



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

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JUN 13 1980

WMUR:JER  
Docket No. 40-8380  
SUA-1228, Amendment No. 5

Rocky Mountain Energy Company  
ATTN: Mr. H. R. Newmann  
Environmental Specialist  
4704 Harlan Street  
Denver, Colorado 80212

Gentlemen:

In accordance with your application dated March 31, 1980, and supplement dated May 30, 1980, and pursuant to Title 10, Code of Federal Regulations, Part 40, Condition No. 8 of Source Material License No. SUA-1228 is hereby amended to read as follows:

8. Authorized Place of Use:

Nine Mile Lake Area, Natrona County, Wyoming. For use in connection with research and development uranium solution mining and recovery operations in accordance with statements, representations, and conditions contained in the licensee's application dated March 19, 1976, and submitted in April 1976; Part II of supplement dated June 1976 and submitted by letter dated July 2, 1976, the application dated September 10, 1977, the revised amendment application dated February 1980 submitted with letter dated March 31, 1980, and application supplement dated May 30, 1980.

Notwithstanding the above, the following added conditions shall override any conflicting statements contained in the licensee's applications and supplements:

11. During normal operations, monitor wells shall be sampled every two (2) weeks and analyzed for pH, chloride, bicarbonate, uranium, vanadium, and conductivity with static water levels measured before each sample is taken. Every four weeks, these samples shall also be analyzed for radium-226, thorium-230, arsenic, and selenium. On a quarterly basis, the full suite of thirty-two water quality parameters tabulated on page 11 of the amendment request submitted on March 31, 1980, shall be determined on samples from each of the five monitor wells for Test Pattern #4.

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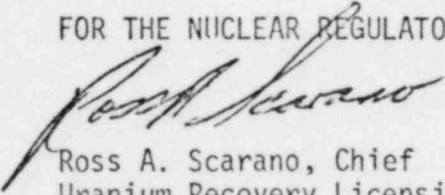
12. Pre-injection groundwater quality baseline in the Pattern #4 production zone shall be established following the procedure described in the February 1980 amendment request submitted March 31, 1980. Baseline values shall also be established for each of the four monitor wells outside the leach zone as well as the shallow monitor well committed by the licensee to be installed in the alluvium overlying the Lewis Shale following the same procedure except that for the five monitor wells, only those seven parameters used for excursion detection need be determined.
13. The upper control limits for detecting excursions shall be determined for each of the five monitoring wells by taking the average for each parameter (X), adding two standard deviations (S) then adding 10% of this total. The lower control limits will be determined by subtracting two standard deviations from the average of each parameter then subtracting 10% of the remainder or:  
$$\text{UCL} = 1.1(X + 2S)$$
$$\text{LCL} = 0.9(X - 2S)$$
14. Grab samples of yellowcake, yellowcake decant, yellowcake filtrate, reverse osmosis brine, and reverse osmosis product listed in table headed "Requested Sampling Summary" in the February 1980 Amendment Request shall be analyzed for radon-226 on at least a monthly basis.
15. The goal for restoring the groundwater quality in Pattern #4 will be the return of all parameters to pre-injection background levels. Criteria for groundwater restoration will be determined in accordance with Wyoming State requirements.

All other conditions shall remain the same.

These conditions have been discussed and agreed upon in a conversation between you and J. E. Rothfleisch of the NRC staff.

The overall effect of this amendment is to authorize the use of a carbonate/bicarbonate lixiviant in Test Pattern #4 as requested, subject to the conditions listed above.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Ross A. Scarano, Chief  
Uranium Recovery Licensing Branch  
Division of Waste Management