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URFO:RFB  
 Docket No. 40-8380  
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MEMORANDUM FOR: Docket File No. 40-8380

FROM: Randall F. Brich, Project Manager  
 Licensing Branch 1  
 Uranium Recovery Field Office, Region IV

SUBJECT: REVIEW OF ROCKY MOUNTAIN ENERGY COMPANY'S  
 QUARTERLY REPORTS FOR THE 9-MILE LAKE IN SITU  
 R&D SOLUTION MINE - RESTORATION/STABILIZATION PHASE

By letters dated October 26, 1983; February 7, 1984; May 7, 1984; July 31, 1984, October 31, 1984, February 4, 1985, and May 14, 1985, Rocky Mountain Energy Company (RMEC) submitted environmental monitoring reports for the third and fourth quarters of 1983; all four quarters of 1984; and the first quarter of 1985, respectively, in compliance with License Condition No. 36 (SUA-1228). This memorandum presents URFO staff review of this data with respect to past data and applicable standards. Process circuits were discontinued from use on February 1, 1982, and have remained inactive. Since February 1982, site activities have been limited to routine environmental monitoring and site maintenance.

Water Quality and Excursion Control

Ground-water sampling of Patterns 1 and 2 was discontinued during the third quarter of 1983. At that time, water quality analysis indicated that stabilization has been achieved in both patterns. WDEQ approved restoration adequacy of Patterns 1, 2 and 3, in August 1982. Pattern 4,

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inoperable since mid-1981, exhibited stabilized water quality for the major parameters, however, vanadium and selenium occurred slightly above baseline during the third quarter of 1983. During the fourth quarter of 1983, Pattern 4 showed a slight deterioration of overall water quality. Pattern 4 continued to exhibit deteriorating water quality through the first quarter of 1985.

The significance of this deterioration and its potential impact on the public health and safety and the environment has been discussed in detail in the recent Environmental Assessment (EA) dated May 28, 1985, and subsequent Final Finding of No Significant Impact (FONSI) dated May 29, 1985. The FONSI stated that baseline water quality was poor due to naturally high concentrations of total dissolved solids, sulfate, radium, cadmium, iron, lead, manganese, mercury and selenium. The EA conclusively stated that the R&D site operations did not and will not impair any existing ground-water users. The public will be notified of any potential hazards associated with ground-water contamination at this site via the Wyoming State Engineer's well permitting procedures. Thus, the potential for future users of this ground water is greatly minimized.

#### Personnel Safety Monitoring

Working level values, personnel gamma ray exposure rates, radionuclide air particulate values and contamination surveys were performed at the required frequencies, locations and sensitivities in accordance with License Condition Nos. 13 and 17. No significant upward trends were noted, and reported values were well below applicable limits.

#### Environmental Radiological Monitoring

Whole body gamma ray exposure rates, radionuclide air particulate and radon gas surveys were performed at the required frequencies, locations and sensitivities as required by License Condition No. 13. No significant upward trends were apparent based on my review of the data, and values were typical of background radiological concentrations.

#### Conclusion

Reported radiation exposure data were within applicable limits, and the facility is preparing to enter the decommissioning phase. The Final

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FONSI and accompanying EA state that the ground-water contamination poses no threat to the public health and safety. Therefore, no further action is warranted.

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Randall F. Brich, Project Manager  
Licensing Branch 1  
Uranium Recovery Field Office  
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Approved by:

Original Signed By  
Edward F. Hawkins

Edward F. Hawkins, Chief  
Licensing Branch 1  
Uranium Recovery Field Office, Region IV

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