QUARTERLY STATUS REPORT
GENERIC ACTIVITIES
OFFICE OF NUCLEAR REACTOR REGULATION
JANUARY 1996

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INTRODUCTION

The purpose of this report is to provide information about generic activities, including generic communications, under the cognizance of the Office of Nuclear Reactor Regulation. This report, which focuses on compliance activities, complements NUREG-0933 (A Prioritization of Generic Safety Issues).

The report includes three types of activities: Action Plans (AP), generic communications under development, and other generic compliance activities.

Action plans have been developed for generic or potentially generic issues of sufficient complexity or scope to require substantial NRC staff resources. The issues covered by action plans include concerns identified through review of operating experience (e.g. Boiling Water Reactor Internals Cracking, Thermolag), and issues related to regulatory flexibility and improvements (e.g. New source term, Probabilistic Risk Assessment (PRA) Implementation Plan). For each action plan the report includes a description of the issue, key milestones, discussion of its regulatory significance, current status, and names of cognizant staff.

Generic communications and compliance activities (GCCA) comprise two groups of items: generic communications under development at NRC that relate to reactors and other compliance items. The generic communications list includes bulletins, generic letters, and information notices. For each communication, there is a short description of the issue, current schedule and name of cognizant staff.

The remaining items are other potentially generic issues under NRR responsibility, not rising to the level of complexity of an AP, and for which a generic communication is not presently planned. For each item, there is a short description of the issue, scheduled completion date, and name of cognizant staff.

Attachment 1

NRR ACTION PLANS

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In the special industry review group's report, that was issued in January 1995, ring cracking was evaluated. The NRC concluded that the BWRVIP's assessment was acceptable and that top guide ring and core plate ring cracking is not a short term safety issue.

Proposed Actions: The staff will continue to assess the scopes that have yet to be submitted by licensees concerning inspections or re-inspections of their core shrouds. The staff will also continue to assess core shroud inspection results and any appropriate core shroud repair designs on a case-by-case basis. The staff will issue separate safety evaluations regarding the acceptability of core shroud inspection results and core shroud repair designs. The staff has been interacting with the BWRVIP and individual licensees. In an effort to lower the number of industry and staff resources that will be needed in the future, it is important for the staff to continue interacting with the industry on a generic basis in order to encourage them to continue their proactive efforts to resolve IGSCC of BWR internals. The BWRVIP has submitted four generic documents, supporting plant-specific submittals, for staff review. The staff is ensuring that the generic reviews are incorporating recent operating experience on all BWR internals.

Originating Document: Generic Letter 94-03, issued July 25, 1994, which requested BWR licensees to inspect their core shrouds by the next outage and to justify continued safe operation until inspections can be completed.

Regulatory Assessment: In July 1994, the NRC issued Generic Letter 94-03 which required licensees to inspect their shrouds and provide an analysis justifying continued operation until inspections could be performed. The staff has concluded in all cases that licensees have provided sufficient evidence to support continued operation of their BWR units to the refueling outages in which shroud inspections or repairs have been scheduled. In addition, by the end of 1995, industry's special review group that is aggressively pursuing this issue is expected to issue a comprehensive plan addressing cracking in all BWR internals, discussing cracking susceptibility, safety consequences, inspection scope and methodology, flaw evaluation, repair strategies, and mitigation of degradation.

Current Status: Almost all BWRs will complete inspections or repairs of core shrouds during refueling outages by fall of 1995. Various repair methods have been used to provide alternate load carrying capability, including preemptive repairs, installation of a series of clamps and use of a series of tie-rod assemblies. The NRC has reviewed and approved all shroud modification proposals that have been submitted by BWR licensees. Review by NRC continues on individual inspection results and plant-specific assessments.

In October 1995, industry's special review group issued a report which the NRC staff's preliminary review indicates was not comprehensive. The NRC staff is preparing requests for additional information. In addition, the industry group promised to submit reports on reinspection of repaired and non-repaired core shrouds which the staff has not yet received. It is important to have these reports prior to the spring 1996 outages in order to have agreed upon generic inspection criteria. In an effort to lower the number of industry and staff resources that will be needed in the future, it is important for the staff to continue interacting with the industry on a generic basis in order to encourage them to continue their proactive efforts to resolve IGSCC of BWR internals. The NRC is also reviewing new information submitted by GE on the safety significance of and recommended inspections for top guide and core plate ring cracking.

