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RECORD #202

TITLE: Licensing Status of Titanium Bearing Ores and Waste
Products From Titanium Dioxide Manufacturing

FICHE:



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

NOV 2 1984

Guy V. Johnson, Esq.
Environment, Materials and
Logistics Division
E.I. du Pont de Nemours & Company
Wilmington, Delaware 19898

Dear Mr. Johnson:

In accord with the exchange of letters between yourself and Mr. Martin G. Malsch of the NRC, we have examined the question of exemption and licensing status for titanium bearing ores and waste products resulting from titanium dioxide manufacturing at your plant in Tennessee. Some ores (monazite and xenotime-rare earth ores) and some waste products (barium salts in scale in piping, and some process wastewater) contain thorium and uranium in excess of .05% by weight, but less than .25% by weight. You suggest that these materials are covered by 10 CFR 40.13(c)(1)(vi) and should, therefore, be exempt from licensing.

10 CFR 40.13(c)(1)(vi) provides an exemption for licensing for thorium contained in rare earth metals and compounds, mixtures, and products containing not more than 0.25% by weight of thorium, uranium, or any combination of thorium and uranium. As your memorandum notes, this exemption was promulgated in 1961 upon the petition of American Potash and Chemical Co. to restore a status quo ante. (American Potash was then processing rare earth ores for thorium and rare earths at its facility in West Chicago, Illinois. The facility was then, and is still under NRC license, presently undergoing decommissioning). Your memorandum correctly traced the exemption to Schedule I of 10 CFR 40.60.

Schedule I was first promulgated in 1947 (12 Fed. Reg. 1855, March 20, 1947) in conjunction with a provision requiring unlicensed persons in possession of 10 lbs of source material ore, or 1 lb of refined source material, to register with the Atomic Energy Commission. However, products listed in Schedule I were exempted. This history indicates that the exemption applies only to products, not to raw materials or process wastes. Further, the petitioner, American Potash and Chemical Company, always proceeded under license with respect to ores exceeding .05% by weight thorium, and the facility (now owned by Kerr-McGee Chemical Corp.) is still licensed for possession of source material in waste. Accordingly, in our opinion, the complete history of the provision does not support your position.

We emphasize the fact that in its totality only products are involved in the several exemptions in paragraph 40.13(c). Under the regulatory system of 10 CFR Part 40, unrefined and unprocessed ores are exempt without limit on quantity and quality pursuant to paragraph 40.13(b). If source material ore

has been refined or processed (see 10 CFR 40.4(k)) it is subject to licensing. 10 CFR 40.13(c)(9) states that paragraph 40.13(c) does not authorized manufacturing of any of the products listed in paragraph (c), reinforcing the historical view of the limited application of the exemption to products only, and not to raw materials and waste.

In 1982 we were asked the same question with respect to material possessed by Molybdenum Corporation of America. I enclose a memorandum written at that time that arrives at the same conclusion. As a matter of compatibility, we would expect the State of Tennessee to arrive at the same conclusion. If you have any further questions please feel free to call me at (301) 492-8692.

Sincerely yours,

Robert L. Fonner

Robert L. Fonner
Deputy Director
Regulations Division
Office of the Executive
Legal Director

Enclosure:
As stated

cc: M.G. Malsch, OGC
R. Page, ONMSS
R. Browning, ONMSS
~~V. Miller, ONMSS~~
R. Cunningham, ONMSS
W. Kerr, OSP