



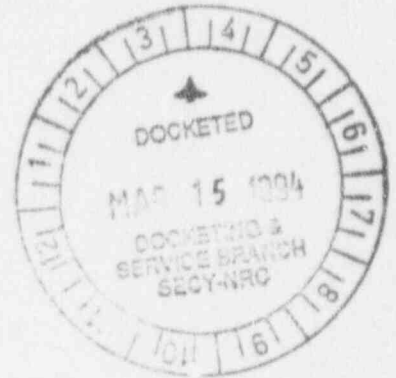
JOHN ENGLER, Governor

DEPARTMENT OF PUBLIC HEALTH

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VERNICE DAVIS ANTHONY, MPH, Director

March 9, 1994



Donald A. Cool, Ph.D., Chief
Radiation and Health Effects Branch
Division of Regulatory Applications
Office of Nuclear Regulatory Research
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Dear Doctor Cool:

As requested in your notice dated January 27, 1994 enclosed are our comments relating to the staff draft of proposed radiological criteria for decommissioning.

Should you have any questions concerning these comments, please contact me or David Minnaar of my staff at (517) 335-8200.

Sincerely,

BUREAU OF ENVIRONMENTAL
AND OCCUPATIONAL HEALTH

George W. Bruchmann, Chief
Division of Radiological Health

GWB:DM:rt

Enclosure



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MICHIGAN DEPARTMENT OF PUBLIC HEALTH
Bureau of Environmental and Occupational Health
Division of Radiological Health

Comments on U.S. Nuclear Regulatory Commission
Staff Draft of Proposed Radiological Criteria
for Decommissioning.

On January 31, 1994, we received a notice dated January 27, 1994 from the U.S. Nuclear Regulatory Commission (NRC) requesting comments on an NRC staff draft of proposed radiological criteria for decommissioning. Based upon a staff review of the draft criteria and accompanying supplemental information, it appears that the NRC staff draft embodies many of the essential elements that we believe should be codified in the rulemaking effort. Consequently, we are generally supportive of the draft proposed radiological criteria except as enumerated below.

1. We continue to support a rulemaking that incorporates the use of radiological criteria that are easily measured and verified to the maximum extent practical, and we support the general provision in proposed 10 CFR 20.1403(a) which specifically addresses this issue. In our view, the practical implementation of the radiological criteria is a critical concern for the effectiveness of the NRC rulemaking package. We note, however, that the NRC staff draft refers heavily to the detailed guidance that NRC plans to issue to accompany the proposed codified radiological criteria to address key implementation issues. The guidance is described as containing detailed information on performing site specific surveys, analyses, measurements, and calculations involving the practical considerations attendant to the licensee assessment of individual total effective dose equivalents (TEDE's) to determine compliance with the decommissioning criteria. Since the guidance has not yet been published by NRC, we found it difficult to judge whether the staff draft of radiological criteria can be effectively implemented in a manner that accommodates practicality to the maximum extent possible. For example, we note that the proposed TEDE limit of 15 millirem per year could impose severe restrictions on the ability to use field instruments for direct measurement of external, penetrating radiation. Gamma radiation levels as low as about 3 microrentgens per hour above background, which are often difficult to discern on even the most sensitive field instruments, could be considered unacceptable to assure compliance with the proposed TEDE limit, as well as difficult to verify. Overall, the associated guidance seems to have an important bearing on the practical application of the proposed criteria. As a result, we believe that additional comments on the radiological criteria may be warranted at a later date, subsequent to an opportunity to fully review the NRC's supporting guidance when available.
2. We believe that the scope of the proposed rulemaking should require NRC licensees to comprehensively address all radiological hazards associated with the decommissioning process. Specifically, the dose limits and goals specified in the NRC rulemaking should include the contribution of all nonbackground radiation doses, whether contributed by NRC-regulated materials or by nonbackground naturally-occurring and accelerator-produced radioactive materials (NARM). Rulemaking guidance to be issued by NRC should further clarify this issue and provide additional details on assessing doses from potentially coexisting NARM as a component to the process of demonstrating compliance with the radiological criteria.

In support of this approach, we believe that the definition for "background radiation" contained within 10 CFR 20.1003 of the proposed rulemaking should be changed as follows:

"Background radiation" means radiation from cosmic sources; nontechnologically enhanced concentrations of naturally occurring radioactive material, including radon

This change, when coupled with the definition for "residual radioactivity," should help clarify that nonbackground NARM sources are appropriately among the "unlicensed sources" which the radiological criteria require be assessed.

3. At the time of decommissioning, we believe that many licensees may possess residual radioactivity or radioactive sources that are no longer used. As a result, it appears to us that the definition of "residual radioactivity" in proposed 10 CFR 20.1003 should be broadened to accommodate the distinction between "possession" and "use." We suggest that the definition be improved by modifying the second sentence to read:

"This includes radioactivity from all licensed and unlicensed sources possessed
or used by the license, but excludes background radiation."