

memorandum

DATE: JUN 28 1986

REPLY TO
ATTN OF: RW-40

86 JUN 25 A10:55

SUBJECT: Request for Review and Comments on Positions for Delegation to the Radioactive Waste Management Committee Meeting, Paris, 7/9-10/86.

TO: R. Browning, NRC

The attached positions are undergoing review in DOE. When developed, they will be used as a basis for expressing the U.S. position at the RWMC meeting. I suggest that your review focus on the position statements and the talking points which will be used to guide the delegation comments at the meeting. Some of the topics (listed as item 14) are not on the agenda for the meeting but may come up during discussions at the meeting. Note that the position statements are not final and positions may change based on comments by you and others.

Please provide your comments to C. R. Cooley as early as possible, but no later than June 27, 1986. If comments are minor, Mr. Cooley will be glad to take them by telephone on 252-6116.

If desirable, we can schedule a markup session on the positions. Please let C. Cooley know by June 24, 1986 if you would like a markup session.

Roger W. Gale, Director
Office of Policy and Outreach
Office of Civilian Radioactive
Waste Management

Attachment

cc: G. Burley, EPA
S. Coplan, NRC
M. Knapp, NRC
S. Meyers, EPA
R. Purple, RW-41

WM Record File 109 WM Project 1
Docket No. _____
PDR
LPDR _____

Distribution:
REB MJB Ann-ticket
JOB Carbone
(Return to WM, 623-SS) df

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PDR WASTE PDR
WM-1

ORGANISATION FOR ECONOMIC
CO-OPERATION AND DEVELOPMENT

NUCLEAR ENERGY AGENCY

SEN/RWM(86)2

RESTRICTED

Paris, drafted: 4th June 1986

distr.: 6th June 1986

CONVOCAATION

Or. English

STEERING COMMITTEE FOR NUCLEAR ENERGY

RADIOACTIVE WASTE MANAGEMENT COMMITTEE

Château de la Muette, Paris
8th-9th July 1986

The seventeenth session of the Radioactive Waste Management Committee will be held at the Château de la Muette, 2 rue André-Pascal, Paris 16ème, on 8th and 9th July 1986. The meeting will start on the first day at 10.00 a.m.

Delegates participating are advised that the security arrangements in force at the OECD include the obligation to present an identity document bearing a photograph. This document will be requested at the time of issuing Delegates' cards for the meeting on first entry to the OECD. It should also be presented subsequently with the card every time OECD premises are entered.

The following agenda is proposed for the meeting:

Proposed Agenda

1. Opening of the Meeting
2. Adoption of the Agenda SEN/RWM(86)2
3. Approval of the Summary Record of the Sixteenth Meeting SEN/RWM(85)6
4. Report on Activities of the OECD and NEA of Interest to the Committee SEN/RWM(86)3
5. Performance Assessment of Radioactive Waste Management Systems:
 - a) Report from the first Meeting of the Performance Assessment Advisory Group (PAAG) held on 12th-14th May 1986 SEN/RWM(86)4

The Committee is invited to consider the new programme of work suggested by the Group and to agree to the various proposals made on new and ongoing activities. In addition, the Committee will have to confirm the new terms of reference.

b) Progress of on on-going activities:

.Data bases:

- .. ISIRS: Report from the Executive Committee Meeting held in June SEN/ISIRS(86)2
- .. Thermodynamic Data Base Oral report
- . PSAC User Group: Report of Third Meeting held in April 1986 RWM/DOC(86)1
- . Hydrocoin Oral report
- . Radiological Aspects of Long-Lived Radioactive Wastes Disposed of In Shallow Land Burial Facilities RWM/DOC(86)2

The Committee is invited to take note, comment as appropriate, on each item and agree to the publication of the Shallow Land Burial report

c) Other recent developments:

- . Natural analogues; Oral report
(Follow-up of the discussion of the previous session of the Committee in the light of the June 1986 meeting of the CEC Expert Group and considerations of possible NEA actions)
- . Co-operation with the NEA Data Bank. Oral report
(For information and comments)

6. Geological Disposal of Long-Lived and High Level Waste

- .. Progress report on the Stripa Project, including prospects for Phase 3 Oral report
- .. Plans for the first meeting of the Advisory Group on In Situ Research and Investigation Oral report

The Committee is invited to take note of these two items

7. Seabed Disposal

- .. Summary record of the Special Meeting of the Seabed Working Group Executive Committee held in April 1986. SEN/RWM(86)1

The Committee is invited to take note of the arrangements made at the meeting and to endorse follow-up actions, notably on the preparation of the concept assessment report

- ✓ 8. International Approaches on the Use of Waste Disposal Facilities: Report on the Preliminary Study RWM/DOC(86)3

The Committee is invited to consider the report prepared by the Small Ad-hoc Expert Group, including follow-up actions, and to agree to its submission to the Steering Committee

9. Radiation Protection Aspects of Radioactive Waste Management

- a) Progress report on exemption rules for de minimis levels Oral Report

The Committee is invited to take note of the current status of work

- b) Progress report on CRPPH activities concerning ICRP recommendations RWM/DOC(86)4

The Committee is invited to take note of developments relevant to waste management and to comment as appropriate

