

July 8, 1982

William J. Dircks Executive Director for Operations

Attn: T. Rehm

Subj: 263RD ACRS MEETING ACTIONS, RECOMMENDATIONS, AND REQUESTS

Based on discussions regarding methods for improved implementation and followup of ACRS recommendations, the Committee agreed that a summary of Actions, Agreements, Assignments, and Requests made during each full Committee meeting will be sent to the NRC Staff following each meeting.

Attached in response to this agreement is a list of the requests made at the 263rd ACRS Meeting, March 4-6, 1982. This list has the concurrence of the ACRS Chairman and designated ACRS members as will all future items provided for follow up purposes.

Those items in the list "Actions, Agreements, Assignments, and Requests" dated April 28, 1982, that do not deal with requests made of the NRC Staff or that are not pertinent to NRC Staff activities have not been included in this followup list.

Executive Director

cc: C. Michelson, AEOD

H. Denton, NRR

R. B. Minogue, RES

R. DeYoung, I&E

J. G. Davis, NMSS

E. Case, NRR

ACRS Members

attachments:

As stated

ACTIONS, RECOMMENDATIONS, AND REQUESTS 263RD ACRS MEETING, MARCH 4-6, 1982

ACRS Reports, Letters, and Memoranda

Report on Clinton Power Station Unit 1

- 1. The Committee prepared a report to the Commissioners of its review of the Clinton Power Station Unit 1 recommending, subject to due consideration of recommendations in the body of the report and satisfactory completion of construction, staffing, and preoperational testing, the granting of a license to operate the plant at full power. Recommendations/comments in the body of the report addressed:
 - . Continued progress in the plant staffing and training prior to full loading
 - . Staff audit of the QA/QC organization
 - . Generic resolution of Mark III suppression pool dynamic loads
 - Generic resolution of a hydrogen ignition system for this type of containment
 - . Specific attention to the seismic capability of the emergency AC power supplies, the DC power supplies, and small components such as actuators and instrument lines that are part of the decay heat removal system.

Report on the Byron Station Units 1 and 2

- The Committee prepared a report to the Commissioners of its review of the full power operating license for the Byron Station Units 1 and 2. The recommendation is for full power operation subject to certain issues requiring final resolution noted in the body of the report and subject to satisfactory completion of construction and preoperational testing. The issues noted in the body of the report are:
 - . Applicant's staffing, training, and technical support capabilities

Report on the Waterford Steam Electric Station Unit 3

The Committee prepared a report to the Commissioners regarding the continuation of its review of the application of Louisiana Power and Light Company (LP&L) for a license to operate the Waterford Steam Electric Station Unit 3. The ACRS believes that the Applicant has effectively responded to concerns

ACTIONS, RECOMMENDATIONS, AND REQUESTS 263RD ACRS MEETING, MARCH 4-6, 1982

regarding organization and management expressed in the Committee's August 11, 1981 report. If due consideration is given to other matters in the August 11, 1981 report as well as continued dedication of LP&L management, satisfactory completion of staffing, and the planned program for training, the recommendation is for approval of full power operation of the plant.

Report on Systems Interaction Study for Indian Point Nuclear Generating Unit 3

4. The Committee prepared a report to the Commissioners of its review of the proposal of the Power Authority of the State of New York (PASNY) to perform a systems interactions study of the Indian Point Nuclear Generating Station Unit 3. The ACRS believes that the PASNY proposal is generally responsive to prior ACRS recommendations made in letters dated July 13, 1978 and October 12, 1979 and believes that it is reasonable in this study to place emphasis on the interactions between nonsafety systems and safety systems.

