

Return to URFO 467-55

40-3453

PDR



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December 2, 1982



Harry J. Pettengill, Section Chief
Licensing Section II
Uranium Recovery Field Office
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Source Material License No. SUA-917
Docket No. 40-3453

Dear Mr. Pettengill:

This is in response to your letter dated November 4, 1982 concerning the location for the background air particulate monitoring site.

We have carefully reviewed your comments regarding the site and are not quite sure what you believe a proper location should be. You state, "The location of Site No. 5 would seem to indicate that the town of Moab is affecting concentrations at the site. This is based on the fact that the site is located about half way between Moab and the Atlas Mill, and downwind of Moab." Yet you do not believe this site to be suitable as a background station, apparently because Ra-226 and Th-230 data indicates a greater variance at Site No. 5 than for Site No. 6, the current background location.

As you know, the terrain around the town of Moab, including the mill site, develops a deep basin with the Colorado River flowing through the bottom of it. I think you can agree that it would be difficult to select a site anywhere within this basin for a background determination without some influence from the town itself. And, as you state in your letter, indications are that the town of Moab is affecting concentrations at the site.

With this in mind, the objective of providing a representative sample of background ambient air particulates for the mill site, which is predominately downwind from the town, would seem to be met by a sampling station which is located between the town and the site. The factor of distance must be balanced between being close enough to be representative of the site-specific topography, geology and meteorology, and yet sufficiently removed to be negligibly impacted by the source (mill) itself. This, in our opinion, is also satisfied by Site No. 5.

The variations referenced in your letter with regard to Ra-226 and Th-230 concentrations are not unexpected when the levels being determined are

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on the order of 10^{-14} uCi/ml and the air flows within the basin are quite variable and complex. Even with the variability, the average Ra-226 concentrations for the twelve-month monitoring period are identical for both Site No. 5 and Site No. 6. Furthermore, the average Th-230 concentration is less at Site No. 5 than at Site No. 6.

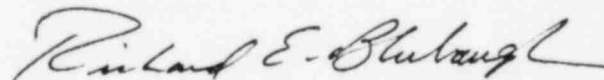
Therefore, based on available meteorological and analytical data, plus the nature of the local terrain, we maintain that Site No. 5 is a satisfactory background site, provided that the NRC's objective is to determine specific background radionuclide concentrations at a location representative of that of the source, yet not impacted by the source.

However, if the NRC's objective is to determine specific background radionuclide concentrations at a location which has no influence from man and is not representative of the source site, then Site No. 5 is not appropriate. And, in this case, the request does not seem appropriate since the background site would have to be located out of the valley. Data obtained from such a site could just as easily be obtained from published references on natural radiation and would be just about as meaningful, with very little correlation to site-specifics, i.e., air shed, geology, etc.

Again, it is our opinion that the risk associated with an insignificantly small variation in exposures which might result from the change, and considering the cost-effectiveness of the change, Atlas Minerals hereby proposes to eliminate Air Sampling Station No. 6 and substitute Air Sampling Station No. 5 as the background station.

If this is still not acceptable to you and the NRC, I propose that we be allowed to present our case to you personally, preferably at the mill or your Denver offices at a time convenient to you.

Yours very truly,



Richard E. Blubaugh
Regulatory Affairs Manager

REB:cf

cc: R. Weaver
M. Drozd
W. Jensen
D. Edwards