10. Decommissioning: Progress Within the International Programme on Information Exchange Oral Report

The Committee is invited to take note

11. Report on a proposal for a Workshop on Radioactive Waste Management and Public Information RWM/DOC(86)5

Following discussion at the April Steering Committee Meeting, the RWM is invited to take note of the proposal, and to advise NEA on the preparation of the workshop

12. Recent Developments in Member Countries

The presentations by Member countries and international organisations should focus on recent important developments and should preferably be supported by written material (60 copies)

13. Date of the Next Meeting

14. Any Other Business

**DRAFT POSITION PAPER ON SUPPORT OF PERFORMANCE ASSESSMENT
ADVISORY GROUP (PAAG)**

BACKGROUND: Numerous performance assessment activities -- KBS-3 assessment, HYDROCOIN, INTRACOIN, ISIRS, SYVAC USERS GROUP, INTRAVAL, etc. -- have been underway and are continuing in the area of geologic disposal of radioactive waste. In recognition of the possible redundancy in these activities, attendees at the Second NEA Workshop on System Performance Assessment for Radioactive Waste Disposal held 10/22-24/85 recommended that a standing group on performance assessments be established to coordinate NEA activities in this area of performance assessment. The group would be composed of experts in the field and meet about once a year to:

- (1) Improve information exchange through periodic reviews of the state-of-the-art.
- (2) Identify initiatives for cooperation.
- (3) Provide a forum for organization of peer reviews.
- (4) Advise the RWMC on technical aspects of systems performance assessments.

Formation of the group was approved at the 12/4-5/85 meeting of the RWMC and the NEA issued invitations to member states, including the United States, to participate.

DISCUSSION: Performance assessments of geologic disposal systems are highly technical endeavors. The members of the Performance Assessment Advisory Group must have a technical background coupled with sufficient experience in the waste management field to be able to understand the various programs and recommend priorities. For the same reasons, continuity of service by the members is desirable.

The nominees for attendance at the initial meeting of this group in May 1986 were R. Cranwell (Sandia National Laboratory), Seth Coplan (NRC) for NRC and W. E. Coons (IT Corporation) and C. Defigh-Price (Rockwell Hanford Operations), representing the Office of Defense Programs within the U.S. DOE. At the first meeting, only Coons and Defigh-Price attended. OCRWM chose not to participate.

U.S. POSITION: The U.S. DOE (DP) will continue to participate in the Performance Assessment Advisory Group and workshops sponsored by PAAG. NRC will participate. OCRWM will not participate. Other experts may be nominated as the situation warrants, particularly to attend workshops initiated by the Group. NRC selected participants and/or other DOE participants will attend selected technical workshops on specific technical subjects.

The U.S. (NRC and DOE (OCRWM and DP)) support the following:

- Sponsoring one PA type meeting in the U.S. in the next two years (DOE only or joint NRC-DOE).
- Providing a summary paper or papers on the methodology to assign probabilities and identify (select scenarios).
- Providing suggestions on objectives and agenda for scenario workshop. (A year should be taken to appropriately plan such a workshop).
- Contribution to newsletter only if it is a country report as part of an annual PAAG meeting which would be issued with the meeting record. Otherwise, we recommend a PA correspondent contact where PA information can be communicated directly when needed. DOE and NRC are willing to identify a correspondent.

TALKING POINTS: In view of the large number of performance assessment activities, this group can provide a valuable service by coordinating technical exchange and workshops on timely technical subjects.

(BECAUSE THIS GROUP PLANS WHAT WILL BE DONE, OCRWM SHOULD SERIOUSLY RECONSIDER PARTICIPATION.)

PAAG.2
06-23-86

**PROPOSED POSITION STATEMENT ON PARTICIPATION IN UNCERTAINTY
WORKSHOP**

BACKGROUND: The NEA 's RWMC and CSNI are planning a workshop on **Uncertainty Analyses in Performance Assessments**. They have requested participation by the United States. A planning meeting was held in Paris on April 17-18, 1986 attended by Al Liebentrau of Pacific Northwest Laboratory and B. Sagar, RHO. The workshop is tentatively planned for three days in early 1987.

DISCUSSION: Methods to define the level of uncertainty are essential for the credibility of performance assessment results. DOE and NRC are interested in all advancements in uncertainty analysis.

U.S. POSITION: The U.S. NRC plans to participate in the workshop. The U.S. DOE may participate depending upon the outcome of the review of the information provided by the planning meeting. We encourage the holding of the workshop.

TALKING POINTS:

- The US NRC and DOE cannot commit to hosting the NEA meeting in the US.
- We encourage the full publication by NEA of papers on uncertainty analysis. The techniques and methods need to be shared by all.

DRAFT POSITION PAPER ON SUPPORT OF ISIRS

Background: In 1979, the Coordinating Group on Geological Disposal under the Radioactive Waste Management Committee endorsed a proposal for an international bank of data for use in safety assessments of geologic disposal media. An agreement was reached in 1981 for the creation of the data bank, initially to focus on radionuclide sorption in geologic media and using as a base an ongoing program at Pacific Northwest Laboratory. The system, called the International Sorption Information Retrieval System (ISIRS), was developed by PNL and eventually transferred to Saclay over the period July 1983 to July 1985. All funding for ISIRS to date has been from non-nuclear waste fund money.