Report on the Long-Term Performance of Materials Used for High-Level Waste Packaging

- The Committee prepared a report to the Commissioners of its review of the NRC's Contract Review Panel recommendations for the selection of a contractor to develop a methodology for predicting Long-Term Performance of Materials Used for High-Level Waste Packaging. Concern was expressed about the rationale for the extraordinarily high standards for long-term survival of these waste containers. Comments were made regard ng several additional items as follows:
 - NRC Staff and the contractor should establish plans for close monitoring of progress in the work
 - NRC should assure that the contractor issues progress reports at frequent intervals
 - . Provisions should be made for periodic peer review of
 - contractor's proposal program
 - contractor's results
 - . NRC Staff monitoring and peer reviews should assure
 - program responsive to NRC's needs
 - contractor gaining maximum benefit from state-of-the-art knowledge and experimental techniques

ACTIONS, RECOMMENDATIONS, AND REQUESTS 263RD ACRS MEETING, MARCH 4-6, 1982

- Guidance should be developed on the requirements of the repository surveillance program, including
 - extent and nature of tests
 - accuracy levels required
 - definition of associated degree of uncertainty
 - parameters that are important and unimportant to assessment of the performance of waste package materials

Report on the Licensee Event Report Rulemaking

AEDD

The Committee prepared a report to Commissioner Ahearne regarding the status of its consideration of the proposed Licensee Event Report (LER) Rulemaking. While the ACRS believes the proposed rule represents a natural evolution in the state-of-the-art in data gathering, and supports its publication for comment, ultimate goals for such a system include better reporting, analysis, and evaluation of human errors and computer software errors and perhaps the development of a system for more effectively identifying precursors and systems interactions in addition to revisions revealed by subsequent experience.

ACRS Recommendation Regarding Revision 3 to Proposed Regulatory Guide 1.28 "Quality Assurance Program Requirements (Design and Construction) (Task No.RS 002-5)



Red 7. The Committee endorsed a memorandum from the ACRS Executive Director to the EDO which states that the ACRS has considered the recommendations of its Subcommittee on Regulatory Activities regarding Revision 3 to Regulatory Guide 1.28 and has agreed to defer further consideration and action until it has been reviewed by the Committee to Review Generic Requirements (CRGR). It is recommended that the CRGR consider in its review the generic question relating to the manner in which the NRC Staff utilizes voluntary consensus standards by endorsement in a regulatory Guide with exceptions and/or additions and makes mandatory those quidelines that are nonmandatory in the endorsed standard.

NRC-Industry Steering Panel on Steam Generator Tube Degradation

The NRC Staff is organizing a Steering Panel to coordinate an NRC-industry NRA effort to resolve problems associated with ubiquitous steam generator tube degradation. Consistent with the request of the NRC Chairman for ACRS participation, the Committee endorsed having P. G. Shewmon address metallurgical/chemical engineering concerns and J. Ebersole address plant design/ operations aspects of the problem.

ACTIONS, RECOMMENDATIONS, AND REQUESTS 263RD ACRS MEETING, MARCH 4-6, 1982

Improved Summaries in Safety Analysis Reports (SARs) and Safety Evaluation Reports (SERs)

NRR 9. The Committee discussed the development of improved SERs and SARs for support of ACRS activities in regard to a February 12, 1982 memorandum from the EDO responding to suggestions from the Committee on this matter. The Committee designated M. C. Gaske as liaison for the ACRS regarding this effort.

Status of LOFT Research Program

Real 10. M. S. Plesset requested an hour at the 264th ACRS Meeting (April) for a Staff briefing regarding the future status of the LOFT Program.

Use of PORVs on Combustion Engineering (CE) Plants

NRR 11. D. A. Ward noted the intent of the Decay Heat Removal Systems Subcommittee to schedule a briefing at a future subcommittee meeting regarding the need for PORVs on Combustion Engineering Reactor Plants.

Question of the Staff on Loop Stop Valves

12. J. Ebersole suggested that the Staff investigate and report back to the ACRS on the potential for failure of pump casings when pumps are inadvertently running between two closed loop isolation valves.