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James Medoff, EMCB, 415-2715
Kerri Kavanagh, SRXB, 415-3743
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NRR Lead PM: C. E. Carpenter, DRPE, 415-1423

References:

1. Generic Letter 94-03, "Intergranular Stress Corrosion Cracking of Core Shrouds in Boiling Water Reactors," July 25, 1994.

2. Action Plan dated April 1995.

REACTOR PRESSURE VESSEL ACTION PLAN

TAC Nos. M92310, M92313, M93329, M93330, M93331

Last Update: 01/02/96
Lead NRR Division: DE

MILESTONES	DATE (T/C)
1. ISSUE SUPPLEMENT TO GL 92-01	5/95 (C)
2. COORDINATION WITH RESEARCH	7/97 (T)
3. NRC/INDUSTRY WORKSHOP ON RPV ISSUES	7/95 (C)
4. REVIEW OF GL 92-01 SUPPLEMENT 1, 1ST ROUND	10/95 (C)
5. NUREG 1511 RPV STATUS REPORT SUPPLEMENT 1	4/96 (T)
6. REVIEW OF GL 92-01 SUPPLEMENT 1, 2ND ROUND	12/96 (T)
7. NUREG 1511 RPV STATUS REPORT SUPPLEMENT 2	6/97 (T)
8. ISSUE OF RVID REVISION 1	6/96 (T)
9. ISSUE OF RVID REVISION 2	6/97 (T)
10. REVIEW AND EVALUATE THE PALISADES ANNEAL PLAN	6/96 (T)
11. OBSERVE INDUSTRY ANNEALING DEMONSTRATION	12/96 (T)
12. REVIEW PALISADES ANNEAL	8/98 (T)

Description: Appendix G to 10 CFR 50 and 10 CFR 50.61 establish requirements to prevent fracture of the reactor pressure vessel (RPV). These rules require licensees to project the amount of embrittlement of RPV materials. As a result of the review of responses to Generic Letter (GL) 92-01, the review of Palisades PTS issue, and recent inspections conducted at Combustion Engineering, several issues related to RPV evaluations have been identified. These issues can be summarized as follows:

(1) It appears that licensees may not have been aware of or considered all relevant information and data in previous assessments of their RPVs,

(2) The variability in copper and nickel chemical composition may be independent of weld heat number and is greater than previously recognized by the staff,

(3) The Palisades reactor vessel will be the first commercial nuclear vessel annealed in the U.S. to improve its fracture toughness.

Historical Background: In March 1992, the NRC issued Generic Letter (GL) 92-01, Revision 1, "Reactor Vessel Structural Integrity, 10 CFR 50.54(f)." As a result of the information provided by the licensees in response to GL 92-01, Revision 1, the staff issued NUREG-1511, "Reactor Pressure Vessel Status Report," and the Reactor Vessel Integrity Database (RVID). NUREG-1511 provides a summary of the critical issues and regulatory requirements involved in RPV structural integrity and the status of each RPV with respect to the regulatory requirements. The RVID contains all the data that was submitted by licensees to demonstrate compliance with the regulatory requirements. Since licensees provide data during the life of the plant to demonstrate their compliance with regulatory requirements, NUREG-1511 and the RVID will require periodic upgrading.

In April 1995, the staff completed its evaluation of the Palisades plant compliance with the pressurized thermal shock (PTS) rule, 10 CFR 50.61. The staff concluded that the Palisades RPV could be operated in compliance with the requirements of the PTS rule through the plant's 14th refueling outage, which was scheduled for late 1999. To extend the life of the Palisades RPV beyond 1999, the licensee for Palisades has begun to plan for annealing of the Palisades RPV. The staff will review the licensee's annealing plan prior to its implementation. The Palisades anneal is scheduled for the 1998 refueling outage. Prior to this anneal the industry will be performing demonstration anneals at the Marble Hill and Midland-2 sites.

As a result of information received during the Palisades PTS review, a meeting with Combustion Engineering and two inspections at the Combustion Engineering offices in Windsor, Connecticut, the staff determined that licensees may not have been aware of or considered all relevant information and data in previous RPV assessments. Based on the above finding, the staff concluded that the most effective way to resolve this issue was through a supplement to GL 92-01 requiring the licensees to collect all data relevant to their RPVs, and if there are data that they had not previously considered, to perform a reassessment of their RPV.

