

OCT 31 1989

MEMORANDUM FOR: William G. Kennedy, Technical Assistant
Office of Executive Director for Operations

FROM: Richard L. Bangart, Director
Division of Low-Level Waste Management
and Decommissioning, NMSS

SUBJECT: COMMISSIONER ROGER'S LUNCHEON SPEECH TO THE
MIDWEST UNIVERSITIES ENERGY CONSORTIUM

Enclosed you will find input from the Divisions of HLWM and LLWM for Commissioner Roger's speech to the above subject consortium. If you have need for additional assistance or have questions regarding our input, please contact me or LeRoy Person at x20575.

ORIGINAL SIGNED BY

Richard L. Bangart, Director
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Enclosure: As stated

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SUBJECT ABSTRACT: COMMISSIONER ROGER'S LUNCHEON SPEECH TO THE
MID WEST UNIVERSITIES ENERGY CONSORTIUM

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ENCLOSURE

In the area of Low-Level Waste (LLW), a major milestone of the Low-Level Radioactive Waste Policy Amendments Act (LLWPAA) is approaching. This milestone requires that compacts and states outside the sited compact regions submit either a complete license application for a new LLW disposal facility, or, failing that, submit a certification to NRC signed by the Governor certifying that the state will provide for the storage, disposal, or management of its LLW after 1992. The LLWPAA also allows states to meet the 1990 milestone through disposal agreements with sited compacts.

Last February, NRC provided guidance to states and compacts on the contents of these certifications, and specified procedures for their submittal and processing. Under the LLWPAA, NRC is required to transmit the certification to Congress and to publish them in the Federal Register. All but a few states, who will file applications for licenses, plan on meeting the milestone with a Governor's certification; as many as 30 states may file certifications. The majority of state certifications are expected to rely on storage of LLW for up to several years, either at the waste generator's facilities or at a centralized storage location.

To ensure availability of adequate health and safety guidance in this area, NRC is developing guidance for materials licensees on the information needed in an amendment application to authorize interim storage. We expect this guidance to be developed by 1990. Storage guidance for reactors is already in place. It was previously issued in two generic letters, Numbers 81-38 and 85-14.

At the present time, states and compacts are engaged in a range of activities aimed at achieving compliance with the 1990 milestone. The LLWPAA uses a system of incentives and penalties to ensure active state participation in meeting the 1990 milestone. The States regulating the three operating disposal facilities can deny disposal access to those non-sited compact regions and States who do not make good progress or fail to meet milestones as has been demonstrated by their actions in the past. Similarly, DOE has responsibility under the LLWPAA to grant or deny the rebate to non-sited states and compacts of portions of surcharges paid by waste generators. In summary, this system seems to be working and the regulatory guidance necessary for safe interim storage of LLW and development of new disposal facilities should be sufficient to allow for these activities to safely proceed.

Another concern raised by the 1990 milestone is whether any Governor can provide a certification relying on storage when, under current Environmental Protection Agency (EPA) rules, the storage of mixed waste probably cannot be permitted for the durations that will be needed until new disposal capacity is available. As you know, this is only one of a number of regulatory implementation issues associated with mixed waste management. Indeed, the

mixed waste issue itself is one of a number of issues arising from the different missions, statutory mandates, and regulatory approaches of EPA and NRC. One is the development of general environmental standards for LLW disposal. In addition to setting dose limits for LLW disposal in any land facility, these standards are also expected to establish a threshold for wastes with radioactive hazards below regulatory control (BRC). NRC has also been addressing the issue and the Commission expects to establish a broad BRC policy in the near future. EPA is also developing new hazardous air pollution standards for radionuclides, which may set more stringent offsite airborne dose limits for all licensed facilities, including storage and disposal operations.

The potential impacts of these EPA activities on the development of new capacity have been the focus of renewed interest at the highest levels of both NRC and EPA in recent months, and we at NRC expect to be devoting even more effort toward their timely resolution. I think both agencies are very much aware that the sooner we can come to a workable, mutually supported approach to these issues, the better.

Additionally, there is the question of what can be done for the safe management of greater-than-Class-C (GTCC) wastes until a federal disposal facility can be made available. Under the LLWPA, disposal of GTCC waste is a federal responsibility and such waste must be disposed of in a facility licensed by NRC. In a recent rule change, NRC required disposal of GTCC waste in a deep geologic repository, unless disposal elsewhere has been approved by the Commission. NRC continues to support DOE efforts to establish interim storage capacity for GTCC waste. While DOE continues its efforts to establish GTCC storage capacity and to develop an eventual disposal facility, we are working to characterize the quantities of GTCC waste being generated, particularly the number and characteristics of unneeded sealed sources.