LER Engineering Evaluations

13. D. Okrent requested that C. Michelson of AEOD add his name to the distribution list for LER engineering evaluation memoranda which are developed in AEOD. C. Michelson agreed.

Froth Impingement with Regard to Hydraulic Control Units (HCU)

14. J. Ebersole, D. Okrent, and M. S. Plesset expressed concern about water impact on HCUs. C. Grimes of the NRC Staff indicated that the matter came up during the CP review of Grand Gulf, Clinton, Allens Creek and similar BWR Mark IIIs. D. Okrent suggested that the Staff resolve this matter and report to the ACRS before the Committee completes its OL review of Grand Gulf.

Seismic Design of Pendant Type Pumps

15. J. Ebersole requested that the NRC Staff study the seismic design of pendant type pumps that are used for service water uptake, determine whether they will operate at the limits of the amplitude of movement, and report to the ACRS regarding recently described problems with bearing degradation and bearing failures in such pump types.



March 9, 1982

Honorable Nunzio J. Palladino Chairman U. S. Nuclear Regulatory Commission Washington, DC 20555

SUBJECT: REPORT ON CLINTON POWER STATION UNIT 1

Dear Dr. Palladino:

During its 263rd meeting, March 4-6, 1982, the Advisory Committee on Reactor Safeguards reviewed the application of the Illinois Power Company, the Soyland Power Cooperative, Inc., and the Western Illinois Power Cooperative, Inc. (Applicant) for a license to operate the Clinton Power Station Unit 1. The plant is to be operated by the Illinois Power Company. A tour of the facility was made by members of the Subcommittee on the morning of February 25, 1982 and a Subcommittee meeting was held in Decatur, Illinois on February 25-26, 1982 to consider this application. During its review the Committee had the benefit of discussion with representatives of the Applicant and the NRC Staff. The Committee also had the benefit of the documents listed. The Committee commented on the application for a permit to construct this Station in its report dated April 8, 1975.

The Clinton Power Station is located in DeWitt County in east-central Illinois about 6 miles east of the city of Clinton and 22 miles north-northeast of Decatur. Unit 1 uses a General Electric BWR-6 nuclear steam supply system with a rated power level of 2894 MWt and a Mark III pressure suppression containment system with a design pressure of 15 psig. Construction of Unit 1 is about 85% complete and Unit 2 is about 3% complete. Construction of Unit 2 has been deferred indefinitely, and the Applicant's motion to sever the Unit 2 proceedings from Unit 1 licensing proceedings has been granted. Consequently, both the Committee and the NRC Staff have limited this review to Unit 1.

The Committee's review included an evaluation of the management organization, the operational staff, and the training program. The Clinton Power Station is the Applicant's first nuclear station and staffing for plant startup and operation is not yet complete. The Applicant, however, has made considerable progress and has a well-established training program. The NRC Staff will continue to monitor the Applicant's progress and expects to complete its review before fuel loading.

The Applicant is currently restructuring the construction and operational quality assurance and quality control organization in response to NRC Staff concerns. The revised organization will be reviewed and audited by the NRC Staff. The Committee wishes to be kept informed on this matter.

PR 0139

The Mark III suppression pool dynamic loads have been identified as an Outstanding Issue in the NRC Staff's review. The NRC Staff has provided the Applicant with a proposal for the appropriate design basis loads, and it appears that the Clinton design will be able to accommodate these loads. The Committee will continue to discuss, on a generic basis, the Mark III suppression pool dynamic loads with the NRC Staff.

Hydrogen control systems for Mark III containments are being developed by the Mark III Owners Group. Efforts by this Owners Group are being directed toward the development of a hydrogen ignition system which makes use of distributed ignition sources. The NRC Staff has indicated that they will be able to meet with the Committee on this matter in the near future. The Committee expects to review this system on a generic basis. Acceptability of this system is a License Condition.

