



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

Mr. Karl F. Meyers
Uranium King Corporation
P.O. Box 60261
Las Vegas, Nevada 89160

SUBJECT: CORRESPONDENCE REGARDING GRAVITY SEPARATOR AT RIO PUERCO MINE,
NEW MEXICO

Dear Mr. Myers:

I am responding to your letter dated February 5, 1997, where you raised two questions concerning the U.S. Nuclear Regulatory Commission's position on Uranium King's gravity separation process. In particular, the two questions dealt with are: 1) Which regulatory department will have jurisdiction in an operation of this style? and 2) Will Uranium King be permitted to use the residue from the gravity separation as backfill in the mine? The purpose of this letter is to respond to these questions. Before I respond to the questions I believe it would be beneficial to provide some background on NRC regulations and procedures.

The NRC's regulations, contained in Title 10 of the Code Of Federal Regulations Part 40 (10 CFR Part 40), establish procedures and criteria for the issuance of licenses to receive title to, receive, possess, use, transfer, or deliver source and byproduct materials, as defined in 10 CFR Part 40; and establish and provide for the terms and conditions upon which NRC will issue such licenses. These regulations also provide for the disposal of byproduct material and for the long-term care and custody of the byproduct material.

10 CFR Part 40.4 defines "source material" as:

"(1) Uranium or thorium, or any combination thereof, in any physical or chemical form or (2) ores which contain by weight one-twentieth of one percent (0.05%) or more of: (i) Uranium, (ii) thorium or (iii) any combination thereof";

and defines "byproduct material" as:

"Tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content, including discrete surface wastes resulting from uranium solution extraction processes. Underground ore bodies depleted by such solution extraction operations do not constitute 'byproduct material' within this definition."

Question #1 in your letter deals with NRC's licensing authority concerning the recovery of source material. NRC authority commences with the initial beneficiation (i.e. including processing) of the ore, and includes byproduct management and fuel fabrication. Assuming the ore treatment at the surface results in a product that contains over .05% uranium by weight, NRC's licensing authority would commence at Step 7 of your process. The beneficiation of the pumped slurry in the gravity separator removes the ore

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from the "unrefined and unprocessed" category (see 10 CFR Part 40.4) and therefore from the exemption in 10 CFR Part 40.13(b).

Question #2 is only relevant if NRC issues a source material license. In that case, the residue from the process would be byproduct material, as defined in 10 CFR Part 40. Designating the residue as byproduct material does not preclude its disposal as backfill in the mine. In this scenario, Uranium King would be required to demonstrate that this disposal method is in compliance with the applicable regulations in 10 CFR Part 40. Please contact Robert Tinsley of my staff at (301) 415-6251 if you have any additional questions.

Sincerely,

Charles L. Cain, Acting Chief
Uranium Recovery Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

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