - ripping with tractor.

5. Method of application - hand broadcasting and covering seed approximately 1/2" deep by harrowing, dragging, or raking.

6. Fertilizer - 300 lbs/acre - Diammonium Phosphate, 18-48-0.

Page 11, Item 28 (Rule M-10(4) and M-10(5))

A variance for highwalls and slopes in the quarry area will be granted if the operator commits to reducing the slope angle if the 65° slope proves to be unstable.

Page 11, Item 28 (Rule m-10(7))

You have indicated that a portion of the access road on the east side of the site is not to be reclaimed. This variance should be requested and written justification provided.

If possible, please provide a response to the comments outlined above by May 1, 1987. Thank you for your cooperation in this permitting matter. Should you have any questions, please contact me, Dave Wham (Hydrologist), or Frank Jensen (Soils Specialist).

Sincerely,

Frank Filas
Reclamation Engineer

clj
Enclosure
cc: L. Braxton
D. Wham
F. Jensen
1115R/40-43