The Applicant, in response to NRC Staff requirements, has reevaluated certain safety-related systems of the Clinton design using the ground motion parameters that describe the site-specific spectra equivalent to a design basis earthquake of M equal to 5.8. The Applicant has reanalyzed what he believes to be the limiting structures and components using this new response spectrum and has concluded that all Seismic Category 1 structures will withstand the design basis earthquake. Work by the Applicant is continuing. The Committee believes that specific attention should be given to the seismic capability of the emergency AC power supplies, the DC power supplies, and small components such as actuators and instrument lines that are part of the decay heat removal system. This matter should be resolved in a manner satisfactory to the NRC Staff. The Committee wishes to be kept informed.

In its Safety Evaluation Report dated February 1982, the NRC Staff has identified a number of Unresolved Safety Issues as being applicable to Clinton as well as a number of Outstanding Issues, Confirmatory Issues, and License Conditions. We believe that if due consideration is given to these matters and to our recommendations above, and subject to satisfactory completion of construction, staffing, and preoperational testing, there is reasonable assurance that the Clinton Power Station Unit 1 can be operated at power levels up to 2894 MWt without undue risk to the health and safety of the public.

Sincerely,

P. Shewmon Chairman

References

1. Illinois Power Company, et al., "Final Safety Analysis Report, Clinton Power Station Units 1 and 2" with Amendments 1-12.

 U.S. Nuclear Regulatory Commission, "Safety Analysis Report Related to the Operation of Clinton Power Station Unit 1," NUREG-0853, dated February 1982.



March 9, 1982

Honorable Nunzio J. Palladino Chairman U. S. Nuclear Regulatory Commission Washington, DC 20555

SUBJECT: REPORT ON THE BYRON STATION UNITS 1 AND 2

Dear Dr. Palladino:

During its 263rd meeting, March 4-6, 1982, the Advisory Committee on Reactor Safeguards reviewed the application of the Commonwealth Edison Company (Applicant) for a license to operate Byron Station Units 1 and 2. A tour of the facility was made by members of the Subcommittee on February 25, 1982, and a Subcommittee meeting was held in Rockford, Illinois on February 26, 1982 to consider this project. During its review, the Committee had the benefit of discussions with representatives of the Applicant and the NRC Staff. The Committee also had the benefit of the documents listed. The Committee commented on the construction permit application for this Station in its report dated May 13, 1975.

The Byron Station is located in Ogle County, Illinois, about 17 miles southwest of Rockford. Rockford is the nearest densely populated center and had a 1980 population of about 140,000 people.

The Byron Station uses two Westinghouse four-loop pressurized water reactors, each having a rated power level of 3425 MWt. Each is housed in a steel-lined, reinforced concrete containment building with a design pressure of 50 psig. Construction of Unit 1 is about 82% complete and Unit 2 is about 70% complete.

The Applicant now has seven operating reactors and has accumulated over 80 reactor years of operating experience. We reviewed the Applicant's staffing, training, and technical support capabilities for the Byron Station and believe that these capabilities are satisfactory.

The NRC Staff has identified in its Safety Evaluation Report dated February 1982 certain Unresolved Safety Issues as being applicable to the Byron Station as well as a number of Outstanding Items, Confirmatory Issues, and License Conditions; these include some TMI Action Plan requirements. We believe that these issues can be resolved in a manner satisfactory to the NRC Staff and recommend that this be done.

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The Committee believes that, if due consideration is given to the recommendation above, and subject to satisfactory completion of construction and preoperational testing, there is reasonable assurance that the Byron Station Units 1 and 2 can be operated at power levels up to 3425 MWt without undue risk to the health and safety of the public.

Sincerely.

P. Shewmon

Chairman

References

- T. Commonwealth Edison Company, "Final Safety Analysis Report for the
- Byron/Braidwood Stations," including Amendments 1-36.

