



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION IV  
URANIUM RECOVERY FIELD OFFICE  
BOX 25325  
DENVER, COLORADO 80225

JUL 12 1991

URFO:DCW  
Docket No. 40-8102  
04008102940E

MEMORANDUM FOR: Docket File No. 40-8102  
FROM: Dana C. Ward, Project Manager  
SUBJECT: REDUCTION OF RESTRICTED AREA AROUND TAILINGS BASIN  
AMENDMENT NO. 38 TO SOURCE MATERIAL LICENSE SUA-1139

Introduction

By letter dated May 2, 1991, Exxon Coal and Mineral Company (Exxon) requested amendment to Source Material License SUA-1139 to reduce the size of the restricted area around the tailings basin. The Exxon facility is located near Glenrock, Wyoming adjacent to Power Resources' Highlands In-Situ Leach Operation. Exxon is conducting reclamation activities as directed by License Condition No. 40 of Source Material License SUA-1139.

Discussion

Exxon proposes to reduce the restricted area as depicted in Figure 1 of their May 2, 1991, submittal. Exxon's request is to reduce the restricted area, which formerly bounded all windblown tailings deposits, to an area that encompasses the tailings basin and some adjacent lands only. Exxon justifies this reduction with supporting data that indicates all windblown areas have been cleaned to meet the 5 pCi/g plus background standard. Exxon also references ground water data that indicates that concentrations for indicator radionuclides were within the 10 CFR Part 20 Appendix B Table II limits for unrestricted areas.

Exxon will use current fencing on the north and east sides and will construct new fencing on the south and west sides. All fencing will be posted with radioactive materials signs on 500 foot centers.

A review of the Radium-226 soil cleanup indicates that all areas were cleaned to or met the standards of Criterion 6 of Appendix A to 10 CFR 40. A background radium concentration of 0.7 pCi/g was determined, therefore, the

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cleanup standard of 5.7 pCi/g was utilized. Detailed gamma surveys and soil sample verification indicate that no areas exceed the 5.7 pCi/g averaged over 100 square meters. A complete discussion of Exxon's sampling methodology and results are presented as an Appendix to the amendment request.

Exxon's ground water compliance wells indicate that natural uranium, Thorium-230, Radium-226, and Radium-228 do not exceed the limits as specified in Table II of Appendix B of 10 CFR 20. However, data presented in Exxon's January 30, 1991, report on tailings seepage mitigation progress indicate that additional mitigation and study is warranted before any definite conclusions can be made as to the effectiveness of Exxon's corrective action program.


### Conclusion

The staff review of the licensee's proposal indicates that the proposed unrestricted area does not contain windblown tailings in excess of the standards contained in Criterion 6 of Appendix A to 10 CFR 40. However, the staff did note that the ground-water monitoring results are inconclusive. The licensee did demonstrate compliance with certain parameters as noted, but that the licensee's corrective action program has not yet been totally substantiated. Future ground-water reviews will more fully verify this compliance.

The staff concludes that the reduction in the restricted area will not affect the ground-water compliance program since compliance must be achieved even in the unlikelyhood that a contamination plume would migrate beyond any present or proposed restricted area boundary. A restricted area is defined as that area where access is controlled for protection of individuals from exposures to radiation. Exxon has demonstrated that the proposed unrestricted area currently meets all cleanup criterion, thus protecting all individuals from exposures to radiation, and that the new restricted area will be controlled and posted as required. The staff, therefore, recommends that Source Material License SUA-1139 be amended to reduce the restricted area from it's current extent to that which is depicted in the licensee's May 2, 1991, submittal. The staff also takes this opportunity to correct a typographical error by changing the incorrectly referenced submittal date of November 11, 1990, to November 21, 1990. These changes will be implemented by modifying License Condition No. 11 to read as follows:

11. For use in accordance with statements, representations, and conditions contained in the license amendment application submitted by cover letters dated November 10, 1989, November 21, 1990, April 19, and May 2, 1991, except where superseded by license conditions below. [Applicable Amendments: 10, 11, 14, 15, 16, 19, 20, 22, 28, 33, 36, 37, 38]

All other conditions of this license will remain the same. The license is being reissued to incorporate the revision described above.



Dana C. Ward  
Project Manager

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LFMB  
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