M/047/0103
cc: Leslie

REDleaf
RESOURCES, INC.

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Div. of Oil, Gas & Mining

November 28, 2011

Via Hand Delivery and Electronic Mail (danadean@utah.gov)

Ms. Dana Dean, P.E.
Associate Director Mining
Division of Oil Gas and Mining
1594 West North Temple
Suite 1210
PO Box 145801
Salt Lake, City, Utah 84114-5001

Re: Comments of Red Leaf Resources, Application for Large Mining Operations, M/47/0103

Dear Ms. Dean,

Red Leaf Resources, Inc. ("**RLR**") submits this letter in support of the Large Mining Application for the Southwest #1 Facility ("**NOI**") as conditionally approved on October 20, 2011by the Utah Division of Oil Gas and Mining ("**DOGM**" or "**Division**").

RLR understands, per the DOGM letter granting conditional approval of the NOI, that NOI approval is conditioned on either the receipt of a letter from the Utah Division of Water Quality ("**DWQ**") stating that RLR does not need a groundwater discharge permit *or* DWQ's issuance of the appropriate permits. Subsequent to submitting its NOI application, RLR met with DWQ to determine the need for a groundwater discharge permit. The Southwest #1 facility is designed as a zero-discharge operation. Therefore, as stated in the NOI application, RLR did not expect that a groundwater permit would be required. However, by letter dated October 6, 2011, DWQ requested RLR to apply for a groundwater discharge permit for the Southwest #1 facility. RLR is now preparing applications for both groundwater discharge and construction permits for submission to DWQ in early December, 2011. These permit applications should not be taken as a change to RLR's expectation of zero discharge to groundwater resources in the area. If the groundwater permit requires discharge limitations, RLR will so advise DOGM.

Further, RLR notes that DWQ's requirement for a permit does not indicate that the State disagrees with RLR's projection that the facility will be zero-discharge with respect to groundwater resources. DWQ routinely requires permitting of other mining operations (such as heap-leach pads) that are designed and operated without discharges. The EcoShale™ In-Capsule process renders improbable the discharge of pollutants into groundwater. The purpose of the groundwater permit is to assure that RLR's proposed operation and containment measures function as designed.

In its comments dated November 18, 2011, Western Resource Advocates ("**WRA**") alleges that Norwest has questioned the structural integrity of the EcoShale™ In-Capsule design. RLR believes that WRA's comment refers to the last bullet on page 6 of Norwest's Geotechnical Analysis

dated April 21, 2011, included as Attachment I to the NOI. The Norwest Analysis focused specifically on the stability of backing walls of the capsules. To provide context to the Norwest statement, the cited language was only one of six recommendations to strengthen the design of the capsules. Norwest recommended that the effects of retorting on the backing wall and BAS be evaluated thoroughly as capsule design continued. RLR considered Norwest's recommendations in the current design set forth in the NOI. As part of the design process, the RLR team has been very diligent and deliberate in investigating all issues of capsule integrity and potential impacts to every element of the capsule design. The findings of these investigations were integrated in the final design of the capsule as submitted to DOGM in RLR's NOI, dated September 1, 2011. This NOI addresses the issues raised in the Norwest Analysis dated April 21, 2011—4 months prior to RLR's final NOI. Additionally, the major elements of capsule design are addressed in the application to be filed with DWQ and will be further assured by RLR's proposed monitoring plan. RLR will advise DOGM should DWQ require additional monitoring of structural integrity beyond that discussed in the NOI as a condition of the groundwater permit. Moreover, RLR will adhere to all reclamation requirements and revegetation requirements as indicated in its NOI and reclamation contract.

RLR's Quality Assurance and Control ("**QA/QC**") plan specifies testing procedures for design and construction of the EcoShale™ In-Capsule Process. The QA/QC Plan includes testing procedures for determining the integrity of the installed Bentonite-Amended Soil ("**BAS**") layer to assure construction of the capsule shell at a hydraulic conductivity of 10^{-7} cm/sec , a commitment of the NOI. As stated in its application, the BAS layer will provide a seal such that the process capsule is "impermeable" and in compliance with RLR's NOI commitments, including its operation as a minor source for air emissions. *See* NOI, Appendix F, Emissions and Minor Source Qualification Statement. Submission of a QA/QC plan is also required as part of the DWQ groundwater application process.

RLR's NOI fulfills all of the requirements of the applicable DOGM rules and regulations. No substantive issues have been raised in public comment which would require a hearing under Utah Code Ann. § 40-8-13 or R-647-4-116.4. As such, RLR urges DOGM to issue a final decision approving the NOI on the terms and conditions set forth in its approval letter dated October 20, 2011, including obtaining a groundwater discharge permit if deemed necessary by DWQ.

Sincerely,

Laura S. Nelson

Dr. Laura Nelson
VP Energy and Environmental Development

cc: Denise Dragoo, Esq.
Robert Bayer, JBR Environmental Consultants