



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION IV  
URANIUM RECOVERY FIELD OFFICE  
BOX 26326  
DENVER, COLORADO 80226

FEB 01 1990

URFO: PJG  
Docket No. 40-3453  
04003453940E

MEMORANDUM FOR: Docket No. 40-3453  
FROM: Pete Garcia, Project Manager  
SUBJECT: AMENDMENT NO. 10 TO SOURCE MATERIAL LICENSE SUA-917 FOR THE MOAB MILL

Introduction

By letter dated July 19, 1989, Atlas Minerals submitted a proposed corrective action plan for reducing emissions of radon from the tailings pond at the Moab Mill. The proposal was submitted in response to a violation identified during an NRC inspection conducted on April 26-27, 1989. The violation concerned the release of radon to unrestricted areas in excess of the limits specified in 10 CFR 20.106.

Atlas consultant Canonic Environmental Services Corp. submitted a predictive analysis to model the effects of the proposed corrective action plan by letter dated August 16, 1989. On August 25, 1989, Atlas requested amendment of Source Material License SUA-917 to incorporate the proposed plan. The staff review of the proposed corrective action plan is discussed below.

Discussion

The primary sources of radon at the Moab Mill are ore stockpiles located at several locations within the site and exposed tailings within the tailings impoundment. Atlas' proposed plan addresses both the ore stockpiles and exposed tailings.

Atlas states that the initial step in the proposed plan involves recontouring all accessible areas of exposed tailings to achieve contours consistent with Atlas' reclamation plan. The ore stock piles will then be removed and placed

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as fill over the exposed tailings. This will result in a layer of about six inches of low-grade ore overlying the tailings. Following the placement of the low-grade ore, stockpiled soil which had previously been cleaned up as a result of contamination by windblown tailings will be placed over the ore layer. The contaminated soil will constitute a layer approximately 12 inches thick.

Placement of the ore stockpiles over the tailings serves three purposes. One, a layer of material with lower radium levels is placed over the tailings to provide attenuation of radon emanating from the tailings. Secondly, the number of sources for radon is reduced. Third, the ore stockpiles, which are generally located nearer the site boundaries, are moved into the centrally located tailings pile.

Atlas also proposes to continue the monthly radon monitoring frequency initiated in July 1989. Monthly monitoring and reporting will continue for at least two quarters (6 months) following completion of the correction actions. If the monitoring for the two quarters indicates that radon levels have been brought into compliance, Atlas proposes to reduce the frequency to quarterly as specified by the license for routine environmental radon monitoring. If radon levels have not been adequately reduced during the first quarter following completion of the corrective actions, soil will be removed from the mill area and placed over the fill to further reduce radon emanation.

Atlas has begun implementing the proposed corrective action as documented in a submittal dated December 11, 1989. Atlas indicates in the December 11 submittal that 81,500 cubic yards of ore and 41,400 cubic yards of windblown material have been placed on exposed and accessible tailings areas. In addition, Atlas stated that approximately 13,000 cubic yards of ore were dumped in small piles inside of the access road which defined the tailings area which was accessible. The ore will be pushed toward the center of the tailings pond as the solution level decreases to provide additional coverage of exposed tailings. Atlas estimates that this additional placement should be completed by about May 1990. A plan view of the completed work is shown on Figure 2 of the submittal.

#### Conclusion

The staff concludes that the program proposed by Atlas should be adequate to reduce emanation of radon from the site to levels below those specified in 10 CFR 20.106. In addition, the monitoring program to be implemented will provide verification that compliance has been achieved. The staff therefore recommends that Source Material License SUA-917 be amended to incorporate the proposed program for radon attenuation by adding Condition No. 54 to read as follows:

54. The licensee shall implement the program for radon attenuation specified in the submittal dated July 19, 1989.

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The issuance of this amendment was discussed via telecon with Mr. Richard Blubaugh of Atlas on January 23, 1990.

*Pete J. Garcia Jr.*

Pete J. Garcia  
Project Manager

Approved by:

  
Ramon E. Hall  
Director

Case Closed: 04003453940E

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