 2. U. S. Nuclear Regulatory Commisson "Safety Evaluation Report Related to the Operation of Byron Station, Units 1 and 2," NUREG-0876, dated February 1982.
- 3. Letter from League of Women Voters of Rockford, Illinois regarding the agenda of the ACRS Subcommittee meeting on Byron on February 26, 1982 in Rockford, Illinois dated February 26, 1982.
- 4. Letter from Elizabeth McKay to P. Shewmon regarding grouting of plant foundations with bentonite, dated February 26, 1982.



March 9, 1982

Honorable Nunzio J. Palladino Chairman U. S. Nuclear Regulatory Commission Washington, DC 20555

SUBJECT: REPORT ON THE WATERFORD STEAM ELECTRIC STATION UNIT 3

Dear Dr. Palladino:

During its 263rd meeting, March 4-6, 1982, the Advisory Committee on Reactor Safeguards continued its review of the application of Louisiana Power and Light Company (Applicant) for a license to operate the Waterford Steam Electric Station Unit 3 (Waterford-3). This project was considered at a Subcommittee meeting on March 3, 1982 in Washington, D.C. and at a previous full Committee meeting on August 6-8, 1981. During the August meeting, the Committee prepared an interim report to you dated August 11, 1981. In its review the Committee had the benefit of discussions with the Applicant and the NRC Staff. The Committee also had the benefit of the documents listed.

In its interim report the Committee expressed concern about the organizational readiness of the Applicant to operate the plant and about the adequacy of the Applicant's training program. The report made several specific suggestions, and we indicated that we would report to you further on the adequacy of staffing and management.

During the meetings on March 3 and 4, 1982, the NRC Staff reported its conclusion that the Applicant's organization, staff, and management will be adequate to operate Waterford-3 in a safe manner by the time of fuel loading, currently scheduled for January 1983. The Applicant described efforts over the past six months to strengthen the Waterford-3 organization and training program. These efforts include important changes in the corporate structure to provide increased dedication of management to the task of completing and operating Waterford-3, changes in the operating organization to permit improved focus on direct operational and technical support functions, substantial progress toward completion of staffing, the formation of a comprehensive training program, and establishment of a strong Safety Review Committee. In addition, the Applicant described the integration of the Waterford-3 and contract personnel into an effective startup organization.

10R 20242

The Committee believes that the Applicant has effectively responded to the concerns regarding organization and management expressed in our August 11, 1981 report. We believe that with continued dedication of Louisiana Power and Light Company management, satisfactory completion of staffing and the planned program for training, and due consideration to other matters noted in our August 11, 1981 report, there is reasonable assurance the Waterford Steam Electric Station Unit 3 can be operated without undue risk to the health and safety of the public.

Sincerely,

P. Shewmon Chairman

References

- Louisiana Power and Light Company, "Waterford Steam Electric Station Unit No. 3, Final Safety Analysis Report," with Amendments 1-25.
- 2. U.S. Nuclear Regulatory Commission, "Safety Evaluation Report Related to the Operation of Waterford Steam Electric Station, Unit No. 3," NUREG-0787, dated July 1981 with Supplement 1, dated October 1981 and Supplement 2, dated January 1982.



March 9, 1982

Honorable Nunzio J. Palladino Chairman U. S. Nuclear Regulatory Commission Washington, DC 20555

Dear Dr. Palladino:

Subject: REPORT ON SYSTEMS INTERACTIONS STUDY FOR INDIAN POINT NUCLEAR

GENERATING UNIT 3

During its 263rd meeting, March 4-6, 1982, the Advisory Committee on Reactor Safeguards reviewed the proposal of the Power Authority of the State of New York (PASNY) to perform a systems interactions study of the Indian Point Nuclear Generating Unit 3 (Indian Point 3). In its review the Committee had the benefit of a Subcommittee meeting held on February 26, 1982. The PASNY proposal was made in response to prior recommendations by the ACRS in letters dated July 13, 1978 and October 12, 1979 that a systems interactions study should be performed on Indian Point 3.

