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RICHARD E. BLUBAUGH
Vice President Environmental
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August 07, 1996

Joseph J. Holonich, Chief
Uranium Recovery Branch
Division of Waste Management
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Re: Source Material License No. SUA-917, Docket
No. 40-3453, Design of Radon/Infiltration Barrier

Dear Mr. Holonich:

This letter is in reply to your inquiry dated July 11, 1996, wherein you address the issue of the proposed radon barrier design serving as an infiltration barrier. While the issue of minimizing infiltration was not emphasized in the proposed design, it has always been an integral component in our plans for capping the pile. An infiltration analysis was performed as part of the design work associated with the modified reclamation plan submitted in 1988. The results of that analysis confirmed that infiltration would be minimal. However, we recognize that the design has been revised somewhat over the past few years and that an updated infiltration analysis will be needed. We are confident that the improvements made in the design will result in even less infiltration.

Atlas does not object to the Nuclear Regulatory Commission staff's decision to focus on the regulatory action related to on-site stabilization of the tailings without consideration of the groundwater cleanup concerns. Nevertheless, on the bases of the DEIS/DTER, our knowledge of the site-specific conditions, and the June 1996 meeting with the Utah Department of Environmental Quality, Atlas is proceeding with certain analyses necessary to preparation of an application for alternate concentration limits. This work is being performed in accordance with the NRC Staff Technical Position, *Alternate Concentration Limits for Title II, Uranium Mills*, January 1996.

As part of this work, Atlas will be evaluating a number of alternatives to the groundwater corrective action plan (GWCAP) previously approved by the NRC and currently being implemented by Atlas. As you indicated in your letter, it may be necessary to revise the

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GWCAP and that such a revision will likely incorporate alternate concentration limits (ACLs) for some constituents, as allowed under Criterion 5 of 10 CFR part 40, Appendix A. We will thoroughly evaluate infiltration barrier alternatives as part of this effort. All alternatives considered will be done so in conformance with the ALARA principle, that is, potential exposures of humans and wildlife to regulated contaminants will be *As Low As Reasonably Achievable*. Without question, the design permeability of the infiltration barrier will be verified through appropriate testing.

You referred to our response to open issue 17 of the DTER as not appearing to consider the full range of design alternatives for an infiltration barrier that will have to be considered when the GWCAP is revisited by your staff. We have no argument with your observation. Open issue 17 of the DTER simply asked Atlas to clarify whether we planned to take engineering credit for any disposal cell component with respect to meeting compliance with the groundwater protection standards for the site. Atlas believes its response was appropriate to the issue. We did not direct the engineer to consider the full range of design alternatives for an infiltration barrier for the purpose of responding to open issue 17.

However, it is important to reiterate here that our response does emphasize the decreased permeability of the Mancos shale material which is being designated as the infiltration barrier for the top of the pile. This material was determined to have a permeability of 1.7×10^{-7} cm/sec which is essentially the design standard for hazardous waste landfill liners and caps throughout the United States. Consequently, the clay barrier should be more than adequate for both radon suppression and infiltration reduction.

Your specific request is repeated below.

We therefore are requesting that Atlas provide the NRC with a description of what measures it has in place to ensure that any design changes to the tailings stabilization design that result from changes in the GWCAP or are needed for an ACL can be achieved. This is particularly important if on-site stabilization is found acceptable, and Atlas begins construction activities at the site.

Atlas Response

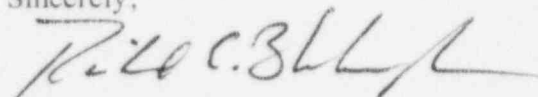
As stated above, Atlas is proceeding with the work necessary to prepare an ACL application. This will take a few months. Assuming the proposed on-site stabilization is found acceptable, the schedule for preparing bid documents, selecting contractors, mobilization, site prep, site grading, soils excavation, placement of soils, etc., will take approximately 12 - 15 months. If

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Atlas were to submit its ACL application, which will contain the required performance assessments of infiltration barrier alternatives, shortly after the NRC issues its decision to accept on-site stabilization, the NRC should have sufficient time to evaluate the design in light of infiltration barrier adequacy before the placement of the radon/infiltration barrier commences. Atlas would then have time to review any potential design changes and issue a change order to the contractor without having to delay the construction schedule. And, if absolutely necessary, Atlas would agree to delay the installation of the radon/infiltration barrier as long as necessary to ensure that the opportunity for including any potential design changes was not precluded. Atlas believes this administrative measure will ensure that potential changes in the GWCAP or that may be needed for an ACL can be achieved in the event the proposed on-site stabilization is found acceptable.

Atlas continues to believe the proposed design provides reasonable assurance that the applicable standards for tailings management and disposal will be satisfied over the specified longevity period of 200 - 1,000 years, and that human health and the environment will be protected with an ample margin of safety. I trust this reply meets with your approval. Please contact me at your convenience should you have any further questions with respect to this matter.

Sincerely,

A handwritten signature in dark ink, appearing to read "R. E. Blubaugh", with a stylized flourish at the end.

Richard E. Blubaugh

cc: Distribution List (attached)

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