As a result of the data supplied in response to GL 92-01 and the Palisades PTS review, the Office of Nuclear Reactor Regulation requested in a letter dated August 11, 1995 that the Office of Nuclear Regulatory Research evaluate whether changes to the PTS rule or Regulatory Guide 1.99 are necessary.

Proposed Actions: Specific actions included in the generic action plans are: (1) issue Supplement 1 to GL 92-01, (2) coordination with RES on RPV integrity issues, (3) hold an NRC/Industry workshop on RPV issues, (4) review first and second round of responses to GL 92-01 Supplement 1, (5) issue supplement 1 to NUREG-1511 in 1996 and issue supplement 2 to NUREG-1511 in 1997, (6) issue revision 1 of the RVID in 1996 and issue revision 2 of the RVID in 1997, (7) observe industry annealing demonstrations, (8) review and evaluate the Palisades annealing plan, and (9) review the Palisades anneal.

Originating Document: Memorandum from Jack R. Strosnider to Ashok C. Thadani, NRR, August 9, 1995.

Regulatory Assessment: This plan would allow for resolution of the issues discussed above in about two years. The staff anticipates that it will take the industry and the NRC this long to collect and assess all the relevant data. The staff assessed the impact of increased variability in chemistry on the RT_{PTS} value of PWR reactor vessels in a memorandum from J.R. Strosnider to A.C. Thadani dated May 5, 1995. The staff's assessment indicates that there is no immediate cause for concern and that there is adequate time to perform a more rigorous assessment of the issue. Based on the staff's generic assessment of the impact of increased variability, the staff has concluded that this is an acceptable schedule.

Current Status: GL 92-01, Supplement 1 has been issued. NRC/Industry workshop has been completed. A request for research on RPV integrity issues has been issued. The Reactor Vessel Integrity Database (RVID) has been issued (NRC Administrative Letter 95-03) to all licensees and to all individuals requesting a copy. The staff has completed the review of licensees' initial responses to Supplement 1 to GL 92-01. The licensee for Kewaunee in a letter from Clark R. Steinhardt dated August 21, 1995 provided the only notable response. They provided three methods of analysis of their surveillance data that indicate the Kewaunee reactor vessel will be below the PTS screening criteria at the expiration of its license. The licensee for Ginna in a letter from dated October 11, 1995 has also submitted a revised PTS evaluation. The Kewaunee and Ginna PTS evaluations are being reviewed by the staff.

In a letter dated October 12, 1995, the licensee for Palisades provided Section 3 to the Thermal Annealing Report (TAR). The staff requested in a November 16, 1995 letter that the licensee provide additional information. The licensee's current schedule for submittal of the TAR shows all sections are scheduled for submittal by the end of January 1996.

NRR Technical Contact:	Barry J. Elliot, EMCB, 415-2709
NRR Lead PM:	Daniel G. McDonald, PD1-1, 415-1408
	Marsha K. Gamberoni, PD3-1, 415-3024

References:

Memorandum from Jack R. Strosnider, August 9, 1995

NUREG-1511, "Reactor Vessel Status Report," December 1994

Generic Letter 92-01, Revision 1, (and Supplement 1) March 6, 1992 and May 19, 1995

SER for Palisades, April 12, 1995

Memorandum from Jack R. Strosnider, May 5, 1995

Memorandum from William T. Russell, August 11, 1995

NRC Administrative Letter 95-03, August 4, 1995

Letter from Clark R. Steinhardt, August 21, 1995

Letter from Ginna, October 11, 1995

Letter from Richard W. Smedley, October 12, 1995

RAI for Palisades, November 16, 1995

MOTOR-OPERATED VALVES ACTION PLAN

TAC Nos. M80330, M82072, M75089, M88898

Last Update: 12/31/95
Lead NRR Division: DE

MILESTONES	DATE (T/C)
Regulatory Improvements: (1) Staff is working with ASME to improve the inservice testing requirements in the ASME Code and (2) Staff is working with OM to develop guidelines for periodic verification of MOV design-basis capability to replace stroke-time testing.	1/96-7/96 (T)
Supp 7 to GL 89-10 issued for 30-day public comment	7/95 (C)
Resolve public comments	
Issue Supp 7 in Federal Register	1/96 (T)
New Generic Letter on MOV Periodic Verification: Staff preparing generic letter to provide recommendations on the periodic verification of MOV design-basis capability.	
Issue for public comment	1/96 (T)
Final issuance	4/96 (T)
MOV Inspection Module: the staff will prepare an inspection module for inspecting MOV programs over the long-term and provide appropriate training for inspectors.	10/96 (T)
Review of EPRI MOV Performance Prediction Program: NRR and RES are currently reviewing a topical report submitted by NEI on the EPRI MOV Performance Prediction Program.	
SER	1/96 (T)