Under the agreement, eleven countries, including the United States, shared the costs of the program. In the first two years, each member country, contributed \$10,000 per year which was made available to PNL for the work. [REDACTED]

[REDACTED] In developing ISIRS an additional \$200,000 has been spent in indirect support mostly by PNL. In 1985, an annual service charge of about \$5,000 was asked by NEA of each member country. The United States paid this fee in 1985 and 1986.

Since the inception of the ISIRS program, the U.S. geologic disposal program has evolved away from generic evaluations to site-specific evaluations. The ISIRS data, representing sites all over the world, are of value only in a generic sense; the U.S. sites must obtain their own data for the specific geology they are considering -- thus raising a question over the further value of involvement in ISIRS.

DISCUSSION: The DOE field offices have little use for the data available through ISIRS. Furthermore, they have little involvement in the program and therefore gain nothing from the contact with the foreign specialists.

The development of sorption data can also have application to low-level and intermediate level waste sites. But the characteristics of each site must be evaluated. The generic data can only be used for comparison.

Data still does not exist on many radionuclides.

U.S. POSITION: The U.S. DOE will not participate beyond the present two-year commitment ending in July 1987 and therefore encourages efforts to reach a timely and logical conclusion to the ISIRS program.

TALKING POINTS: Because of budget constraints, the United States must be selective in their participation in support activities, giving priority to those having near-term and direct site

specific application. While the ISIRS effort is valuable in a generic sense to those countries in the planning phases of a geologic disposal system, the generic data provided by ISIRS is not important to the specific repository projects underway in the United States.

A report of the accomplishments of ISIRS and a printout of some of the data should be prepared in order to make examples of the generic data available.

06-19-86

**DRAFT POSITION STATEMENT ON THE SUPPORT OF THE THERMOCHEMICAL
(THERMODYNAMIC) DATA BASE**

Background: As the development phase of the ISIRS Project was completed and evaluation and routine operation began, work complementing the Kd data in ISIRS with other sorts of data important in the geochemistry of high-level waste disposal in deep geological formations was initiated by the NEA. In 1985 a data base on ten elements of interest in radioactive waste management was completed. The data are being compiled by the NEA staff and reviewed by five teams of internationally-acknowledged experts. It is planned to extend the base to those elements likely to be present in the geologic media.

DISCUSSION: Thermochemical data for chemical elements and compounds are fundamental constants, independent of environment, hence can be used in predictive modeling of any repository site.

Such data have application in all sorts of technical evaluations, both nuclear and non-nuclear.

Development and review of thermochemical data is a highly technical undertaking of the type usually relegated to universities and fundamental laboratories.

U.S. POSITION: The United States will continue to support the Thermochemical Data Base Project by funding the work of a consultant, A. Muller, in 1986 and 1987 (approximately \$50K US per year).

TALKING POINTS: All countries that are doing performance assessment studies require this type of data; the U.S. DOE considers this work beneficial.

The selection of the priorities for development of thermochemical data is important and there should be general agreement by countries on who is going to work on the acquisition of what data. Is the present structure and operation of the group adequate for consensus on the priorities in each country?

The Data base work should be under the purview of the PAAG.

Item 5b 2
P-PSAC.1

DRAFT POSITION PAPER ON SUPPORT OF USER'S GROUP FOR PROBABILISTIC SYSTEMS ASSESSMENT CODES (PSAC)

BACKGROUND: For several years, Canada has been developing a performance assessment code incorporating probabilistic analysis techniques (SYVAC). In 1985, a Users Group for SYVAC-like Codes was established under the auspices of the NEA. The name was subsequently changed to Probabilistic Systems Assessment Code (PSAC group).

Three workshops have been held by the group, made up of representatives of several countries, including the United States. Liebetrau, PNL, and Sagar, RHO, attended the last meeting. The next meeting of the Group is scheduled for late fall in London. Based on the observation and the emphasis on probabilistic assessment codes as used by the participating countries, continued participation has been recommended. April cable to NEA confirmed US DOE intent to participate.

DISCUSSION: Participation in the group is expected to assist in the development of an international consensus on the appropriate use of probabilistic methods to guide the siting process. The US DOE has a vested interest in the appropriate use of probabilistic methods. Participation will provide direct input on other nations experience with the use of probabilistic methods.

U.S. POSITION: US DOE expects to continue participation as long as the group remains focused on specific problems associated with the use of probabilistic methods. NRC will not participate.

TALKING POINTS: The group is encouraged to develop a longer term strategy on what it hopes to accomplish.

The PSAC needs to under the purview of the PAAG.

06-23-96

DRAFT POSITION PAPER ON CONTINUED SUPPORT OF HYDROCOIN

BACKGROUND: HYDROCOIN is an international hydrologic code baselining and benchmarking effort organized by the Swedish Nuclear Power Inspectorate (SKI) with three levels -- Level 1, verification; Level 2, validation; and Level 3, sensitivity/uncertainty. The NEA has taken over as host for the annual group meetings and the U.S. DOE has been participating using staff from Pacific Northwest Laboratory. C. Cole, PNL, has had the lead role for DOE. Periodic participation has occurred by P. Clifton, BWIP; S. Gupta, ONWI; A. Brandstetter and S. Gureghian, OCRD; and N. Hayden, NNWSI. DOE HQ coordination has not been used to confirm commitments nor completion of U.S. activities. NRC has been active in preparing results of several NRC codes.

