

JAN 29 1990

MEETING OF HLW REGULATORS

- 1 -

NOTE TO: Robert E. Browning, Director
Division of High-Level Waste Management

THRU: John J. Linehan, Director
Repository Licensing and Quality Assurance
Project Directorate
Division of High-Level Waste Management

FROM: Julia Corrado, Project Manager
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SUBJECT: OPTIONS FOR MEETING WITH NUCLEAR REGULATORY/SAFETY
REPRESENTATIVES OF FOREIGN GOVERNMENTS REGARDING HIGH-LEVEL
WASTE DISPOSAL

On November 8, 1989, the Division of High-Level Waste Management (HLWM) met with International Programs (IP) to discuss issues and activities of mutual interest concerning high-level waste programs in foreign countries. One of the topics discussed at the meeting was NRC sponsorship of talks between NRC and high-level waste regulatory/safety individuals from foreign countries. It was agreed that HLWM would meet with IP and staff from the Office of Nuclear Regulatory Research (RES) to develop an agenda for such talks.

On November 30, we met with Hans Schechter, IP, and John Randall, RES, to discuss an outline for such an agenda. On the basis of that meeting, and prior and subsequent discussions with HLWM staff, proposed agenda items have been prepared (Enclosure). At the suggestion of IP, the agenda items are followed by a paragraph which generally describes NRC's current practice or position on that item.

The details of the timing for such talks, venue, and whether the talks would be bilateral, i.e. between NRC and representatives of a single government in any one session, or multilateral have not been resolved. We have considered these questions and have identified the following three options for arranging these talks:

Option 1: Invite foreign regulators to a multilateral series of talks at NRC Headquarters;

Option 2: Invite foreign regulators to a multilateral series of talks at Southwest Research Institute (SRI), San Antonio, TX which is the parent organization for the Center for Nuclear Waste Regulatory Analysis; or

Option 3: Invite foreign regulators to visit NRC Headquarters for informal, bilateral talks.

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We would recommend option 3 above because it affords the greatest flexibility for both NRC and foreign regulators, it is more cost effective than meeting at SRI, and bilateral talks would tend to be less formal than multilateral talks. This would seem to be in keeping with the purpose of the talks which is for NRC to become more familiar with the international high-level waste regulatory community and exchange ideas on topics of mutual interest in regulating the safety of waste disposal, but not for concensus-building at this time. One of the purposes of the bilateral talks could be to obtain input on whether multilateral talks among high-level waste disposal regulators would be beneficial at some time in the future.

We would propose to send the enclosure to IP with the recommendation that IP prepare and issue a letter to representatives of foreign high-level waste regulatory authorities, requesting bilateral talks at NRC Headquarters. We would note that we are planning the second quarterly HLWM-IP coordination meeting for late-February at which time we may be able to discuss progress on these talks.

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Enclosure: As stated

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PROPOSED AGENDA ITEMS FOR BILATERAL TALKS WITH FOREIGN HLW REGULATORS

Regulatory Approach/Philosophy to High-Level Waste Program:

High-level waste (including spent nuclear fuel) is highly radiotoxic and will remain hazardous for thousands of years. Projecting the performance of the natural and man-made components of a repository over such a long time will involve uncertainties that may be unprecedented in engineering and risk assessment practice. The challenge facing regulatory authorities is to develop a regulatory approach that will accommodate these uncertainties. Such a regulatory approach should allow licensing decisions to be reached on acceptance of suitable sites and designs, and rejection of unsuitable ones, while avoiding reliance on overly conservative approaches that would excessively increase disposal costs or might eliminate suitable repositories from consideration. The U.S. standards are currently of a quantitative, probabilistic nature. It may be difficult to show compliance with such standards given the uncertainties inherent in predicting repository performance over thousands of years.

Quality Assurance in High-Level Waste Disposal:

The NRC Quality Assurance (QA) requirements for geologic repository investigations is designed to provide confidence that scientific data are valid, retrievable, and reproducible. The documentation produced by the QA program will form an important part of the record upon which the licenseability of a site for a repository will be decided. In addition, because the NRC cannot review all of the data collected by the numerous licensee contractors and subcontractors, the staff will need to rely on the control systems in the licensee's QA program in developing the confidence it needs to issue a license for the repository.

QA programs also need to avoid placing too great a burden on scientists because this may reduce efficiency, effectiveness, and creativity in performing investigations and obtaining data. However, there is reluctance by some in the earth sciences community to applying QA to their work.

Major Technical Concerns in U.S. Candidate Repository Site Investigations:

The U.S. high-level waste program is currently focusing on the Yucca Mountain site in Nevada as the candidate site for the first repository. Key technical issues being addressed are unsaturated flow and transport mechanisms, fault delineation and assessment of tectonics potential, and geochemical assessment (in particular, partially saturated media).

ENCLOSURE