Description: Appendices A and B to 10 CFR Part 50 and 10CFR50.55(a) require nuclear power plant licensees to establish programs to ensure that structures, systems, and components important to the safe operation of the plant are designed, installed, tested, operated, and maintained in a manner that provides assurance of their ability to perform their safety functions. GL 89-10 and its supplements, asked licensees to help ensure the capability of MOVs in safety-related systems by reviewing MOV design bases, verifying MOV switch settings initially and periodically, testing MOVs under design-basis conditions where practicable, improving evaluations of MOV failures and necessary corrective action, and looking for trends in MOV problems. EMEB has programmatic oversight responsibility of regional inspection activities conducted to verify that licensee MOV programs are being implemented. EMEB provides support to the regions, either by staff or contractor expertise, for the conduct of inspections in this area and closure of licensee actions pursuant to GL 89-10.

Historical Background: In 1985, the Davis-Besse nuclear power plant experienced a total loss of feedwater when, following a loss of main feedwater, safety-related MOVs in the auxiliary feedwater system could not be reopened after their inadvertent closure. As a result of this and

other information, the NRC staff issued Bulletin 85-03 (November 15, 1985) requesting that licensees verify the design-basis capability of safety-related MOVs used in high pressure systems. The information from the implementation of Bulletin 85-03, additional operating events, and NRC-sponsored research indicated the need to expand the scope of Bulletin 85-03 to all safety-related systems.

In Generic Letter (GL) 89-10 (June 28, 1989) and its supplements, the NRC staff asked licensees to help ensure the capability of MOVs in safety-related systems by reviewing MOV design bases, verifying MOV switch settings initially and periodically, testing MOVs under design-basis conditions where practicable, improving evaluations of MOV failures and implementing necessary corrective action, and looking for trends in MOV problems. The NRC staff requested that licensees complete the verification of the design-basis capability of MOVs included in the scope of GL 89-10 within three refueling outages or five years from the date of issuance of the generic letter, whichever was later. The NRC staff has issued six supplements to GL 89-10 that provide additional guidance and information on GL 89-10 program scope, design-basis reviews, switch settings, testing, periodic verification, trending, and schedule extensions.

In June 1990, the NRC staff issued NUREG-1352, "Action Plans for Motor-Operated Valves and Check Valves," describing actions to organize the activities aimed at resolving the concerns about the performance of MOVs and check valves. These actions included evaluating the current regulatory requirements and guidance for MOVs, preparing guidance for and coordinating NRC inspections, completing NRC MOV research programs and implementing the research results, and providing the nuclear industry with information on MOVs.

Proposed Actions: Specific activities included in the generic action plan to improve MOV performance are: (1) Regulatory Improvements - The staff is working with ASME to improve the inservice testing requirements in the ASME Code and the staff is working with OM to develop guidelines for periodic verification of MOV design-basis capability to replace stroke-time testing; (2) review of EPRI MOV Performance Prediction Program NRR and RES are currently reviewing a topical report submitted by NEI on the EPRI MOV Performance Prediction Program; (3) preparation of a generic letter to provide recommendations on the periodic verification of MOV design-basis capability; (4) preparation of an inspection module for inspecting MOV programs over the long-term and provide appropriate training for inspectors; and (5) issuance of Supplement 7 to GL 89-10 on potential valve mispositioning in PWRs.

Originating Document: NRC Bulletin 85-03 issued November 15, 1985.

Regulatory Assessment: While it is important for the licensee to take steps to ensure that MOVs will operate reliably under design-basis conditions, the probability of any individual MOV failure is small and safety systems are robust enough to provide reasonable assurance of public health and safety.

Current Status: Supplement 7 to GL 89-10 on potential valve mispositioning in PWRs was issued for public comment on July 26, 1995. Public comments have been addressed. CRGR staff have indicated that CRGR has agreed to a waiver of its review of Supplement 7 to GL 89-10. The staff is preparing the Commission paper for the final issuance of Supplement 7 to GL 89-10. Coordination with industry and support to NRC regional staff, efforts on codes and standards, and MOV research and analysis are ongoing activities. The staff is developing a generic letter which will provide guidance to licensees on periodic verification program. The staff is planning to brief CRGR on the proposed periodic verification GL in January 1996. The staff has been alerting licensees, NEI and EPRI to the staff's findings from the EPRI program review, and has been communicating staff views with industry regarding periodic verification. In addition, the staff has been factoring the overall findings from the EPRI program into staff activities.

