



UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, D. C. 20555

January 5, 1983

William J. Dircks
Executive Director for Operations


Attn: T. Rehm

Subj: 272ND ACRS MEETING FOLLOW-UP ITEMS

Based on discussions regarding methods for improved implementation and follow-up of ACRS recommendations, the Committee ^{has agreed that a summary of} Actions, Agreements, Assignments, and Requests made during each full Committee meeting will be sent to your office following each meeting.

Attached per this agreement is a list of the requests made at the 272nd ACRS Meeting, December 9-11, 1982. This list has the concurrence of the ACRS Chairman and designated ACRS members.

Those items in the list "Actions, Agreements, Assignments, and Requests" dated January 5, 1983, 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 follow-up list.


R. F. Fraley
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

XA Copy Has Been Sent to PDR

XA
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ACTIONS, RECOMMENDATIONS, AND REQUESTS
272ND ACRS MEETING, DECEMBER 9-11, 1982

1. ACRS Report on Sequoyah Nuclear Plant Units 1 and 2 Hydrogen Control System

NRC
1/5/83
D. G. T.
1/19

The Committee prepared a report to the Commissioners of its review of the design features of the final hydrogen control system which has been proposed by the Tennessee Valley Authority (TVA) for use in the Sequoyah Nuclear Plant Units 1 and 2. The ACRS noted that it is not fully persuaded regarding the NRC Staff proposal for the installation of additional igniters in the upper compartment of the containment and wishes to be kept informed on this matter since the questions raised are also relevant to distributed ignition systems in other plants. Since the proposed Permanent Hydrogen Mitigation System (PHMS) uses either offsite power or the emergency diesels as a power source, the PHMS would consequently not control a hydrogen release from a degraded core coincident with a station blackout. The Committee recommended that this matter be considered further by the NRC and TVA, particularly the use of special emergency procedures and wishes to be kept informed regarding this matter.

2. ACRS Report on the Systematic Evaluation Program Review of the Dresden Nuclear Power Station Unit 2

NRC
Dandy
12/29

The Committee prepared a report to the Commissioners of its review of the results of the Systematic Evaluation Program (SEP), Phase II, as it has been applied to the Dresden Nuclear Power Station Unit 2. The letter included a number of comments and conclusions regarding the program and the Dresden plant and is attached.

3. ACRS Report on the Systematic Evaluation Program Review of the Millstone Nuclear Power Station Unit 1

NRC
D. G. T.
12/29

The Committee prepared a report to the Commissioners of its review of the Systematic Evaluation Program (SEP), Phase II, as it has been applied to the Millstone Point Nuclear Power Station Unit 1. The letter cited a number of comments and recommendations regarding the program and the Millstone plant. A copy of the report is attached.

4. ACRS Comments on Rulemaking Concerning Staffing at Nuclear Power Plants and Draft Policy Statement on Shift Crew Qualifications

RES

The Committee prepared a report to the Commissioners of its review of the proposed final rule entitled "Licensed Operator Staffing at Nuclear Power Units" and a proposed draft policy statement on "Shift Crew Qualifications." H. W. Lewis appended additional comments. A copy is attached.

ACTIONS, RECOMMENDATIONS, AND REQUESTS
272ND ACRS MEETING, DECEMBER 9-11, 1982

5. ACRS Recommendation on Regulatory Guide 1.150 Entitled, "Ultrasonic Testing Of Reactor Vessel Welds During Preservice and Inservice Examinations"

NRR
Dredg
1/13

The Committee approved a letter to the EDO regarding Regulatory Guide 1.150 entitled, "Ultrasonic Testing of Reactor Vessel Welds During Preservice and Inservice Examination." In light of the general concern about pressure boundary integrity and the continuing review of the pressurized thermal shock phenomenon, the Committee urged that Regulatory Guide 1.150 be fully implemented immediately and that the industry alternate be accepted. Additional comments regarding this matter can be found in the attached letter.

6. ACRS Comments on the Use of Potassium Iodide (DI) as a Thyroid Blocking Agent In the Event of a Nuclear Power Plant Accident

IE

The Committee prepared a report to the Commissioners based upon an oral report from its Subcommittee on Reactor Radiological Effects and its Subcommittee on Site Evaluation regarding use of potassium iodide (DI) as a thyroid blocking agent in the event of a major release of radioiodine from a nuclear power plant. Specific recommendations/comments are in the attached report.