DISCUSSION: Level 1 activities are essentially complete. Level 2 activities will be completed in early 1987 and Level 3 activities in March 1988. Reporting by SKI has been excellent with a quarterly report on progress. Current understanding of commitments made by the participants are in the attachment.

The U.S. participation in HYDROCOIN is a beneficial cooperative effort. It is assisting in identifying the quality of the codes and their limitations. Each workshop has provided an open exchange of successes and difficulties in solving the various verification, benchmark, validation, and uncertainty problems.

The effort is becoming more oriented toward fractured crystalline rock. Worth of the program for salt, basalt and unsaturated tuff may be marginal.

U.S. POSITION: The U.S. DOE and the U.S. NRC plan to continue participation in HYDROCOIN at the same level as in the past.

TALKING POINTS:

- SKI and NEA are to be commended on this undertaking. Reporting has been excellent and very helpful.
- The clear identification of the various country commitments for participation are very helpful. We need to close following these meetings with a clear endorsement that the country will or will not complete the commitment.
- As the work progresses there is a need for an executive summary which identifies some measure of the performance and comparison of the codes and their limitations.
- HYDROCOIN should be under the purview of the PAAG.

Item 5b 4
SHLAND

**DRAFT POSITION ON SHALLOW LAND BURIAL DERIVATION OF REFERENCE
LEVELS FOR ACCEPTANCE OF LONG LIVED RADIOACTIVE WASTE**

BACKGROUND: The NEA report has been under preparation for several years and has been fully endorsed by DP earlier.

U.S. POSITION: The U.S. (DOE-DP & NE and NRC) endorses publication of the report and commends the authors on the preparation of an excellent report.

TALKING POINTS: The report will provide a valuable resource document for reference. It should receive wide distribution and the RWMC members should assume responsibility to assure that the report receives ample distribution within their country.

06-23-86

Item 5c
P-ANALOG.1

**DRAFT POSITION PAPER ON U.S. DOE PARTICIPATION IN NATURAL
ANALOGUE STUDIES**

BACKGROUND: At the previous meeting of NEA's Radioactive Waste Management Committee on December 5-6, 1985, Australia and Canada proposed natural analogue studies for sponsorship by the NEA.

Australia's proposal was to extend a U.S. NRC sponsored study in uranium ore bodies of the Alligator Rivers area of Australia into an international activity sponsored by the NEA. Canada solicited cooperation with their own analogue project underway at Cigar Lake in northern Saskatchewan. In the meantime, Sweden has organized a Pocos de Caldas project in Brazil and has solicited the U.S. DOE for participation. DOE has responded to SKB as interested and is awaiting further information from SKB.

U.S. and Brazilian institutions have cooperated since 1979 on a study of the movement of Th and other elements from a thorium deposit in Brazil called Morro do Ferro.

The United States is also participating in the Natural Analogues Working Group sponsored by the CEC whose objective is to evaluate the value of natural analogues as a means of validating performance assessment models.

DISCUSSION: There is considerable uncertainty concerning the value of studying remote natural sites as an indication of what might happen for a repository. Because of the uncertainty, DOE is interested in exploring in more depth the value of such studies.

U.S. POSITION: The United States wishes to defer a decision on participation in either the Australian or Canadian natural analogue study until detailed work plans or information is available for review. Based on the information we now have available our first priority will be to consider participation in the Pocos de Caldas study.

TALKING POINTS:

- Opinions on the value of natural analogue studies are mixed. The lack of information or conclusions from previous studies such as the Morro do Ferro study supports the negative opinion.
- We appreciate the opportunities for cooperation with other countries on natural analogues. It is an interesting issue which will only be resolved as we all obtain more information on their value for supporting performance assessments.

P-ANALOG.1
06-19-86

Item 6a
P-STRIPA.2

DRAFT POSITION STATEMENT ON CONTINUED SUPPORT OF STRIPA

Background: The STRIPA Project organized in 1980 as a NEA program and managed by KBS of Sweden is a cooperative test program in the Stripa iron mine, located in central Sweden. The areas of research cover detection and characterization of fracture zones, hydrogeology and geochemistry of groundwaters, migration of radionuclides in fractures and backfilling with bentonite clay. Costs are borne by the participants.

The U.S. DOE involvement has been managed through the Crystalline Rock Repository Program (Sally Mann) at Chicago.

DISCUSSION: The US DOE participation through the Joint Technical Committee (JTC) has been working well and our involvement with Stripa provides opportunities to conduct tests which otherwise would be impossible with US facilities except through significant expenditures to create and maintain US facilities.

U.S. POSITION: The U.S. DOE considers this program useful and will continue to support related activities within the constraints of budgets on development work for repositories in crystalline and other rocks. Once Phase III is defined by the JTC, which includes U.S. participation, DOE will evaluate participation.

TALKING POINTS: The US DOE is interested in further developments for testing in crystalline rocks. The Joint Technical Committee has been working well and should continue to function in selecting the technical activities of most interest and developing shared costs for execution of the work.