NRR Technical Contact: Thomas G. Scarbrough, EMEB, 415-2794
NRR Lead PM: Allen G. Hansen, DRPW, 415-1390

References:

Bulletin 85-03, November 15, 1985

Generic Letter 89-10, June 28, 1989, and 6 supplements

NUREG-1352, "Action Plans for Motor-Operated Valves and Check Valves," June 1990

SRP REVISION ACTION PLAN

TAC Nos. M40047 and M83832

Last Update: 12/31/95
Lead NRR Division: DISP

MILESTONES	DATE (T/C)
1. Identify recommended changes	09/94C
2. Code and standard comparisons	12/95C
3. Prepare draft revisions of current sections	10/95C
4. Develop new sections	12/95C
5. Maintenance of program data	Ongoing

Description: The Standard Review Plan (SRP) Revision Action Plan deals with the development of draft revisions for all sections in NUREG-0800 (except Chapter 7) and the development of new SRP sections to cover review areas that are supported by established staff positions or are fully addressed in the evolutionary reactor design reviews. The draft revisions will incorporate recommended changes identified in the review of generic regulatory documents and NRR staff safety evaluation reports for evolutionary light water reactor designs. The objective of the tasks outlined in the action plan is to complete the preparation of draft revisions by December 1995, with contractor assistance, while minimizing the impact on NRR technical branches.

Historical Background: The Standard Review Plan Update and Development Program (SRP-UDP) was established in 1991 to update the Standard Review Plan, NUREG-0800, (SRP) for use in reviewing future reactor design applications. The revised SRP incorporates changes in the regulation of the nuclear power industry that have occurred since the 1981 revision of the SRP. In SECY-91-161, "Schedules for the Advanced Reactor Reviews and Regulatory Guidance Revisions," the staff discussed, in part, the revision effort for the SRP. In that paper, the staff committed to produce supplements to the 1981 SRP in parallel with the conduct of future reactor design reviews. In a memorandum of November 18, 1991, the EDO requested that the Chairman approve a commercial contract to provide technical assistance in revising the SRP. The Chairman provided a response dated December 13, 1991, stating his concern that the SRP had been allowed to become "outmoded." In this regard, the Chairman stated, "The staff should ensure that when this project is completed in FY 1997, adequate agency resources and procedures are in place to review and revise the SRP as needed at least annually."

Proposed Actions: Specific tasks included in the Action Plan are: 1) Identify established staff positions and new regulatory requirements from a review of generic regulatory documents issued since the last SRP revision and from a review of NRR staff safety evaluation reports for evolutionary LWR designs; 2) Prepare a side-by-side comparison of the SRP-cited version of codes and standards vs the current version of the standard; 3) Prepare draft revisions of the current SRP sections to incorporate the changes recommended; 4) Prepare new draft SRP sections that are supported by established staff positions or are fully addressed in the evolutionary design reviews; 5) Automate the SRP to make future revisions and accessibility easier to accomplish; and 6) Maintain the program data base to reflect new staff positions and requirements.

Originating Document: Memorandum of November 18, 1991, from James M. Taylor to The Chairman, Subject, Commercial Contract for Technical Assistance to Support the Standard Review Plan Update and Development Program; and memorandum of December 13, 1991, from Ivan Selin to James M. Taylor, same subject.

Regulatory Assessment: NRR has established the SRP Update and Development Program (SRP-UDP) to update the SRP for use in the review of future reactor applications to reflect existing agency requirements and guidance and to add new review criteria to accommodate future designs.

Current Status: Two contracts are currently in place to support SRP-UDP activities, JCN L-2013 with Pacific Northwest Laboratory (PNL) and JCN J-2055 with Idaho National Engineering Laboratory (INEL). The work approach and detailed procedures have been completed for the development of SRP draft revision packages and for new SRP section development. Both contractors have completed draft revision work for current SRP sections and are continuing work on new SRP sections. PNL has completed code and standard comparison work which involves the preparation of side by side comparisons between the cited version of codes and standards and the latest version, to allow SRP reviewers to use the more current version and to support SRP updates of the citations. Code and standard NUREG/CRs have been published. Delivery of draft revisions to technical branches for review and concurrence is in the final stages. Review by technical branches is being completed on a resource available basis consistent with a priority 3 effort. An automated version of the current SRP has been developed and is operational. Delivery was made on December 15, 1995. This AutoSRP will be installed on the NRC LAN.

