

MAR 17 1993

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

89001821

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

SUBJECT: FOREIGN TRIP REPORT

Margaret Federline of the Division of High-Level Waste Management and I participated as members of the U.S. Delegation in the 25th meeting of the OECD Nuclear Energy Agency (NEA) Radioactive Waste Management Committee held on February 11-12, 1993, at the NEA in Paris. Attached is a report which summarizes the key issues addressed by the Committee during the meeting. Serving as members of the U.S. delegation afforded us an opportunity to contribute to RWMC decisions on issues of particular interest to the Nuclear Regulatory Agency such as long-term planning of performance assessment activities.

Also attached is a foreign trip report Abstract which has been forwarded to International Programs.

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

Attachments:
As stated

cc: J. M. Taylor, EDO
G. Arlotto, NMSS
H. Denton, IP
J. Youngblood, HLWM
R. Bangart, LLWM
R. Cunningham, IMNS
R. Burnett, FCSS
R. Brady, SEC/ADM

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TRIP REPORT ABSTRACT
DATE OF REPORT
2/16/93

OFFICIAL TRAVELERS:
Robert M. Bernero
Margaret V. Federline

TRAVEL TO: OECD Nuclear Energy Agency
Paris, France

BEGINNING ON: 2/9/93
ENDING: 2/13/93

OFFICE: Office of Nuclear Material Safety & Safeguards
Division of High-Level Waste Management
Hydrology and Systems Performance Branch

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MEETING TITLE AND/OR AFFILIATION:

Nuclear Energy Agency - Radioactive Waste Management Committee Meeting

ORGANIZED BY: Nuclear Energy Agency Secretariat

SUMMARY OF MEETING RESULTS:

Mr. Robert M. Bernero, Director, Office of Nuclear Material Safety and Safeguards and Margaret Federline, Chief, Hydrology and Systems Performance Branch, Division of High Level Waste Management, participated as members of the U.S. delegation in the 25th meeting of the OECD Nuclear Energy Agency (NEA) Radioactive Waste Management Committee (RWMC) held on February 11-12, 1993, at the NEA in Paris. The delegation was led by Jerome Saltzman, Director of External Relations, Office of Civilian Radioactive Waste Management, DOE.

Dr. K. Uematsu, Director General of the OECD NEA, opened the meeting and announced that an invitation had been extended to the Republic of Korea for membership in NEA. The RWMC Chairman, Dr. R. H. Flowers, indicated that since the last RWMC meeting in April 1992 there had been slow but steady progress in addressing waste issues in OECD countries.

Activities of the OECD and NEA of particular interest to the RWMC were discussed including RWMC participation in an expert group on potential exposures. Performance assessment matters were reviewed in detail including long term plans of the Performance Assessment Advisory Group and progress of

the Probabilistic System Assessment Group. Discussions also focused on activities related to the use of expert judgement in performance assessment and an assessment of future human actions at disposal sites. Activities of the Co-ordinating Group on Site Evaluation and Design of Experiments for Radioactive Waste Disposal were also reviewed.

The RWMC had a lengthy discussion of the need for and approach to a new collective opinion based on a suggestion from ANDRA to present a balanced discussion of geologic disposal in the context of ethical considerations and protection of the environment. The Committee also considered the results of the NEA fact-finding mission to the Ukraine and reviewed plans for a symposium in May 1993 on the long-term isolation of radioactive substances from the Chernobyl 4 nuclear power plant. Presentations were heard from member countries on recent developments and highlights in their waste management programs.

The RWMC elected a new Chairman and three Vice-Chairman and scheduled the next meeting for January 20-21, 1994, in Paris. The new Chairman is Mr. Henri-Edme Waljard, the Director of ANDRA in France. The three Vice-Chairmen elected are Dr. Colin Allan of AECL-Whiteshell, Soren Norrby of the Swedish SKI, and Ron Flowers, the outgoing Chairman, retained as a Vice.