06-23-86

Item 6b
P-INSITU.1

**DRAFT POSITION STATEMENT ON SUPPORT OF THE NEA ADVISORY GROUP ON
IN SITU RESEARCH AND INVESTIGATIONS FOR GEOLOGIC DISPOSAL**

BACKGROUND: At their previous meeting in December 1985, the NEA RWMC elected to discontinue the former Coordinating Group on Geologic Disposal and replace the activity with two groups, the Performance Assessment Advisory Group and the Advisory Group on In Situ Research and Investigations for Geologic Disposal. The latter group would provide a forum for the exchange of scientific and technical experience in underground laboratories for geologic disposal programs.

The NEA has extended an invitation to member states to participate and has scheduled the first meeting for October 28-29, 1986 in Paris. One or two representatives are expected from each country.

DISCUSSION: Presently, the United States has only one underground test facility, WIPP, for the Defense program. Climax Mine has been closed and Avery Island is no longer used for DOE testing.

U.S. POSITION: The United States tentatively plans to participate, using staff from the WIPP activity. Lynn Tyler, SNLA, has been nominated to participate representing DOE salt tests. Another DOE member is planned representing tests in crystalline rock (OCRWM/OCRD). NRC will have a participant.

TALKING POINTS: Now that the US DOE has indefinitely postponed the siting activities for a second repository, we have an increased interest in getting involved in working with other countries on testing in crystalline rocks. We do not plan on any new test facilities and must rely on international cooperation for development work.

06-23-86

DRAFT POSITION ON US DOE SUPPORT OF NEA SEABED WORKING GROUP

BACKGROUND: The United States has actively supported the NEA'S Seabed Working Group (SWG) and has a subseabed disposal program underway at Sandia National Laboratory. The 1986 budget for that activity is \$60,000,000. About \$1 million of this will be carried over into FY 1986 to terminate the program. The collective financial support by other countries has been about equal to the U.S. expenditure.

In February 1986, the DOE notified participants of the NEA SWG of its intentions to terminate the U.S. participation because of budget constraints but not technical reasons. Subsequently, in a meeting of the SWG Executive Committee in Paris, April 21-22, 1986, the UK and the Netherlands also indicated intentions to reduce funding for seabed studies. France cautioned that the declining interest in seabed disposal may adversely affect sea dumping decisions by the London Dumping Convention. However, at the SWG task group meeting in Urbino, Italy, the group agreed to complete a NEA Concept Assessment Report by December 1987 or before.

DISCUSSION: The U.S. DOE is interested in an orderly closure of its activities on evaluating the feasibility of the subseabed in order to preserve acquired information for later use. Subseabed is an "alternative" disposal study under Section 222 of the NWPA.

U.S. POSITION: The U.S. encourages that the utmost effort be made to complete the NEA report on Subseabed feasibility and we will do our best to assist. DOE will support participation in the Executive Meeting October 21-22, 1986.

TALKING POINTS:

- Recent and projected budget limitations on R&D expenditures (non-nuclear waste fund money) have resulted in the need to reassess repository program priorities in the United States. This reassessment has led to a decision to close out the U.S. Subseabed Project in 1986. Funds not exhausted in 1986 will be available for closeout support in 1987. In planning the closeout of the U.S. program, the U.S. DOE will work closely with its cooperating partners in the NEA Seabed Working Group to minimize adverse effects resulting from this action. The United States encourages the continuation of the scientific work on the subseabed by the other partners to the extent possible.
- The 1987 effort by the U.S. DOE will be limited to documentation of existing data and information to preserve subseabed knowledge. This will include preparation of the U.S. contribution to the NEA report.

The support will continue to be provided by the Albuquerque Operations Office (Forster) and Sandia National Laboratory (Anderson).

- The SWG is to be commended on the excellent job of coordinating the development programs and organization it has used to effectively get information through international sharing of activities.

P-NEASWG.2
06-23-86

Item 8
P-IWR.1

**DRAFT POSITION PAPER ON INTERNATIONAL APPROACHES ON THE USE OF
RADIOACTIVE WASTE DISPOSAL FACILITIES**

BACKGROUND: The NEA's Radioactive Waste Management Committee, primarily because of interest by the Netherlands, initiated in February 1985 a preliminary review of possible approaches for international co-operation on the use of waste repositories. The Dutch interest stems from their need to demonstrate to their national governing body that a solution to disposal of waste from their expanding nuclear power generation is forthcoming.

A small group of experts, set up by NEA with A. M. Platt (USA) as chairman met in June and October of 1985 to undertake the review and to consider the need for future studies. Preliminary discussions within the Group and the RWMC indicate that there does not seem to be any fundamental technical and economical obstacles to multilateral co-operation on radioactive waste disposal. The report of the study will be presented at the July 1986 meeting of the RWMC for review and comment.

DISCUSSION: The discussions on this topic at the December 1985 meeting of the RWMC indicate there are two schools of thought on the issue. One school, consisting of states like the Netherlands who have no ready answer to the disposal problem, support the concept of an international repository. The other school, composed of those states advanced in nuclear technology like France and the United Kingdom, take the position that international trade already exists in this area and believe that waste disposal should be treated as any other commercial enterprise. For example, one country might accept another state's waste in return for a reactor order or other trade incentives.

Acceptance of spent fuel from the third-world countries, whether at an international repository or by one of the advanced states could reduce the potential for proliferation.