NRR Technical Contact: A. Masciantonio, PIPB, 415-1290

References:

SECY-91-161, "Schedules for the Advanced Reactor Reviews and Regulatory Guidance Revisions"

Memorandum of November 18, 1991, from James M. Taylor to The Chairman, Subject, Commercial Contract for Technical Assistance to Support the Standard Review Plan Update and Development Program

Memorandum of December 13, 1991, from Ivan Selin to James M. Taylor, same subject

Memorandum of May 17, 1994, from Frank P. Gillespie to William T. Russell, Subject, Action Plan for the Development of Draft SRP Revisions in the SRP-UDP (Available in Central Files)

NEW SOURCE TERM FOR OPERATING REACTORS

TAC No. M89586

Last Update: 12/21/95
Lead NRR Division: DRPM
Supporting Division: DSSA

MILESTONES	DATE (T/C)
1. NEI Letter	07/94C
2. Commission Paper	09/94C
3. NEI Response	09/94C
4. NEI/NRC Meeting	10/94C
5. Publication of NUREG-1465	02/95C
6. NEI/NRC Meetings	06/95C 10/95C 01/96T
7. Submittal of Generic Framework Document (from NEI)	11/95C
8. Public Workshop	02/96T
9. NRC Approval of Generic Framework Document	03/96T
10. Pilot Plant Submittals	12/95T

Description: More than a decade of research has led to an enhanced understanding of the timing, magnitude and chemical form of fission product releases following nuclear accidents. The results of this work has been summarized in NUREG-1465 and in a number of related research reports. Application of this new knowledge to operating reactors could result in cost savings without sacrificing real safety margin. In addition, safety enhancements may also be achieved.

Historical Background: In 1962, the U. S. Atomic Energy Commission published TID-14844, "Calculation of Distance Factors for Power and Test Reactors." Since then licensees and the NRC have used the accident source term presented in TID-14844 in the evaluation of the dose consequences of design basis accidents (DBA).

After examining years of additional research and operating reactor experience, NRC published NUREG-1465, "Accident Source Terms for Light-Water Nuclear Power Plants," in February 1995. The NUREG describes the accident source term as a series of five release phases. The first three phases (coolant, gap, and early in-vessel) are applicable to DBA evaluations, and all five phases are applicable to severe accident evaluations. The DBA source term from the NUREG is comparable to the TID source term; however, it includes a more realistic description of release timing and composition. Since the NUREG source term results in lower calculated DBA dose consequences, NRC decided not to require current plants to revise their DBA analyses using the new source term. However, many licensees want to use the new source term to perform DBA dose evaluations in support of plant, technical specification, and procedure modifications.

NRC and NEI met several times to discuss the industry's plans to use the new source term. To make efficient use of NRC's review resources, NRC encouraged the industry to approach the issue on a generic basis. In November 1995, NEI submitted a generic framework document for NRC

review.

Proposed Actions: NRC plans to review and approve the document if it is found acceptable. Based on the guidance of the document, several pilot plants will submit applications to the NRC using the new source term. NRC plans to review and approve these applications if they are found acceptable. Then many of the rest of the plants will submit similar applications using the experience gained from the pilot plants. NRC anticipates that the review of these applications will require less resources than the pilot plant reviews.

Originating Document:

EPRI Technical Report TR-105909, "Generic Framework Document for Application of Revised Accident Source Term to Operating Plants," transmitted by letter dated November 15, 1995.

Regulatory Assessment: There will be no mandatory backfit of the new source term for operating reactors. The design-basis accident analyses for current reactors based on the TID-14844 source term are still valid. Therefore, non-urgent regulatory action and continued facility operation are justified.

Current Status: The Nuclear Energy Institute (NEI) unveiled its plans for the use the new source term at operating plants at the Regulatory Information Conference in May 1995. NEI, Polestar (EPRI's consultant), and pilot plant (Grand Gulf, Millstone, Beaver Valley, Browns Ferry, Perry, and Indian Point) representatives met with NRC staff on June 1 and October 12, 1995, to discuss more detailed plans. NEI submitted the generic framework document in November 1995 for NRC review and approval, and would like to meet with NRC again in January 1996 to walk through the document to discuss important issues of controversy. NEI would like the NRC to complete its review before the end of March 1996 and the workshop (now planned for February 1996). Pilot plant submittals will be sent to NRC as early as February 1996 (Browns Ferry, Indian Point, Perry, and Millstone, thus requiring a review parallel to the generic framework document review) with the rest to be submitted during the 12-month period after approval of the generic framework document.