7. ACRS Comments on Proposed Changes in NRC Regulations

RES

The Committee approved a memorandum to the EDO regarding proposed changes to 10 CFR Part 20, Standards for Protection Against Radiation, 10 CFR Part 50.54, Conditions of Licenses, and 10 CFR Part 140, Subpart E, Extraordinary Nuclear Occurrences. A number of recommendations/comments are included in the attached copy of the memorandum.

8. ACRS Interests Regarding Waterford Steam Electric Station Unit 3 (Waterford-3)

NRR

The Committee heard a report from the ACRS Waterford-3 Subcommittee regarding operator training and staffing at the Waterford Station. The Committee has requested that it be kept informed by the NRC Staff of future developments in the Waterford-3 operator training program and staffing effort, as previously requested in its August 11, 1981 interim report to the Commissioners.



UNITED STATES
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WASHINGTON, D. C. 20555

December 13, 1982

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

Dear Dr. Palladino:

SUBJECT: ACRS REPORT ON SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2 HYDROGEN CONTROL SYSTEM

During its 272nd meeting, December 9-11, 1982, the Advisory Committee on Reactor Safeguards reviewed the design features of the hydrogen control system which has been proposed by the Tennessee Valley Authority (TVA) for use in the Sequoyah Nuclear Plant Units 1 and 2. This matter was discussed during a Subcommittee meeting held on December 7, 1982. During our review we had the benefit of discussions with representatives of TVA and the NRC Staff. The Committee has previously reported on issues related to hydrogen control for the Sequoyah Nuclear Plant in two letters dated July 15, 1980 and in a letter dated September 8, 1980.

The hydrogen control system reviewed during this meeting has been designated by TVA as the Permanent Hydrogen Mitigation System (PHMS) and replaces the Interim Distributed Ignition System (IDIS). The PHMS utilizes igniters of a different type than those used in the IDIS, and incorporates system changes which are intended to increase the reliability of the igniter system. The TVA proposal for hydrogen control is supported by extensive research and development programs carried out by TVA, the nuclear industry, and the NRC. Some of these programs are currently ongoing and will be continued. We believe that igniter systems represent a viable method for hydrogen control. In addition, we believe that the PHMS is an adequate hydrogen control system and that it will perform its intended function in a manner that provides adequate safety margins.

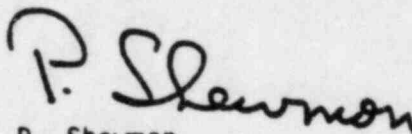
The NRC Staff has proposed that additional igniters be installed in the upper compartment of the containment. The additional igniters may not be necessary but will do no harm. The NRC Staff has also proposed that the performance of the igniters be tested in a containment spray environment. These proposed tests are intended to ensure the capability of the system to burn small quantities of hydrogen. We are not fully persuaded at this point that the Staff's concern is warranted. We wish to be kept informed on this matter since the questions raised are also relevant to distributed ignition systems in other plants.

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December 13, 1982

The PHMS as presently proposed by TVA uses either offsite power or the emergency diesels as a power source. The PHMS would consequently not control a hydrogen release from a degraded core coincident with a station blackout. We believe that this should be further considered by the NRC Staff and TVA and that, in particular, the use of special emergency procedures should be considered. We wish to be kept informed regarding this matter.

Sincerely,

A handwritten signature in cursive script that reads "P. Shewmon". The signature is written in dark ink and is positioned above the typed name and title.

P. Shewmon
Chairman

Reference:

1. U.S. Nuclear Regulatory Commission "Safety Evaluation Report Related to the Operation of Sequoyah Nuclear Plant Units 1 and 2," NUREG-0011, Supplement No. 6, draft dated December, 1982



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

Dear Dr. Palladino:

SUBJECT: ACRS REPORT ON THE SYSTEMATIC EVALUATION PROGRAM REVIEW OF THE DRESDEN NUCLEAR POWER STATION, UNIT 2

During its 272nd meeting, December 9-11, 1982, the ACRS reviewed the results of the Systematic Evaluation Program (SEP), Phase II, as it has been applied to the Dresden Nuclear Power Station, Unit 2. These matters were also discussed during Subcommittee meetings in Washington, D. C. on October 27 and November 30, 1982. During our review, we had the benefit of discussion with representatives of the Commonwealth Edison Company (Licensee) and the NRC Staff. We also had the benefit of the documents listed below.

The Committee has reported to you previously on reviews of the SEP evaluations of the Palisades, Ginna, and Oyster Creek plants in letters dated May 11, August 18, and November 9, 1982. The first of these reports included comments on the objectives of the SEP and the extent to which they have been achieved. Our review of the SEP in relation to the Dresden plant has led to no changes in our previous findings regarding this program, as reported in our letter on the Palisades plant.

