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RECORD #184

TITLE: Licensing of Crushing of Uranium Ore Per 10 CFR 40.4(k)

FICHE:

0261/77



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
611 RYAN PLAZA DRIVE, SUITE 1000  
ARLINGTON, TEXAS 76011

July 13, 1977

*Copies faxed  
to Gen Roy, IE:HQ  
& G.D. Brown, NMSS  
7/13/77  
Verified received  
1:35 G. Roy  
1:40 G.D. Brown*

MEMORANDUM FOR: Gen W. Roy, Acting Director, Fuel Facility and Material Safety Inspection, IE:HQ  
FROM: Glen D. Brown, Chief, Fuel Facility and Material Safety Branch, RIV  
SUBJECT: CLARIFICATION OF 10 CFR 40.4(k) "DEFINITION"

Atlas Minerals, Moab, Utah, possesses a NRC license for the milling of uranium ore. During an inspection in June, we cited the licensee as follows:

10 CFR 20.207(a) states that licensed material stored in an unrestricted area shall be secured from unauthorized removal from the place of storage.

Contrary to the above, crushed ore was observed by the inspector to be outside the fenced restricted area and unsecured in two areas: the facility parking lot, and the area adjacent to the ore stockpile along Highway 160.

The licensee contends that the crushed ore (run through the crusher at mill) is not licensed material pursuant to 10 CFR 40.13(b), "Unimportant quantities of source material," since it is unrefined and unprocessed ore as defined by 10 CFR 40.4. The licensee contends that grinding, in the milling industry, is part of the milling process, whereas, crushing is not. Therefore, their position is that the citation is not legally valid.

We need a general counsel ruling, in writing, as to whether or not the crushed ore is unrefined ore or ore that is licensable.

The licensee also stated that ore sampling stations crushed ore and were not licensed and cited one other company near Hanksville, Utah, i.e., Energy Fuel, which crushed ore and had no license.

*Glen D. Brown*  
Glen D. Brown, Chief  
Fuel Facility and Material  
Safety Branch

cc:  
W. T. Crow, NMSS

March 1, 1977

*Handwritten signature: R. Scarrow*

NOTE TO G. WAYNE KERR

Your memo of January 24, 1977 asked whether crushing and sorting operations on uranium ore, which may take place at a mine site or at an ore loading station, would be subject to licensing by NRC in a non-Agreement state. We understand from your memo that Colorado, an Agreement state, would probably follow NRC guidance in developing its own position.

10 CFR 40.13(b) exempts from licensing unrefined and unprocessed ore (excepting export). 10 CFR 40.4(k) defines "unrefined and unprocessed ore" as ore in its natural form prior to any processing, such as grinding, roasting or beneficiating, or refining. "Processing" in this definition includes both physical and chemical procedures that alter the ore from the condition it was in just after removal from its place of deposit in nature.

It is an accepted interpretation of Atomic Energy Act of 1954, as amended, that Section 52 does not authorize the regulation of uranium mining by licensing. <sup>1/</sup> However, the Act does permit regulation by licensing at any stage after mining. 40 CFR 40.13(b), by exempting the transportation and handling of unprocessed ore, implicitly recognizes this authority to regulate. Further, by drawing the exemption line at unprocessed and unrefined ore, that is, ore whose gross appearance and chemical state has not been altered from the point of mining, there is recognition of underlying health and safety considerations. The assumption is that any processing or refining may alter the radiological environment associated with the source material enough so that the health and safety of workers and others becomes a matter of legitimate regulatory concern.

If the handling of the ore (for example, in sorting) exposes workers to a increase in exposure to radioactive material (radium, radon, etc.), it may be viewed as a licensable situation. Crushing of ore is obviously a form of processing subject to licensing by definition in 10 CFR 40.4(k).

*Robert L. Fonner*  
Robert L. Fonner  
Attorney - OELD

<sup>1/</sup> See memorandum of James P. Murray, Jr., May 8, 1967, entitled "Legislative History of the Phrase "After Removal From Its Place of Deposit In Nature."