The ACRS believes that the PASNY proposal is generally responsive to the ACRS recommendations. The Committee agrees with PASNY that for this study it is reasonable to limit the portion that deals with the investigation of control system influences on safety systems to effects of interconnected systems. The ACRS also believes that, in view of prior efforts to review many aspects of possible adverse interactions between safety systems, it is reasonable in this study to place emphasis on the interactions between nonsafety systems and safety systems. However, the ACRS believes that where interactions between safety systems have not received prior study, they should not be ignored in this study.

The ACRS believes that it is time for the Indian Point 3 systems interactions study to begin and recommends that PASNY conduct the proposed "walk-down" phase during the upcoming plant shutdown for refueling.

A partial review of the NRC Staff's preliminary version of a generic approach to systems interactions studies also took place at the Subcommittee meeting. The Committee will complete its review of this matter after the Staff has finished preparation of its proposed plan. However, it is clear that it will be several years before the Staff completes the development of its approach to systems interactions studies for all reactors. In the interim, the ACRS recommends consideration of the potential merits of simplified walk-through systems interactions studies for all operating

PPR 29H

Honorable Nunzio J. Palladino - 2-March 9, 1982 light-water reactors in order to look for relatively obvious interactions. In addition, the ACRS recommends that a mechanism be developed for early dissemination and evaluation of any systems interactions observations arising from the ongoing studies and having potentially significant generic implications for a family of operating plants. Sincerely, P. Shewmon Chairman



March 9, 1982

Dr. John F. Ahearne Commissioner U.S. Nuclear Regulatory Commission Washington, DC 20555

SUBJECT: LICENSEE EVENT REPORT RULEMAKING

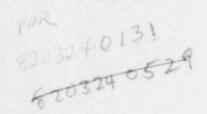
Dear Dr. Ahearne:

During its 263rd meeting, March 4-6, 1982, the Advisory Committee on Reactor Safeguards considered the proposed Licensee Event Report (LER) Rulemaking. Subcommittee meetings were held in Washington, DC on September 9, 1981, December 8, 1981, and March 3, 1982 to discuss this matter. Additional full Committee consideration of the proposed LER Rulemaking occurred during the 257th ACRS meeting, September 10-12, 1981, and the 260th ACRS meeting, December 10-12, 1981.

Implementation of the LER reporting procedures described in the Proposed Rule would represent a substantial improvement over the present system.

The new LER reporting system coupled with the proposed Nuclear Plant Reliability Data System (NPRDS), to be administered by the Institute of Nuclear Power Operations, should increase the usefulness of reported operational experience. For the combined system to be effective, however, the NPRDS must receive the cooperation and support of the nuclear utilities. The NRC Staff is aware of this need, and has promised to closely monitor the implementation of the NPRDS.

We believe the Proposed Rule represents a natural evolution in the state-of-the-art in data gathering, and we support its publication for comment. Although subsequent experience will undoubtedly reveal ways in which the Proposed Rule should be revised, and even perhaps replaced, we do not believe its publication should be delayed until a more advanced system is developed. Ultimate goals for such a system include better reporting, analysis, and evaluation of human errors and computer software errors and perhaps the development of a system for more effectively identifying precursors and systems interactions.



Dr. John F. Ahearne - 2 -March 9, 1982 The Committee expects to review the final version of the Proposed Rule after public comments have been received and considered by the NRC Staff. Sincerely yours, P. Shewmon Chairman SECY-82-3, Rulemaking Issue for The Commissioners from W. J. Dircks, Executive Director for Operations, Subject: Proposed Addition of 10 CFR 50.73 Establishing the Licensee Event Report (LER) System, dated January 4, 1982 cc: Chairman Palladino Commissioner Gilinsky Commissioner Bradford Commissioner Roberts C. Michelson, AEOD S. Chilk, SECY



