State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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June 18, 1999

Ronald Bosshardt
Redmond Minerals, Inc.
6005 North 100 West
Redmond, Utah 84652

Re: Review of Response to DOGM's Initial Review, Notice of Intention to Commence Large Mining Operations, Redmond Minerals, Inc., South RCR Salt Mine, M/039/002, Sevier County, Utah

Dear Mr. Bosshardt:

The Division has completed its review of your February 19, 1999 response to our initial completeness review of your revised Notice of Intention to Commence Large Mining Operations for the South RCR Salt mine, located in Sevier County, Utah. After reviewing the information, the Division has a few technical comments which will need to be addressed before tentative approval may be granted. Our comments are listed below under the applicable Minerals Rule heading. Please format your response in a similar fashion.

We will suspend further review of the South RCR Salt Mine permit application until your response to this letter is received. If you have any questions regarding this review document, please contact me, Tony Gallegos, Lynn Kunzler, or Tom Munson of the Minerals Staff. If you wish to arrange a meeting to sit down and discuss this review, please contact us at your earliest convenience. Thank you for your patience and continued cooperation in completing this permitting action.

Sincerely,

D. Wayne Hedberg

D. Wayne Hedberg
Permit Supervisor
Minerals Regulatory Program

jb
Attachment: Review
cc: Arjun Ram, Consultant
Rhett M. Roberts, President-Redmond Minerals
M39_02.rvw

REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

Redmond Minerals, Incorporated
South RCR Salt Mine
M/039/002

R647-4-105 - Maps, Drawings & Photographs

105.3 Drawings or Cross Sections (slopes, roads, pads, etc.)
These requested items were not included in Redmond's latest response letter. Cross sections provided for SM-1 & 2 were ideal, not actual sections. (DJ)

Please provide cross sectional drawings for the overburden piles/dumps and waste piles/dumps which are included in variance requests. Please provide two cross sections through each pit included in a variance request (revegetation and highwall). Pit cross sections should run perpendicular to each other through the long and short axis of the pit.

Please provide cross sectional drawings of waste dumps to be reclaimed which show the dump configuration during operations and after reclamation. Please include a written description of the reclaimed slope configuration for these dumps in the appropriate section of the text.

Please provide typical cross sectional drawings of the dirt roads which are proposed to remain for post mining use. Provide one cross section for a road on gentle terrain and one cross section for a road on steep terrain.

Please show the location of all cross sections on the surface facilities (Mine Features) map or provide another index map showing these locations. (AAG)

R647-4-106 - Operation Plan

106.3 Estimated acreages disturbed, reclaimed, annually.
Acreages totaled from the Treatments Map give a total of 72.15 acres. In section 110.2 the total acreage is noted as 72.25, please clarify which is the correct figure.

106.5 Description of existing soil types, location, amount
The soil analysis was provided. A review of the results show that the soils are saline-sodic which can cause problems for reclamation. Samples CM1 and NM1 are highly saline and sodic and should not be used as topsoil (if possible use this material to backfill areas with). To remedy the saline-sodic problems with the other samples, it is recommended that the soils be leached with good quality irrigation water after they have been respread. A minimum of 5 tons/acre of composted manure should then be applied and the site ripped and left in a rough condition for seeding. (LK)

Existing soils must be harvested and stockpiled from the areas of future disturbance and waste placement, before this mining activity begins. The harvested soils should be placed in designated

stockpiles to preserve the quality and quantity. Use of soil for berms is not an acceptable utilization of this product. (DJ)

R647-4-109 - Impact Assessment

109.4 Slope stability, erosion control, air quality, safety
Please describe the anticipated surface and subsurface impacts due to the underground salt mining operations. Please describe measures to mitigate these impacts or explain why mitigation is unnecessary. The Redmond response does not address or mention subsidence, with active underground workings this could be a problem in the future. (AAG)

R647-4-110 - Reclamation Plan

110.2 Roads, highwalls, slopes, drainages, pits, etc., reclaimed
Please explain the post-mine use of roads included in the variance request. Roads that appear to terminate at the proposed reclaimed areas do not appear to have a use. (DJ)

Page 27 of the LMO states existing stockpiled topsoil will be mixed with fertilizer and spread where soil was stripped and the area disced & seeded. This same page states that other disturbed areas with existing topsoil will be ripped, fertilized as necessary and seeded. Please identify which areas will receive which of these reclamation treatments on the Treatments Map and provide the respective acreages. (AAG)