DETAILED TRIP REPORT OF:
Robert M. Bernero, Director
Office of Nuclear Material Safety and Safeguards

Margaret Federline, Chief
Hydrology and Systems Performance Branch
Division of High Level Waste Management
Office of Nuclear Material Safety and Safeguards

SUBJECT: Trip report on the Nuclear Energy Agency Radioactive Waste Management Committee Meeting, Paris, France, February 9-13, 1993

Mr. Robert M. Bernero, Director, Office of Nuclear Material Safety and Safeguards and Margaret Federline, Chief, Hydrology and Systems Performance Branch, Division of High Level Waste Management, participated as members of the U.S. delegation in the 25th meeting of the OECD Nuclear Energy Agency (NEA) Radioactive Waste Management Committee (RWMC) held on February 11-12, 1993, at the NEA in Paris, France. The U.S. delegation was led by Jerome Saltzman, Office of Civilian Radioactive Waste Management (OCRWM), DOE, and also included a representative from the Office of Environmental Restoration and Waste Management, DOE.

OPENING OF THE MEETING:

Dr. K. Uematsu, Director General of the OECD NEA, opened the meeting by welcoming all participants and introduced a new Deputy Director for Science, Computing and Development, Mr. Phillippe Savelli. He also announced that an invitation had been extended to the Republic of Korea for membership in the NEA. He indicated that Korean representation is expected at the next Steering Committee meeting in April 1993.

In opening the meeting, the RWMC Chairman, Dr. R. H. Flowers, indicated that since the last meeting in April 1992 there had been slow but steady progress in addressing waste issues in OECD countries.

REPORT ON OECD AND NEA ACTIVITIES:

Reports were heard and discussed on key activities of the OECD and NEA of interest to the RWMC including programs of the CSNI, CRPPH, CNRA and NDC, as well as a general report on cooperation items with the Central and Eastern European Countries (CEECs) and the New Independent States of the ex-Soviet Union (NIS). RWMC accepted a proposal for the Committee to join the CRPPH, CSNI, and CNRA in an expert group on potential exposures to examine an integrated approach to risk management with the provision that a regulator with PRA experience be included in the group. In discussion of an international meeting on actinide separation and transmutation, RWMC members emphasized that transmutation could not be a substitute for geologic disposal. NEA Deputy Director Stadie reviewed the results of a recent fact-finding mission to the Ukraine and plans for a symposium in Kiev in May 1993 on the long-term isolation of radioactive substances from the Chernobyl 4 nuclear power plant. The symposium is to hear papers by the Ukrainians on what they know and possible alternatives. It would be followed 6-9 months later by an OECD nations' meeting to provide scientific comments. Stadie emphasized the

urgency of the situation and described difficulties in coordination with Ukrainian officials. He indicated that the expert group is of the opinion after the visit that a collective search by the nuclear community in the West and the East provides the best assurance that an environmentally acceptable solution can be found. After extensive discussion, the RWMC supported the technical workshop, but no nations indicated a willingness to participate.

PERFORMANCE ASSESSMENT:

Discussions of performance assessment activities were initiated by NEA Secretariat staff who presented an overview of the 8th meeting of the RWMC Performance Assessment Advisory Group (PAAG) held in Paris in September 1992. Long-term plans for PAAG activities which give high priority to addressing the treatment of modeling uncertainties, including the role of expert judgment and the fundamental issue of model validation, were well received by the RWMC. PAAG was cautioned to carefully consider the definition of validation in the context of the very long time periods of performance of geologic disposal. Mr. S. Norrby (SKI) emphasized the importance of making use of existing work in performance assessment to understand problems and advances in the use of current performance assessment methodologies. Cooperation between PAAG and SEDE in a planned November 1993 workshop on the treatment and understanding of conceptual model uncertainty was favorably noted by the Committee. Accomplishments of the 13th and 14th Probabilistic System Assessment Group (PSAG) meetings held in June 1992 and January 1993 were outlined including completion of Level 1 intercomparison studies and definition of a Level 2 exercise.

Recommendations of an expert group on the future development of the NEA Thermochemical Data Base were reviewed and discussed by the RWMC. The objective of the project is to compile internationally recognized, internally consistent and traceable data sets for geochemical calculations used in safety analyses. RWMC noted the resource limitations which have constrained the pace of the project. The RWMC endorsed the recommended priorities of the expert group, including the completion of the first set of elements (Np, Pu, Am, and Tc).

