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State of Utah
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY

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SEP 27 1993
DIVISION OF
OIL, GAS & MINING

October 22, 1993

Mr. S.D. Lackey
Barneys Canyon Mine
8200 South 9600 West
P.O. Box 311
Bingham Canyon, UT 84006-0311

RE: Proposal for the Land Application of Sludge for Mine Reclamation

Dear Mr. Lackey:

Thank you for Barneys Canyon Mine's proposal to use biosolids for a reclamation demonstration project, received by this office October 5, 1993. The Division of Water Quality (DWQ) is certainly supportive of the beneficial use of a valuable by-product of wastewater treatment, as well as the improvement in water quality and the environment in general that can result from land reclamation.

This project is approved principally as proposed, subject to the following additional conditions:

1. Before land application begins, please submit biosolids analysis, on a dry-weight basis, for the following parameters:
   a. nitrogen: ammonia, nitrate + nitrite, and organic
   b. the geometric mean of the density of fecal coliform bacteria in seven grab samples of sludge, then from the same source as the sludge that will be land-applied, so that it is representative of the sludge that will be land-applied.
   Time?
2. Before land application begins, also submit
   a. the nitrogen demand of the crop that will be planted (overall, not necessarily for each species)
   b. an explanation of how one of the vector attraction reduction methods from 40 CFR 503.33(b)(1)-(10) will be met (for instance, if the volatile solids reduction is sufficient, then incorporation is not required)
   c. soil analysis for nitrate + nitrite. This analysis shall be performed on composite samples taken at one foot intervals to five feet deep. Each composite sample shall

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be composed of subsamples of the same depth from at least six different randomly chosen points within the study area. The analysis shall be repeated once a year for five years, following the initial (pre-application) analysis, and the results submitted to DWQ as soon as they are available. The initial soil analysis shall include a composite sample for each area which has received a different amount of fertilizer in the past. The subsequent analyses shall be performed on a composite sample for each area which receives a different treatment in the present project.

3. No additional fertilizer shall be applied to the areas that receive sludge.

4. The land application shall comply with all applicable portions of 503, such as site restrictions and management requirements.

If these conditions are met, this project is expected to have *de minimus* impact on ground water. Therefore, this project is permitted-by-rule and you are not required to apply for a ground water permit. However, facilities permitted-by-rule are subject to the requirement that any discharge shall not cause any ground water standards or class TDS limits to be exceeded.

We understand that the goal of reclamation is to achieve a permanent, diverse and self-sustaining vegetative cover, according to the reclamation rules administered by the Division of Oil, Gas and Mining (DOGM). Therefore, the success of land-application in this demonstration project will be assessed based on the achievement of the applicable reclamation performance standards as determined by DOGM, as well as compliance with water quality standards of the State.

EPA is currently the permitting authority for 503, but the State also has case-by-case approval authority for the land application of sludge (*Utah Administrative Code R317-3-9.9*). The sludge generator bears most of the responsibility for compliance with 503, including but not limited to applying for a 503 permit, record keeping and reporting to EPA.

Of course, we know that dealing with both State and Federal agencies and regulations regarding any issue can be confusing, time-consuming, duplicative or even contradictory. Therefore, DWQ and the EPA are working closely together in order to streamline the process and increase efficiency for all of us. Your sludge contact here at DWQ, Lisa Rogers, is coordinating with EPA for you, so that you needn't contact EPA directly (although you should feel free to call Bob Brobst, the EPA Region VIII Sludge Coordinator, or anyone else at EPA for technical or regulatory advice.) We have sent a copy of your proposal to Mr. Brobst. We have received his comments, which have been incorporated into this approval.

We expect that your proposed application rate does exceed the agronomic rate, and the data requested above will confirm that. It is required by 503 that EPA (as the permitting authority)

must agree to any application rate that exceeds the agronomic rate. Therefore, we have arranged for EPA approval to be expedited as soon as we receive the requested information from you.

We expect this project will prove successful in demonstrating a beneficial use of sludge, which will enable you to meet your reclamation goals while reducing the financial and environmental costs of topsoiling and fertilizing. If you have any questions or we may be of further assistance, please call Lisa Rogers of my staff, at 538-6146.

Sincerely,

Utah Water Quality Board

Don A. Ostler, P.E.
Executive Secretary

DAO:lr:st

cc: James Carter, Director, Utah Division of Oil, Gas & Mining
Bob Probst, EPA Region VIII
Melvin Muir, Salt Lake City/County Health Dept.
Kiran Bhayani, Manager, Design Evaluation Section, UDWQ
Larry Mize, Manager, Ground Water Protection section, UDWQ
Paul Krauth, Outreach Coordinator, UDWQ

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