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Docket File 40-3453
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SEP 30 1982

WMUR: PJG
Docket No. 40-3453
04003453160E

MEMORANDUM FOR: Docket File No. 40-3453

FROM: Peter J. Garcia, Jr., Project Manager
Operating Facility Section II, WMUR

SUBJECT: AMENDMENT NO. 10 TO SUA-917, QUALITY ASSURANCE
PROGRAM FOR THE MOAB MILL

By letter dated April 28, 1982, Atlas Minerals submitted a response to an NRC information request dated March 22, 1982. The information request and response concerned Atlas' quality assurance program as presented in their report "Radiation Safety Procedures Manual for Atlas Minerals Uranium Mill, Moab, Utah." Four items requiring clarification or additional information were identified by the staff in a memorandum dated March 22, 1982. These items and the Atlas responses are discussed below. Amendment No. 10 will incorporate certain aspects of the quality assurance program into Source Material License SUA-917 for the Moab Mill.

Item 1 concerned the organization of the Radiation Safety Staff at the Moab Mill. The organization as presented in the Atlas procedures manual was not acceptable in that production-oriented positions are included in the Radiation Safety Staff. Atlas has provided a revised organization chart to U.S. NRC Region IV by letter dated December 11, 1981. The revised organization chart is acceptable. Atlas has requested by telecon that the specific organization chart not be incorporated into SUA-917 to allow flexibility. The staff therefore recommends that SUA-917 be amended to specify that the line of authority between the mill RSO and the individual onsite with the final responsibility for site operations not include any positions having production responsibilities.

Item 2 concerned the lack of documented minimum qualifications for the individual responsible for the radiation safety program. Atlas' response of April 28, 1982 contained a statement that the qualifications specified in draft Regulatory Guide "Information Relevant To Ensuring That Occupational Radiation Exposures At Uranium Mills Will Be As Low As Is Reasonably Achievable" would be used as "guidelines" for future personnel

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actions. This statement does not contain the necessary commitment regarding minimum qualifications. The staff therefore recommends that the following minimum qualifications for the position of Radiation Safety Officer (RSO) be incorporated into the Atlas license:

- (1) A bachelor's degree in the physical sciences, industrial hygiene or engineering from an accredited college or university, or equivalent relevant experience in uranium mill radiation protection. Two years of relevant experience shall be considered equivalent to one year of education.
- (2) At least one year of work experience in applied health physics or radiation protection.
- (3) At least four weeks of specialized training in health physics applicable to uranium milling followed by refresher training every two years.

Item 3 was a request for lower limits of detection (LLD) not provided in the procedures manual. The requested information was provided by Atlas as follows:

<u>Radionuclide</u>	<u>Sample Type</u>	<u>LLD</u>
U-nat	Air	0.6×10^{-16} $\mu\text{Ci/ml}$
U-nat	Water	4.0×10^{-10} $\mu\text{Ci/ml}$
Pb-210	Air	1.0×10^{-15} $\mu\text{Ci/ml}$
Pb-210	Water	5.0×10^{-10} $\mu\text{Ci/ml}$
Pb-210	Vegetation	1.0×10^{-9} $\mu\text{Ci/g}$
Ra-226	Vegetation	5.0×10^{-10} $\mu\text{Ci/g}$

All the LLDs provided are equal to or less than the values specified in Regulatory Guide 4.14 "Radiological Effluent and Environmental Monitoring At Uranium Mills" with two exceptions, U-nat in water and Ra-226 in vegetation. A review of the past environmental monitoring results for both sample analyses shows that the results have been approximately two orders of magnitude greater than Atlas' proposed LLD. Therefore, all the LLDs proposed by Atlas are acceptable and no further action is necessary regarding this item.

Item 4 requested a commitment for a periodic, formal ALARA audit. Atlas responded that the mill RSO prepares monthly reports which "essentially

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address all the items listed in Section 2.3.3 of the draft guidance document, "Information Relevant to Ensuring that Occupational Radiation Exposures at Uranium Mills Will be as Low as is Reasonably Achievable." Atlas has committed to monthly reviews of monitoring data and employee exposures in Section 5.5.3 of their revised Safety Analysis Report dated August 28, 1975, which has been included in SUA-917. Atlas also indicated that a formal, comprehensive annual audit would be implemented in early 1982. Specific information was not provided regarding the content of the annual audit. The staff recommends that the annual audit, as well as the contents of the audit, be incorporated into SUA-917 by requiring that an audit committee which includes the RSO perform a comprehensive annual audit of the mill radiation protection program and prepare a report documenting the audit. The audit report shall address all items listed in Section 2.3.3 of the draft Regulatory Guide and shall also summarize environmental monitoring data and discuss trends in the data.

Section 10.7 of Atlas' procedures manual contains commitments regarding (1) the percentage of samples analyzed by the mill environmental laboratory which are quality control samples (at least 5% and typically 10) and (2) participation in the EPA cross-check program or an equivalent program to provide independent outside verification of the accuracy of the analyses performed by the mill laboratory. The staff recommends that the commitments in Section 10.7 be incorporated into SUA-917.

Based on the above, the staff recommends that Source Material License SUA-917 be amended by adding Condition No. 54 to read as follows:

54. Notwithstanding any statements to the contrary in Section 5 of the licensee's revised Safety Analysis Report (SAR) dated August 28, 1975, the licensee shall comply with the following:
- (a) The line of authority between the Radiation Safety Coordinator (Mill RSO) and the individual onsite with the final responsibility for site operations shall not include any positions having production responsibilities. In addition, the responsibilities of the positions of Radiation Safety Supervisor and General Superintendent as specified in Section 5.5.3 of the licensee's revised SAR of August 28, 1975 shall be assumed by the Radiation Safety Coordinator (RSO) and the Regulatory Affairs Manager, respectively.

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- (b) The RSO shall be responsible for all aspects of the mill radiation safety program and shall have the following minimum qualifications:
- 1) A bachelor's degree in the physical sciences, industrial hygiene, or engineering from an accredited college or university, or equivalent relevant experience in uranium mill radiation protection. Two years of relevant experience shall be considered equivalent to one year of education.
 - 2) At least one year of work experience in applied health physics or radiation protection.
 - 3) At least four weeks of specialized training in health physics applicable to uranium milling, followed by refresher training every two years.
- (c) An audit committee which includes the RSO shall perform a comprehensive annual audit of the mill radiation protection program, and shall prepare a report documenting the audit for distribution to the President of Atlas Minerals and the Uranium Recovery Licensing Branch, USNRC. The audit report shall address all items listed in Section 2.3.3 of draft Regulatory Guide "Information Relevant to Ensuring That Occupational Radiation Exposures at Uranium Mills Will Be As Low As Is Reasonably Achievable" (Task OH-941-4 dated August 1980), and shall also summarize environmental monitoring data and discuss trends in the data.
- (d) The licensee shall implement the program specified in Section 10.7 of their report "Radiation Safety Procedures Manual for Atlas Minerals Uranium Mill, Moab, Utah," submitted by letter dated December 4, 1981.

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The above condition was discussed via telecon between Mr. R. Blubaugh, Atlas, and myself on September 16, 1982.

Original signed by

Peter J. Garcia, Jr., Project Manager
Operating Facility Section II
Uranium Recovery Licensing Branch

Original signed by

Approved by:

H. J. Pettengill, Section Leader
Operating Facility Section II
Uranium Recovery Licensing Branch

Case Completed: 04003453160E

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Revision #1

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NAME	: PJGarcia:mb:BPFisher	:	:HJPettengill:	:	:	:
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