

August 28, 1986

MEMORANDUM TO:

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Re: Meeting at the U. S. Nuclear Regulatory Commission

On August 27, 1986, Dr. A. G. Naguib and the undersigned visited the offices of the N.R.C., Region I in King of Prussia, PA. A meeting was held with Dr. John E. Glenn, Chief of Nuclear Material Safety to discuss the regulatory aspects of Mineral Recovery, Inc. pending operations.

The general flowsheet of the plant and the radiometric data available were presented and the various options involving monazite handling were discussed. The following conclusions were reached:

1. The process involves only physical separations of the various minerals using gravity, size, electrical and magnetic separation methods. No chemical processing will be performed, and therefore, there is no cause of formation or release of other isotopes.
2. Mineral Recovery, Inc. would be operating a safe plant and would be in full compliance with NRC regulations as long as each of the feeds to the plant and the products emerging from the plant (concentrates and tailings) contain less than 500 ppm source material (Uranium or Thorium). Under these conditions, there are no licensing requirements to start the operation.
3. Intermediate streams within the process which may exceed the 500 ppm limit (if any) are being combined with other (low-level) streams, so that when they leave the "Black Box", i.e. the process plants, they are below that limit. This practice is acceptable to the NRC since it is a natural and integral part of the process, and since those intermediate streams are natural unprocessed materials.
4. The economic production of a monazite concentrate will be evaluated in the future. If it were proven that it is feasible to produce and market a monazite concentrate, the

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necessary licenses and other regulatory requirements will be addressed.

5. The licensing process usually takes about 65 days and it will be necessary to obtain the license before full scale production of monazite can begin.
6. Plant-scale, short-term testing to study the feasibility of monazite production is permissible without a license, provided that the produced and stockpiled concentrate does not contain more than 15 pounds of source material (Thorium) at any one time.
7. The NRC prefers and encourages the concentration and production of source material as a means of removing these materials from the environment and having it in a form that is easy to trace and regulate.
8. It was also recommended to keep an open line of communication between Mineral Recovery and NRC so that safety and compliance can be maintained at all times.

Max El Tawil

cc: Dr. A. G. Naguib
Ray Green
Earl Fisk
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