March 9, 1982

MEMORANDUM FOR: William J. Dircks, Executive Director for Operations

FROM: Raymond F. Francy Executive Director, ACRE

SUBJECT: ACRS RECOMMENDATIONS REGARDING REVISION 3 TO PROPOSED

REGULATORY GUIDE 1.28 "QUALITY ASSURANCE PROGRAM RE-QUIREMENTS (DESIGN AND CONSTRUCTION)" (TASK NO. RS 002-5)

During its 263rd meeting, March 4-6, 1982, the ACRS considered the recommendations of its Subcommittee on Regulatory Activities regarding Revision 3 to Regulatory Guide 1.28 and agreed to defer further consideration and action until it has been reviewed by the Committee to Review Generic Requirements (CRGR).

Some of the reasons for this action can be found in the minutes, transcript, and report of the meeting of the Subcommittee on Regulatory Activities on March 3, 1982. These will be forwarded as soon as they are available. The ACRS recommends that the discussions at the Subcommittee meeting be considered by the CRGR in its review of this Guide.

It is recommended that the CRGR consider in its review the generic question relating to the manner in which the NRC Staff utilizes voluntary consensus standards by endorsement in a Regulatory Guide with exceptions and/or additions and by making mandatory those guidelines that are nonmandatory in the endorsed standard. The values of this practice to the Staff and its impact on the industry should be considered in a more quantitative form than in the value-impact statement accompanying the proposed Guide. It is even more important, however, that the CRGR consider the benefits in terms of reduced risk that result from endorsement of a voluntary consensus standard and the additional requirements included in the Regulatory Guide.

The ACRS expects to review this Regulatory Guide again after it has been approved by the CRGR. For that review, the Committee would like to have the benefit of any evaluative documents supplied to the CRGR. If the CRGR does not approve this Guide, the ACRS wishes to be informed.

cc:

Commission

S. Chilk. SECY

V. Stello, EDO

T. Murley, EDO

H. Denton, NRR

E. Goodwin, NRR

R. Minogue, RES

W. Morrison, RES

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March 9, 1982

Honorable Nunzio J. Palladino Chairman U. S. Nuclear Regulatory Commission Washington, DC 20555

SUBJECT: REPORT ON THE LONG-TERM PERFORMANCE OF MATERIALS USED FOR

HIGH-LEVEL WASTE PACKAGING

Dear Dr. Palladino:

In response to your letter of August 10, 1981, the Advisory Committee on Reactor Safeguards has reviewed the NRC's Contract Review Panel recommendation for the selection of a contractor to develop a methodology for predicting Long-Term Performance of Materials Used for High-Level Waste Packaging. On the basis of this review, we offer the following comments and recommendations.

We believe that the proposed contractor is technically capable of conducting the requested research. However, we believe that both the NRC Staff and the contractor should establish plans to provide for close monitoring of the work as it progresses, that the NRC should assure that the contractor issues reports on the progress of his work at frequent intervals (at least, quarterly) and that provisions should be made for periodic peer review both of the contractor's proposed program and his results.

NRC Staff monitoring of the work and the efforts of the peer reviews should be directed toward assuring that the program is responsive to NRC's needs, and that the contractor is gaining maximum benefit from state-of-the-art knowledge and experimental techniques. In particular, detailed guides need to be developed concerning the extent and nature of the tests that must be conducted, and the accuracy levels required, to assure that the results can be extrapolated to the time spans required for a waste repository and that the associated degree of uncertainty can be defined. Specific attention will need to be directed to the determination, early in the research program, of those parameters that are important, as well as those that are not important, to the assessment of the performance of waste package materials.

The Committee would like to take this opportunity to note that this letter is narrowly responsive to the question you posed to us in your letter of August 10, 1981, and that we have some concern about the rationale for the

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extraordinarily high standards for long-term survival of these waste containers. In this matter we urge you to follow the approach used in pursuit of quantitative safety goals so that society is not penalized by the imposition of arbitrarily derived criteria for waste isolation.

Sincerely,

P. Shewmon Chairman