NRR Technical Contact:	R. Emch, PERB, 415-1068
	A. Huffert, PERB, 415-1081
NRR Lead PM:	J. H. Wilson, PDST, 415-1108

References:

NUREG-1465, "Accident Source Term for Light Water Nuclear Power Plants," February, 1995.

July 27, 1994, letter to A. Marion, NEI, from D. Crutchfield, NRC, "Application of New Source Term to Operating Reactors".

September 6, 1994, letter to the Commission, "Use of NUREG-1465 Source Term at Operating Reactors".

November 10, 1994, "Summary of Meeting Held on October 6, 1994 with NEI Regarding Implementation of Revised Source Term at Operating Reactors."

July 21, 1995, letter to the Commission, "Use of NUREG-1465 Source Term at Operating Reactors".

July 26, 1995, "Summary of Meeting Held on June 1, 1995 with NEI Related to the Proposed Approach and Feasibility of Using the NUREG-1464 Severe Accident Source Term at Operating Reactors."

November 17, 1995, "Summary of Meeting Held on October 12, 1995 with NEI Related to the Proposed Approach for the Application of New source Term Insights to Operating Reactors."

ENDANGERED SPECIES ACTION PLAN

TAC No. M88282

Last Update: 1/3/95
Lead NRR Division: DRPM

	MILESTONE	DATE
1.	Development of action plan.	06/95C
2.	Develop list of currently listed protected species in the vicinity of each nuclear power plant site	11/95C
3.	Identify individual licensee programs and activities being conducted to further the conservation of protected species.	02/96T
4.	Determine priority for sites warranting follow-up actions.	04/96T
5.	Completion of site-specific follow-up actions.	11/96T
6.	Development and implementation of process for maintaining status and compliance with the ESA at each site.	03/97T

Description: Develop a list of currently listed protected species in the vicinity of each nuclear power plant site, identify individual licensee programs and activities being conducted to further the conservation of protected species, and conduct, as necessary, informal or formal consultation with either the National Marine Fisheries Service or the Fish and Wildlife Service is warranted for any specific site. specific

Historical Background: In 1973, Congress passed the Endangered Species Act for the protection of endangered or threatened species. In responding to a Commission memorandum of July 30, 1991, concerning efforts of the Commission, applicants, and licensees for protection of endangered species in the vicinity of nuclear power facilities, it was identified that the NRC may not have completed all the necessary activities required by the Endangered Species Act for some of the facilities that have identified endangered species. This action plan will determine the additional actions, if any, that need to be taken at individual sites so that the NRC can meet its obligations under the act.

Proposed Actions: Evaluations of plant-specific lists of endangered species and existing licensee commitments to further the conservation of the protected species, determine if informal or formal consultation with either the National Marine Fisheries Service or the Fish and Wildlife Service is warranted.

Originating Document: Commission Memorandum of July 30, 1991

Regulatory Assessment: Continued facility operation is appropriate because this action plan does not involve a health and safety issue.

Current Status: A list of currently listed protected species in the vicinity of each nuclear power plant site was developed. Identification of licensee programs and activities is continuing on schedule.

Contacts: NRR Technical Contact: Mike Masnik, ONDD, 415-1191
NRR Lead PM: Steve Reynolds, PDLR, 415-1115

References: Commission Memorandum of July 30, 1991

EFFECT OF HURRICANE ANDREW ON TURKEY POINT

TAC No. M86716/17

Last Update: 12/20/95
Lead NRR Division: DRPM
Supporting Division: DISP

MILESTONES	DATE (T/C)
1. Evaluate the Adequacy of Licensee Offsite Communications for Natural Disasters Within the Plant Design Basis.	1/97T
Collect information on licensee communication capabilities and vulnerabilities via region inspection.	7/96T
Analyze inspection findings and report on results.	10/96T
Established schedule for issuance of generic correspondence (if necessary).	11/96T
2. Evaluate the Adequacy of NRC Guidance for Reviewing Licensee Preparation and Response to Natural Disasters and Industry Preplanned Support.	11/95C
The action will provide guidance for inspectors to address any vulnerabilities that may develop from the review of Individual Plant Examination of External Events (IPEEE), if review indicates guidance is needed. This action has been incorporated into the Probabilistic Risk Assessment Implementation Plan (Activity 1.3(b)), which is scheduled for completion 12/96. PIPB	