Reports on the October 1992 and November 1992 workshops on the use of expert judgment in performance assessment were discussed, and it was agreed that NEA should not initiate a working group or develop formal recommendations on the use of expert judgment given the wide range of uses by member states. Concern was expressed about the use of expert judgment techniques in lieu of the collection of reasonably available or obtainable data. PAAG and SEDE will be asked to facilitate communication on the application of expert judgment techniques. RWMC also noted progress in other performance assessment activities including initiation of a work group for the preparation of a data base of features, events, and processes (FEPs) for scenario development.

Extensive RWMC discussion followed a presentation of preliminary conclusions of an NEA Working Group on the assessment of future human actions at radioactive waste disposal sites, including the U.S. delegation's description of provisions of the Energy Policy Act of 1992, which provides for a National Academy of Science study on issues related to human intrusion. Mr. Bernero

emphasized that it is important to understand the context in which human intrusion assessments will be used (e.g., diffuse waste with shallow burial or discrete waste with deep burial). He also indicated that it would be useful for the work group to consider whether human intrusion assessments will have a comparative (site comparison) or absolute (licensing) use. In summarizing, Chairman Flowers indicated that early availability of the group's draft report would be desirable and expressed the Committee's general agreement that it would be appropriate to base scenarios on current activities since it will be difficult to predict future human activities with certainty. He also raised the question for consideration by the working group -- do high consequence/low probability events need different treatment?

The Committee agreed with a proposal for the organization of a joint NEA/SKI Symposium in 1994 on the results of the Intraval project and validation issues.

RWMC BUREAU ELECTION:

Mr. H.E. Wallard, ANDRA, was elected to replace Dr. R.H. Flowers, UKAEA, whose term as Chairman was expiring. Thanks were expressed by all members to Dr. Flowers for his hard work over the term. Dr. C. Allan, AECL, Dr. R.H. Flowers and Mr. S. Norrby, (SKI), who was nominated by the U.S. delegation, accepted terms as Vice-chairmen.

COORDINATED RESEARCH AND ENVIRONMENTAL SURVEILLANCE PROGRAM (CRESP)

The RWMC noted the work of the Coordinated Research and Environmental Surveillance Program (CRESP) in reviewing reports of sea-dumping of radioactive waste.

COLLECTIVE OPINION:

The RWMC discussed a proposal for a new RWMC collective opinion based on a suggestion from ANDRA to present a balanced discussion of geologic disposal in the context of ethical considerations and protection of the environment. After an extensive discussion on the need for and approach to a new collective opinion, Chairman Flowers summarily indicated that the RWMC was generally in favor of the drafting of such an opinion. It was agreed that the Secretariat would be asked through the Bureau to draft a statement which is clear, readily understandable by a lay audience, non-promotional, and provides a factual technical basis for ethical and environmental aspects of deep geologic disposal. Cooperation with the OECD Environment Directorate in the development of this statement was also discussed.

ENVIRONMENTAL RESTORATION

Mr. D. Huizenga, DOE Office of Environmental Restoration and Waste Management, described plans for an international meeting as early as March to discuss possibilities of cooperation in the area of environmental restoration and waste management. DOE expressed interest in sharing technologies and solutions to problems. The RWMC Chairman noted that this activity would be coordinated with the OECD Environment Directorate.

INSITU RESEARCH AND SITE CHARACTERIZATION MATTERS:

Dr. Patera, NEA Secretariat, reviewed the record of the 3rd meeting of the Coordinating Group on Site Evaluation and Design of Experiments for Radioactive Waste Disposal held in November 1992, the workshop on Paleohydrogeology held in the same month, the May 1992 meeting of the SEDE on argillaceous media, and the October 1992 final symposium of the Stripa project. Mr. J. Saltzman, DOE, commended SKB for excellent management of the Stripa Project.

OTHER ACTIVITIES:

Representatives from the NEA and SKI both indicated that the PAAG review of SKI Project 90 was very worthwhile. Mr. Norrby emphasized the value not only of the documentation of the review but the discussions which formed the basis for the review. Dr. Ilari, NEA, summarized the September 1992 meeting of the NEA Liaison Committee. The RWMC welcomed the group's activities but concluded after discussion that the time for a collective opinion on the state-of-the-art in the field of decommissioning was not right. Member countries discussed developments and recent highlights in their waste management programs.

The Chairman thanked attendees and noted that the next meeting is scheduled for January 20-21, 1994 in Paris.