The remainder of this letter relates specifically to the SEP review of the Dresden plant.

Of the 137 topics to be addressed in Phase II of the SEP, 30 were not applicable to the Dresden plant and 19 were deleted because they were being reviewed generically under either the Unresolved Safety Issues (USI) program or the TMI Action Plan. Of the 88 topics addressed in the Dresden review, 54 were found to meet current NRC criteria or to be acceptable on another defined basis. We have reviewed the assessments and conclusions of the NRC Staff relating to these topics and have found them appropriate.

The 34 remaining topics involved 72 issues relating to areas in which the Dresden plant did not meet current criteria. These issues were addressed by the Integrated Plant Safety Assessment, and various resolutions have been proposed.

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December 13, 1982

The Integrated Assessment has not yet been completed for 26 of the issues, for which the Licensee has agreed to provide the results of studies, analyses, and evaluations needed by the NRC Staff for its assessments and decisions. All of these issues are of such a nature that hardware backfits may be required for their resolution. The resolution of these issues will be addressed by the NRC in a supplemental report that will be available for review in connection with the application for a full term operating license (FTOL) for the Dresden plant.

For 21 of the issues included in the Integrated Assessment, the NRC Staff concluded that no backfit is required. We concur.

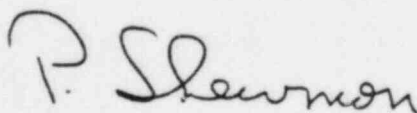
For the remaining issues for which the assessment has been completed, the NRC Staff requires hardware backfits in about half of the cases, and changes in procedures or Technical Specifications in the other half. The Licensee has agreed in all cases to make these changes.

As was the case for the Palisades, Ginna, and Oyster Creek plants, a plant-specific probabilistic risk assessment (PRA) was not available for the Dresden plant. In its place, the NRC Staff utilized the results of the Millstone Unit 1 PRA developed as part of the Integrated Reliability Evaluation Program (IREP), suitably modified and interpreted to reflect the differences between the two plants. The PRA study was used to address 19 of the issues included in the Integrated Assessment for the Dresden plant.

Our conclusions regarding the Dresden SEP review are similar to those for the plants previously reviewed:

1. The SEP has been carried out in such a manner that the stated objectives have been achieved for the most part for the Dresden plant and should be achieved for the remaining plants in Phase II of the Program.
2. The actions taken thus far by the NRC Staff in its SEP assessment of the Dresden plant are acceptable.
3. The ACRS will defer its review of the FTOL for the Dresden Nuclear Power Station, Unit 2 until the NRC Staff has completed its actions on the remaining SEP topics and the USI and TMI Action Plan items.

Sincerely,



P. Shewmon
Chairman

References:

1. U.S. Nuclear Regulatory Commission Draft Report, NUREG-0823, "Integrated Plant Safety Assessment, Systematic Evaluation Program, Dresden Nuclear Power Station, Unit 2," dated October 1982.
2. U.S. Nuclear Regulatory Commission Safety Evaluation Reports, Dresden 2 Systematic Evaluation Program Topics, Volumes 1 through 3, received October 1982.
3. NRC Staff consultants' reports on the Dresden 2 Integrated Plant Safety Assessment Report consisting of consultants' reports from S. H. Bush, J. M. Hendrie, H. S. Isbin and Z. Zudans, dated November 19, November 29, November 23, and November 24, 1982, respectively.
4. Science Applications, Inc. report number SAI-002-82-BE, "Interim Reliability Evaluation Program: Analysis of the Millstone Point Unit 1 Nuclear Power Plant," Volume I, Main Report, Draft dated October 1, 1982.



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December 13, 1982

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

Dear Dr. Palladino:

SUBJECT: ACRS REPORT ON THE SYSTEMATIC EVALUATION PROGRAM REVIEW OF THE
MILLSTONE NUCLEAR POWER STATION, UNIT 1

During its 272nd meeting, December 9-11, 1982, the ACRS reviewed the results of the Systematic Evaluation Program (SEP), Phase II, as it has been applied to the Millstone Nuclear Power Station, Unit 1. These matters were also discussed during Subcommittee meetings in Washington, D. C. on October 27 and November 30, 1982. During our review, we had the benefit of discussion with representatives of the Northeast Nuclear Energy Company (Licensee) and the NRC Staff. We also had the benefit of the documents listed below.