110.4 Description or treatment/disposition of deleterious or acid forming material
Please describe the proposed reclamation treatments for the salt waste areas immediately north of the salt mill. (AAG)

R647-4-111 - Reclamation Practices

111.2 Reclamation of natural channels
There does not appear to be any natural channels included in the current mine site, but it does appear that there is an ephemeral channel to the North of the site. When the site is reclaimed, what will be the final direction of the overland surface water flow? The plan states that all surface drainage flows in the direction of the pits. Please provide a better explanation and map showing direction of flow in regards to overland surface flow in all areas of disturbance. (TM)

111.9 Dams & impoundments left self draining & stable
The pits will become impoundments upon closure of the mine site. Please describe why these structures would not become a public health and safety concern, or present an environmental concern (i.e., water quality contamination concerns?) upon closure of mining operations. Do these pits hold

water presently and are they pumped out to allow mining to take place? Are the "pre-law" brine ponds being used and do they presently hold brine water? (TM)

R647-4-112 - Variance

A variance was requested from Rule R647-4-111.13: Revegetation, for facilities and roads that are proposed to be retained for post mining land use. *Assuming that the additional clarification we have requested above regarding these items is sufficient to approve the proposed post mining land use, a variance from revegetation of these areas would not be necessary.*

A variance was requested from Rule R647-4-111.13: Revegetation, for the clay pits and clay hills as shown on the Reclamation Treatments Map. At this time, it appears that the *clay hills are not within the proposed area for mining. If they are not disturbed, a variance for revegetation is not needed.* If they will be mined, it needs to be made clear in the plan and maps that they will be mined. From the photos of these areas provided, the Division agrees that current vegetation is sparse. A revegetation standard for these areas would be 70% of the premining vegetation cover. It can be assumed that the current clay pits may also have been sparsely vegetated prior to mining. Again, the revegetation standard would reflect a lower cover value. The vegetation report indicated that the vegetation cover on these areas was probably about 5%. At this time, the Division would prefer to see these areas seeded and work with Redmond in developing an appropriate standard that would be less than the proposed 30% revegetation standard for these areas.

Page 22 of the LMO form states the two brine ponds near the north end of the mine will be left in place and are considered "grandfathered" by Redmond. *These ponds will need to be included in a variance request formatted according to this section.* (AAG)

The Treatments Map shows the "Variance" border around several clay hills. These clay hills were not included as disturbed areas on the Mine Features Map. Please explain the reason for including these features as variance areas. If a variance is being requested for these features please provide a variance request for them which is formatted according to this section. (AAG)

Variance Request R647-4-111.7 -Highwalls

Salt Mines

The current pre-law highwalls at the North and South Salt Mines are hereby granted a variance from meeting the 45 degree highwall stabilization requirement. Please indicate the specific location of these highwalls on the Reclamation Treatments Map. This variance does not relieve Redmond from the requirement of taking adequate measures to protect the public from these highwall hazards during active mining operations, and as part of final reclamation. Additional excavation, or extension of the current highwalls are not automatically included in the variance granted. Future highwall modifications will be subject to additional review by the Division. (AAG)

Clay Mines

It is unclear whether Redmond is requesting a variance for all clay mine highwalls, or selected portions of clay mine highwalls. Please clarify the variance request for clay mines and indicate the specific location of these highwalls on the Reclamation Treatments Map. (AAG)

R647-4-113 - Surety

The general methodology used in the reclamation surety estimate is acceptable to the Division; however, no information was provided to support the quantities for each line item. Please provide information to support the quantities used in this estimate. For example, please provide the basis for 20,000 CF of building demolition, 13,068 CY of slope regrading, 500 LF of safety berms, etc. Please explain why a line item was not included for closure of underground openings. The information requested in this review is needed before the Division can evaluate the reclamation estimate. (AAG)

R647-4-115 - Confidential Information

Page 23 of the LMO indicated confidential information was enclosed with this submission. No information was specifically labeled or identified as confidential in the information received by the Division. Please note that only information relating to the location, size, or nature and extent of the deposit may be protected as confidential by the Division. Please clarify which information was intended as confidential & provide this confidential information in a format which allows for separate filing. (AAG)