On the other hand, a program directed at developing an international repository could unfavorably impact the on-going national efforts to site and build a repository. The countries with active repository programs would like to continue their progress without the issue of international waste disposal or the potential of disposing of waste elsewhere which may be unattainable.

An international repository requires a site either through the willingness of a state to be the "host" or through an agreement to use an ocean site. Neither of these options are likely to be offered in the near future.

U.S. POSITION: The United States agrees to submitting the report to the Steering Committee. (The United States, recognizing the number of safe storage options available recommends that we do not immediately consider the follow on studies.) Let's allow the national repositories to develop first.

TALKING POINTS:

1. The estimated accumulation of spent fuel and high-level waste is lower because of fewer reactors than estimated earlier. In fact, the US has just postponed indefinitely the siting process for a second repository because of reduced projections.
2. Future progress in several countries in the next few years will provide a much better data base on which to consider future studies particularly as designs and cost estimates become more precise.
3. International exchange of waste is already taking place as typified by the transportation of spent fuel from many countries to France and the United Kingdom for reprocessing. The Swedes recently traded spent LWR fuel in storage at La Hague for spent FRG MOX fuel to be stored in their new interim storage facility, CLAB.
4. Advancement in low- and -intermediate-level waste is needed by each country to better establish the relationship between resolution of spent fuel/high-level waste disposal and the disposal of other waste.
5. More serious consideration is being given to other hazardous waste materials. The impact of these waste materials on disposal policy needs time to be developed.

P-IWR.1
06-23-86

Item 9a
RADPROT

DE MINIMUS LEVELS

Position: The U.S. supports continued effort towards the establishment of de minimus levels which are fully coordinated with IAEA and regulatory agencies in each country.

06-18-86

Item 9b
CRPPH

COMMITTEE ON RADIATION PROTECTION AND PUBLIC HEALTH

BACKGROUND:

The CRPPH is focused on:

- a) a critical review of new ICRP publications
- b) a review of drafts and concepts being developed by ICRP
- c) to develop recommendations to ICRP.

Radiologic impact of waste disposal is a priority item. The CRPPH has reviewed the report on Shallow Land Burial RWM/DOC (86)2.

It has developed the draft report on "de minimus levels". It is reviewing ICRP 39 and the control of exposure to natural sources of radiation.

It is considering worker doses, emergency planning, consequences of accidents, fetus dose effects and epidemiological effects.

POSITION: The RWM should commend the work of the CRPPH.

TALKING POINTS: The RWM may want to consider coordination with CRPPH on documenting training requirements for radioactive waste management.

06-18-86

**DRAFT POSITION PAPER ON PROPOSAL FOR A SPECIALIST WORKSHOP ON
RADIOACTIVE WASTE MANAGEMENT AND PUBLIC OPINION-- RWM/DOC(86)5**

BACKGROUND: The NEA Secretariat proposes to convene a workshop on the issue of radioactive waste management and public opinion. Objectives would be to: 1) identify the range of problems concerning public acceptance of radioactive waste management issues, 2) to promote a review of current radioactive waste management public affairs policies and programmes at the national level, including an evaluation of their degree of success, 3) identify contributions in this area by international agencies such as the IAEA and NEA; and 4) develop recommendations for improvement in the information available to the public on the status of development of radioactive waste management.

Workshop participants (50-60) would include executives and public affairs experts in the radioactive waste management field, public opinion specialists from the non-nuclear areas (e.g., chemical industry) and experts from the international agencies and the communications industry. The workshop could take place as soon as November 1986 and the report would be ready for the NEA Steering Committee in June 1987. The NEA Steering Committee endorsed the workshop at the April meeting but has not decided that a report of the meeting should be prepared. NEA will enlist several consultants in planning the meeting and identifying the participants.

DISCUSSION: As a strong proponent of a program on public affairs, the United States is obligated to support the proposed study. It is important that we be involved in the early planning so as to provide U.S. input to the scope, methodology, and definition of the proposed end product, and thus to provide some assurance that the results will be of value to the DOE waste management public relations efforts.

As public information covers a wide-gamut of activities in which few nuclear specialists get involved, it is important that input be obtained from a wide range of sources, i.e., industry, government agencies, news media, and the public. It is very important that the study leaders be knowledgeable on both the technical and institutional aspects. It is extremely important that some of the leaders have a good grasp of the risks accompanying radioactive waste management and be able to convey that understanding to the other contributors.

We can expect to get a summary of public information activities around the world which may point to the more successful techniques or the need for better coordinate the information.

U.S. POSITION: The U.S. DOE supports the NEA proposal for a workshop on radioactive waste management and public opinion. We will provide at least one qualified participant for the initial workshop. At this time, we would not assume a lead role such as

chairmanship or assembling the report. We emphasize the need for an early definition of the workshop objective, scope and product and also the need for participation by non-nuclear public relations experts. We are willing to provide an expert to assist in the planning of the meeting.

TALKING POINTS: The NEA is to be commended on recognizing the need for discussions on public information. This is particularly timely given the recent Chernobyl incident and its impact on nuclear power which can spill over into waste management.

Adequate public information has been an issue in the radioactive waste management area for a long-time but appropriate solutions are not apparent.

Public information and communications has a large role in the implementation of the Nuclear Waste Policy Act of 1982. While we have lots to learn, there has been a major effort to keep the public informed.