INSERT FOR ROGERS' SPEECH

- 1 -

INSERT A

NRC is strongly encouraging DOE to give early attention to concerns which may significantly impact the determination regarding site suitability. For example, DOE should give high priority to determining whether the Yucca Mountain site is subject to an unacceptably high probability of phenomena such as volcanism, faulting, and seismicity which could disqualify the site from further consideration. NRC has also suggested that, starting at an early date, DOE periodically conduct total system performance assessments and subsystem performance assessments. The purpose of these early assessments would be to provide an indication of whether any potentially adverse conditions significantly affect the ability of the site to meet 10 CFR Part 60 performance objectives.

In addition to meeting performance objectives in 10 CFR Part 60, a candidate site for a repository must also meet performance standards established by the Environmental Protection Agency (EPA) under the Nuclear Waste Policy Act, as amended.

INSERT B

As you know, in July 1987 the U.S. Court of Appeals vacated and remanded to EPA Subpart B of the high-level radioactive waste disposal standards. It is our understanding that EPA intends to publish revised proposed standards in the near future.

INSERT C

Early working drafts of the revised standard distributed by EPA indicate that the probabilistic approach will continue to be used. The Court decision did not challenge that part of the standard, and it will probably be left unchanged. If that turns out to be the case, then the standard likely would be incorporated into NRC regulations that way.

on the proposed rule and draft regulatory guides when published

in May 1990 and draft generic Environmental Impact Statement in December 1990.

Radioactive Waste Disposal

As you are aware there have been delays in the Department of Energy's High-Level Waste Repository program at Yucca Mountain. The NRC staff reviewed and commented upon the Department's Site Characterization Plan this past Spring and Summer. It is our understanding that ^{construction of the Exploratory Shaft Facility for} the subsurface site characterization program ~~by means of an Exploratory Shaft Facility~~ may be further delayed while additional emphasis is placed on surface exploration over the next few years.

Insert A >

~~A near term issue is the need in the NRC staff's opinion for the Department to develop a process for early site suitability assessment. Of course, repository performance objectives are necessary for safety and licensing decisions.~~ The NRC's regulations in 10 CFR Part 60 reference and adopt the U.S. Environmental Protection Agency's (EPA's) environmental standards in Title ~~10~~⁴⁰ CFR Part 61 for management and disposal of spent nuclear fuel, high-level, and transuranic radioactive wastes. ^{Insert B} The primary standard for disposal is the containment requirement limiting releases of radionuclides to the environment for 10,000 years after disposal. The EPA containment

requirement is probabilistic, thus requiring an estimate of the likelihood of the physical processes and events that could result in release of radioactive wastes to the accessible environment. ^{Limit} Since it is not possible to experimentally observe the disposal system for 10,000 years, computer models will be used to predict these effects. As a result of uncertainties associated with these predictions, uncertainty analysis will be part of the performance assessment. The difficulty is that there is no currently accepted method of utilizing ^{this} probabilistic methodology for a high level waste repository, ^{to show that the EPA Standard ~~is met~~ is met.} ~~with its long term physical processes and events.~~ In sum, the EPA containment requirement on which the NRC's 10 CFR Part 60 regulations are based is both novel and technically challenging due to the long regulatory periods over which compliance predictions must be made and the requirement to incorporate uncertainties in these predictions into a single cumulative complementary distribution function (CCDF). A key issue is the workability of the basic probabilistic standard in the context of the NRC's Licensing Board hearing process in which the validity of the 10,000 year performance of the containment features of the repository ^{has to} can be reasonably proven. I urge this conference to consider ways in which a probabilistic performance assessment methodology for HLW repository can be demonstrated at the earliest practical time in order to:

- Focus the Department's site characterization activity at Yucca Mountain.
- Reach early resolution of site suitability issues.
- Develop an early perspective on overall performance uncertainty.

The efforts in this regard of the utility industry through the Electric Power Research Institute's High Level Research Program is considered exemplary and in my opinion deserving of additional broad industry support.

[NMSS is kindly asked to include a few comparable paragraphs on key regulatory issues associated with low level wastes and, if appropriate, mixed wastes, and the problem of NRC and EPA "dual regulation" in this field.]

There are a number of other issues I have not time to discuss today but are of importance. I will cite a few: the Commission's pending de minimus rule or Below Regulatory Concern standard; Plant Decommissioning requirements; possible licensing issues passed by Independent Power Producers which propose to own and operate nuclear facilities; new plant design certification issues; and the impact of multiple Federal and State agency regulation on nuclear utilities. Some of these

topics are being addressed at this conference, and I commend their importance to you ^{as} an industry of nuclear power production, ~~whose~~ ^{your} watchword ^{should} ~~must~~ always be "Nuclear Safety - First Among Equal Industry Objectives."