The Committee has reported to you previously on reviews of the SEP evaluations of the Palisades, Ginna, and Oyster Creek plants in letters dated May 11, August 18, and November 9, 1982. The first of these reports included comments on the objectives of the SEP and the extent to which they have been achieved. Our review of the SEP in relation to the Millstone plant has led to no changes in our previous findings regarding this program, as reported in our letter on the Palisades plant.

The remainder of this letter relates specifically to the SEP review of the Millstone plant.

Of the 137 topics to be addressed in Phase II of the SEP, 31 were not applicable to the Millstone plant and 20 were deleted because they were being reviewed generically under either the Unresolved Safety Issues (USI) program or the TMI Action Plan. Of the 86 topics addressed in the Millstone review, 48 were found to meet current NRC criteria or to be acceptable on another defined basis. We have reviewed the assessments and conclusions of the NRC Staff relating to these topics and have found them appropriate.

The 38 remaining topics involved 87 issues relating to areas in which the Millstone plant did not meet current criteria. These issues were addressed by the Integrated Plant Safety Assessment, and various resolutions have been proposed.

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The Integrated Assessment has not yet been completed for 42 of the issues, for which the Licensee has agreed to provide the results of studies, analyses, and evaluations needed by the NRC Staff for its assessments and decisions. All of these issues are of such a nature that hardware backfits may be required for their resolution. Several relate to structural design, and the Licensee has proposed an integrated structural analysis program for their resolution. The resolution of these issues will be addressed by the NRC Staff in a supplemental report that will be available for review in connection with the application for a full term operating license (FTOL) for the Millstone plant.

For 23 of the issues included in the Integrated Assessment, the NRC Staff concluded that no backfit is required. We concur.

For the remaining issues for which the assessment has been completed, the NRC Staff requires hardware backfits in about half of the cases, and changes in procedures or Technical Specifications in the other half. The Licensee has agreed to make these changes with one exception. Topics XV-16 and 18 relate to the calculated radiological consequences for certain design basis accidents; thyroid doses, calculated in accordance with current criteria, are considerably in excess of the siting criteria. To correct this situation, the NRC Staff has proposed that the radioiodine concentration in the reactor coolant be limited to that permitted by the Standard Technical Specifications for BWRs. The Licensee has proposed to establish plant-specific radioiodine limits based on more realistic dose calculations. We believe that the NRC Staff's proposal is the more appropriate.

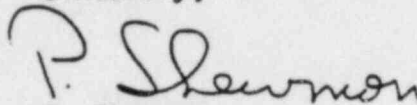
We have noted in previous letters on the SEP program that plant-specific probabilistic risk assessments (PRA) were not available for use in connection with the Integrated Assessment. In this case, a plant-specific PRA for the Millstone plant had been developed as part of the Interim Reliability Evaluation Program (IREP), and the results were used in the assessment of 21 of the issues. Contrary to our previous belief (contained in our August 18, 1982 and May 11, 1982 reports on the Ginna and Palisades SEP reviews), it does not appear that the plant-specific IREP PRA for the Millstone plant provided a basis for more definitive assessments than the more limited risk analyses developed for the other plants that we have reviewed.

Our conclusions regarding the Millstone SEP review are similar to those for the plants previously reviewed:

1. The SEP has been carried out in such a manner that the stated objectives have been achieved for the most part for the Millstone plant and should be achieved for the remaining plants in Phase II of the program.

2. The actions taken thus far by the NRC Staff in its SEP assessment of the Millstone plant are acceptable.
3. The ACRS will defer its review of the FTOL for the Millstone Nuclear Power Station, Unit 1 until the NRC Staff has completed its actions on the remaining SEP topics and the USI and TMI Action Plan items.

Sincerely,



P. Shewmon
Chairman

References:

1. U.S. Nuclear Regulatory Commission Draft Report, NUREG-0824, "Integrated Plant Safety Assessment, Systematic Evaluation Program, Millstone Nuclear Power Station, Unit 1," dated November 1982.
2. U.S. Nuclear Regulatory Commission Safety Evaluation Reports, Millstone 1 Systematic Evaluation Program Topics, Volumes 1 and 2, received November 1982.
3. NRC Staff consultants' reports on the Millstone 1 Integrated Plant Safety Assessment Report consisting of consultants' reports from S. H. Bush, J. M. Hendrie, H. S. Isbin, and Z. Zudans, dated November 22, November 29, November 24, and November 24, 1982, respectively.
4. Science Applications, Inc. report number SAI-002-82-BE, "Interim Reliability Evaluation Program: Analysis of the Millstone Point Unit 1 Nuclear Power Plant," Volume I, Main Report, Draft dated October 1, 1982.