Recognition of the appropriate level of information and the type of information is important.

06-18-86

DRAFT POSITION PAPER ON IMPACT OF CHERNOBYL REACTOR ACCIDENT

Background: The NEA Committee on the Safety of Nuclear Installations (CSNI) together with experts in radiological protection, met on May 9th to examine the impact of the Chernobyl accident on OECD countries. The committee concluded on the basis of available information that the accident poses no significant risk to OECD countries but recommended that a more thorough study be conducted when more information becomes available. These studies would be conducted by the relevant NEA committees, e.g., RWMC.

DISCUSSION: The accident offers a unique opportunity to evaluate the effects of a severe nuclear accident, e.g., radiation effects upon humans, decontamination on a broad scale, costs, disposal of waste materials, etc.

Because of the general relationship between the United States and Russia, it is unlikely that United States nuclear specialists who are able to evaluate Russian nuclear technology would be permitted to examine the reactor scene closely. Some OECD countries or OECD representatives may be allowed to do so, however, and their observations could be of value to us.

U.S. POSITION: The United States supports any efforts by the NEA RWMC to form study groups on waste management aspects of the accident, e.g., D&D, radiation protection, migration of radionuclides, disposal of waste, public understanding of radiation, etc.)

TALKING POINTS: While the accident is indeed a tragedy, the entire world, including the USSR, can benefit from the information and experience to be gained in recovering from the accident.

Open discussion of the accident would do much to communicate information on major reactor accidents. It would also put a damper on the extreme statements that appear so early in the reporting of accidents.

If action is taken, the United States prefers not to have a lead role, i.e., chairmanship or production of a report, but will cooperate with other members in producing a worthwhile report.

**DRAFT POSITION STATEMENT ON RECOMMENDATION FOR COORDINATION
PROGRAM ON WASTE FORM TESTING**

BACKGROUND: Several independent activities are underway on the characterization of waste forms. These include the Materials Characterization Center (USA/PNL), the WIPP/SRL characterization program (USA/SRL), the CEC characterization program, and the JA/SW/FRG characterization program. In addition, many countries are making waste form measurements particularly on leachability of glasses. The test methods vary and the purpose varies as does the recognized individual country requirement for waste form performance. While no one method may be applicable for all purposes, additional coordination of these programs may identify redundant activities, preferred methods and better direction to ongoing scientific programs.

DISCUSSION: These programs cover a narrow technical area and are not well known in the technical community. There is a high probability of redundancy in the work but the results are not transferrable or usable because of differences in test methods and the level of quality assurance that is applied.

Some countries do not emphasize the performance of waste forms but prefer to approach the performance assessments based on assumed scenarios. Their position is that if a worst case is acceptable, why go further.

U.S. POSITION: The United States recommends that NEA, through the RWMC, review the various waste form characterization programs by hosting a workshop(s) in about 2 years on the performance of waste packages in geologic disposal. The activities of all the characterization programs can be presented for review. This in turn could lead to a better scientific consensus on the preferred methods of testing waste forms and packages.

TALKING POINTS: Such a workshop might be handled under the Performance Assessment Advisory Group since the waste forms provide the source term for performance assessment calculations.

The workshop should be a logical follow-on^{to} the workshop recently held on coupled processes. This workshop should emphasize both testing for acceptance of waste and testing for actual performance under geologic conditions.

Since extensive planning is required for the workshop, the NEA custom of involving advisors to plan the workshop is good. The U.S. would be willing to assist in the planning as well as participate in the workshop.

The U.S. would be willing to host such a workshop in the US.

Alignment of the many university and other scientific investigations on waste forms can provide much data in the future.

06-19-86

DRAFT POSITION PAPER ON SEADUMPING OF LOW AND MEDIUM LEVEL WASTE

BACKGROUND: Ocean dumping of radioactive waste was used by the United States from 1946 to 1970 but discontinued because of environmental objections and because of the prospect of acceptable land-based alternatives. European nations have used ocean dumping from 1951 to 1981 but have discontinued the practice because of the moratorium agreed upon at the 1983 London Dumping Convention. Japan planned to begin ocean dumping in 1982 but has since elected to emphasize land disposal. Since 1977, ocean disposal operations have been monitored by the NEA through several working groups. The United States has been participating in these working groups.

Several countries -- Belgium, Netherlands, Japan, United Kingdom -- would like to use ocean dumping but have their plans on hold pending approval through the London Dumping Convention.

Countries participating in the London Dumping Convention generally agree that the LDC is the body to consider sea dumping and the disposal of high level waste in the seabed. Several countries continue to object to seadumping (e.g., Spain) At the last LDC meeting, it was concluded that further study was needed but, it was evident that scientific logic was being ignored. The concern is that if extensive scientific evidence as to the safety of seabed dumping exists, it still may not be practiced. While the participants are not legally bound to abide by the LDC rules, all countries have to date.

DISCUSSION: There is substantial objection to ocean dumping. International approval is viewed as necessary for sea dumping and such would be difficult to obtain. The current approach in LDC is to insist that sea dumping be compared to land based disposal. The NEA has conducted monitoring activities at a sea dump site and reported the findings to LDC. The Coordinated Research And Environmental Survielland Program (CRESP) has been supported modestly by EPA and DOE.

