MEMORANDUM FOR: Hugh L. Thompson, Jr., Deputy Executive Director for Nuclear Materials Safety, Safeguards, and Operations Support

FROM: Robert M. Bernero, Director Office of Nuclear Material Safety and Safeguards

SUBJECT: REQUEST FOR EXTENSION ON RESOLUTION OF THE RULEMAKING PETITION FROM THE U.S. DEPARTMENT OF ENERGY ON A DESIGN BASIS ACCIDENT DOSE LIMIT FOR A GEOLOGIC REPOSITORY FOR HIGH-LEVEL RADIOACTIVE WASTE [DOCKET NO. PRM-60-3]

U.S. Nuclear Regulatory Commission (NRC) Announcement No. 26, "Staff Assistance to Prospective Petitioners" (dated March 21, 1991), recently summarized for the staff the procedure for processing rulemaking petitions within NRC. This procedure calls for the staff to resolve petitions within twelve months of the date of publication in the Federal Register. In those instances where additional time beyond the twelve months is needed to resolve the petition, the announcement instructs the staff to request approval for an extension from the Executive Director for Operations. The purpose of this memorandum is to make such a request.

On April 19, 1990, the U.S. Department of Energy (DOE) submitted a petition to NRC requesting that it amend 10 CFR Part 60 to include specific dose criteria for design basis accidents. NRC noticed receipt of the petition in the Federal Register on July 13, 1990 (55 FR 28771-28773). In its Federal Register announcement, the NRC staff described DOE's petition and noted that its subject matter was closely related to a contemplated rulemaking action currently under consideration by the staff. The staff also noted that it expected to complete the necessary technical background work associated with its related regulatory initiative by November 1991.

Upon completion of the necessary technical background work, the staff plans to publish its proposed rule amending 10 CFR Part 60 to include specific dose criteria for design basis accidents and in doing so, will respond to DOE's petition. The staff anticipates that its proposed rule would be published in the Federal Register no later than July 1992; thus, there is a need for a one-year extension to resolve DOE's petition. If you approve of this extension,

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sign in the appropriate area below and return this memorandum. Following the receipt of your approval, the staff will send the enclosed letter to DOE providing it with an update on the status of the petition.

Original signed by G. A. Arlotto

Robert M. Bernero, Director
Office of Nuclear Material Safety
and Safeguards

Enclosure: As stated

Extension approved _____
Hugh L. Thompson, Jr. Date

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*See previous concurrence

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ENCLOSURE

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

Dr. John W. Bartlett, Director
Office of Civilian Radioactive Waste Management
U.S. Department of Energy RW-1
Washington, D.C. 20585

Dear Dr. Bartlett:

SUBJECT: STATUS OF U.S. DEPARTMENT OF ENERGY'S PETITION ON A DESIGN BASIS ACCIDENT DOSE LIMIT FOR A GEOLOGIC REPOSITORY FOR HIGH-LEVEL RADIOACTIVE WASTE [DOCKET NO. PRM-60-3]

The purpose of this letter is to apprise you of the status of the U.S. Department of Energy's (DOE's) April 19, 1990, petition to the U.S. Nuclear Regulatory Commission (NRC) requesting that it amend 10 CFR Part 60 to include specific dose criteria for design basis accidents.

Following the receipt of DOE's petition, the NRC noticed its receipt in the Federal Register on July 13, 1990 (55 FR 28771-28773). In its Federal Register announcement, the NRC staff described DOE's petition and noted that its subject matter was closely related to a rulemaking action currently under consideration by the staff. The staff described both DOE's petition and NRC's related regulatory initiative, and solicited public comments with respect to each. On November 26, 1990, DOE provided specific comments with respect to NRC's related regulatory initiative. As of this time, no other comments have been received with respect to DOE's petition and no additional public comments have been received relative to NRC's related regulatory initiative.

As noted in the July 13, 1990, Federal Register notice, NRC's contemplated rulemaking action would establish additional preclosure regulatory requirements for the high-level waste geologic repository in two major areas. The first major area concerns the identification of structures, systems, and components important to safety. Although DOE's petition does address areas of concern similar to those to be addressed by NRC, DOE's approach to identifying structures, systems, and components important to safety differs markedly from the approach contemplated by NRC. In applying the approach proposed by DOE in its petition, it would be possible to have no structures, systems, and components important to safety if the nearest boundary of the controlled-use area were sufficiently distant. This could encourage extending the boundary of the preclosure controlled area in order to justify less effective safety design and quality assurance measures and result in inferior structures, systems, and components in the geologic repository operations area (GROA). The NRC staff approach would identify structures, systems, and components important to safety based on the functions they serve with respect to radiological health and safety. This approach would not only provide protection to the general public, it would also address the safety of workers in the GROA.

The second major area concerns additional requirements for establishing a design basis accident dose limit. In its proposal, DOE states that the design basis accident dose limit would be used as a GROA design criterion. If the design basis accident dose limit were not exceeded as a result of a postulated accident, DOE's approach would require no additional safety features for the GROA. On the other hand, the staff's approach is to use the design basis accident dose limit as a baseline value against which to determine the acceptability of the controlled-use area boundary.

At present, the staff is conducting the necessary technical work that it would use to support both its position regarding a specific dose criteria in 10 CFR Part 60 and its views with respect to DOE's petition. Please be advised that the NRC staff is continuing to evaluate the merits of both DOE's petition and the November 26, 1990, letter as it pursues its related regulatory initiative. Upon completion of the necessary technical background work, the staff will develop its position which may include a recommendation to the Commission later this calendar year to proceed with rulemaking. The staff expects to respond to DOE's petition following its recommendation to the Commission.

Please contact Mr. Joseph J. Holonich of my staff if we may be of additional assistance to you in this matter. Mr. Holonich can be reached at 301/492-3403 or FTS 492-3403.

Sincerely,

Robert M. Bernero, Director
Office of Nuclear Material Safety
and Safeguards

cc: R. Loux, State of Nevada
C. Gertz, DOE/NV
S. Bradhurst, Nye County, NV
M. Baughman, Lincoln County, NV
D. Bechtel, Clark County, NV
D. Weigel, GAO
W. Barnard, NWTRB
C. Thistlethwaite, Inyo County, CA