Sea dumping would increase transportation distances over the present regional land-based system coming into use in the U.S. Transfer ports are required to move the waste into ships. Sea dumping would benefit small island type countries, e.g., UK, Japan, Italy, Taiwan, more than the larger countries, e.g., United States, USSR.

U.S. POSITION: The U.S. DOE supports the concept that sea dumping should not be foreclosed until there is scientific findings that indicated the level of its long term safety. Seabed may be a better option for those countries not having suitable land disposal sites or it may be a better option for selected wastes. Decisions should be made based on scientific evaluations. The US will maintain support through EPA research on CRESP interests and through assistance from PNL (W. Tempelton

supported by NE).

TALKING POINTS:

- The studies on disposal of radioactive wastes set a pattern for the almost certain studies to be made on disposal of non-radioactive waste into the sea.
- The EPA study includes laboratory biological effects research on sublethal effects of radiation on the reproductive success of selected marine invertebrates. Dr. Florence Harrision of LLL will participate on the Biology Task Group. Quantative mineral analyses on sediments from the NE Atlantic site have been made.

06-18-86

DRAFT POSITION PAPER ON SUPPORT OF INTRAVAL

BACKGROUND: The Swedish Power Inspectorate, SKI, has since 1981 organized the two international collaboration projects, INTRACOIN and HYDROCOIN, dealing with verification, validation and uncertainty analysis exercises using mathematical models for the description of nuclide migration (INTRACOIN) and groundwater transport (HYDROCOIN). The need for extensive work on validation of geosphere models has led SKI to propose a new project, called INTRAVAL, at a HYDROCOIN workshop in Albuquerque in May 1985.

INTRAVAL would be a technical working group similar to INTRACOIN and HYDROCOIN and many of the members would likely come from those groups. The validation of performance assessment models would be done through comparisons between model calculations and available data from field experiments, laboratory experiments and natural analogues. The program is estimated to take about three years to complete.

DISCUSSION: Validation is an extremely important part of performance assessment. Without it, the accuracy of the analyses of repository performance cannot be substantiated.

Validation by an international group of experts would offer a wider spectrum of experimental data for the validation work than that available in the United States. It could also give more credence to the results.

U.S. POSITION: The U.S. DOE favors support of INTRAVAL, but the level of support depends on the extent of validation which the group undertakes. NEA involvement can be determined after the project is organized.

TALKING POINTS:

- U. S. favors the SKI lead on INTRAVAL. They are to be commended on the excellent job they have been doing. We intend to participate but the level of participation remains to be defined.
- As in the past the NEA role can be determined after the activities are organized.
- Validation is a complex undefined process which requires the best thinking and approaches possible. The INTRAVAL project needs more than just voluntary work. It needs an international commitment and a monetary commitment to make it successful. Such a commitment should be developed and discussed with the NEA RWMC at a future meeting. However, INTRAVAL as presented by SKI should proceed without waiting on the commitment through NEA RWMC.

DRAFT POSITION PAPER ON CODE TRANSFERS TO THE NEA

BACKGROUND: Intermittently, requests are received by the U.S. DOE and supporting contractor staff for computer models and codes to be used in waste management activities in other countries or by international agencies. It has been U.S. policy to provide such models and codes to agreement countries and international organizations.

The U.S. DOE maintains the National Energy Software Center (NESC) at Argonne National Laboratory for the purpose of tracking such transfers and subsequent changes in the codes and is making an effort to document our codes on geologic disposal so we can make them available through the NESC.

A cooperative agreement exists between the U.S. DOE and the NEA for computer code exchange. Under this agreement, requests for developed computer codes by member states are to be referred to the NEA or NESC and the country/organization who developed the code.

DISCUSSION: Control of code transfers is needed to ensure that users are kept up-to-date on the code development and do not receive faulty codes.

U.S. POSITION: The exchange of codes and the appropriate method of transfer of codes need to be discussed. It is necessary for us to adopt the policy that we will only honor requests for codes in the future if they come from the principal coordinator of a bilateral agreement, through the NESC. The NEA role on computer codes needs to be defined.

TALKING POINTS: Computer codes used in performance assessment and other radioactive waste management activities are generally in the developmental stage. Keeping the code up to date for multi-users is difficult without a central clearing house. At present we have had so many requests for codes that we are not able to accommodate all of the requests without considerable delay. There is continual changes and developments in the codes that may not be communicated to previous recipients.

Computer codes, like all other aspects of the waste management system should be subject to quality assurance control.

FROM DOE		DATE OF DOCUMENT 6/23/86	DATE RECEIVED 6/26/86	NO WM-86573
TO REBrowning		LTR	MEMO XX	REPORT XX
		ORIG.	CC XX	OTHER
CLASSIF		ACTION NECESSARY <input checked="" type="checkbox"/>	CONCURRENCE <input type="checkbox"/>	DATE ANSWERED 6/27
POST OFFICE		NO ACTION NECESSARY <input type="checkbox"/>	COMMENT <input type="checkbox"/>	BY
REG. NO.		FILE CODE: 109		
DESCRIPTION (Must Be Unclassified) REQ for review and comments on Positions for Delegation to the RMC Meeting in Paris		REFERRED TO HKnapp	DATE 6/26	RECEIVED BY
ENCLOSURES				
REMARKS				