Description: This action plan is intended to evaluate the need for generic guidance to licensees and NRC inspectors for severe natural events that may impact nuclear power plants. Specifically, two areas are being considered. They are:

1) Whether there is a need for generic guidance to licensees to ensure that their offsite communication circuits can reliably survive or recover from the impact of a severe natural event such as a hurricane. These circuits are required to provide reliable notification to offsite authorities of emergency conditions at the licensee's power reactor facility.

2) Whether there is a need for generic guidance to inspectors to review licensees' preparation for and response to natural disasters, including industry preplanned support.

Historical Background: On August 24, 1992, Category 4 Hurricane Andrew hit south Florida and caused extensive onsite and offsite damage at Turkey Point. An NRC/industry team was organized to review the damage that the hurricane caused the nuclear units and the utility actions to prepare for the storm and recover from it, and to compile lessons that might benefit other nuclear reactor facilities. Results of the team review are presented in the report, "Report on the Effect of Hurricane Andrew on the Turkey Point Nuclear Generating Station From August 20-30, 1992," issued in March 1993. This report was distributed to all power reactor licensees by the Institute of Nuclear Power Operations on June 10, 1993.

The EDO requested a review of the NRC/industry report to determine the actions necessary for resolving the issues identified in the report. An action plan was established on July 22, 1993, to perform this function. Annual written status reports are provided until all items are closed. The October, 1995 report contained two open items, listed above.

Proposed Actions: For item 1) above, a Temporary Instruction has been developed for inspectors to review licensee offsite communication circuits during emergency preparedness inspections scheduled at power reactor facilities between February and July of this year. Data collected from those inspections, as well as past inspections, will be evaluated to determine if guidance to licensees, in the form of generic communication, is necessary to provide either survivability or rapid recoverability of these circuits from a severe natural event.

Regulatory Assessment: Justification for non-urgent regulatory action: A qualitative safety assessment of the technical issues being addressed for item 1) demonstrates that the significance of the issue is at a level that will allow both continued facility operation and treatment of the issue as a non-urgent regulatory action.

Current Status: For item 1) a temporary instruction (TI 2515/131), issued 12/22/95, incorporating Regional comments, has been written to provide Regional inspectors guidance for collecting information on offsite notification circuits. The TI has been forwarded to PIPB for issue to the Regions. TI 2515/131 is expected to go to print for distribution during the first week of January, 1996.

For item 2) the Inspection Program Branch (PIPB) has concluded that from an emergency preparedness standpoint, sufficient guidance exists for reviewing licensee preparations in response to a hurricane or other external events. The staff issued IN 93-53, Supplement 1, on April 29, 1994, in which the staff expanded the scope of lessons learned to other external events and discussed existing regulatory guidance for various external events. The action to provide guidance for inspectors to address any vulnerabilities that may develop from the review of individual plant examination of externally initiated events (IPEEE) (GL 88-20, Supplement 4) has been incorporated into the Probabilistic Risk Assessment Implementation (Activity 1.3 (b)). Completion of this action is currently scheduled for February 1997. On that basis, Milestone 2 is considered closed as the status will now be reported under the Probabilistic Risk Assessment Implementation Plan.

NRR Technical Contacts:	W. Maier, PERB, 415-2926
	G. Klingler, PIPB, 415-3077
NRR Lead PM:	R. Croteau, DRPE, 415-1475

GENERAL ELECTRIC EXTENDED POWER UPRATE ACTION PLAN (A STRATEGY FOR COMPLETION OF BOTH THE GENERIC AND PLANT SPECIFIC REVIEWS FOR EXTENDED POWER UPRATE SUBMITTALS FOR BWRs)

Tac No. M91571

Last Update: 12/29/95
Lead NRR Division: DRPW
Supporting Division: DSSA

MILESTONES	DATE (T/C)
Milestone 1: GE Topical ELTR1 submitted.	3/95 C
Milestone 2: Issue Staff Position Paper on ELTR1	
Actions:	
- Meeting with GE/NSP.	4/95 C
- Identify differences between LTR1 and ELTR1.	8/95 C
- Issue RAIs as appropriate.	9/95 C
- Incorporate information on foreign experience obtained from SRXB.	10/95 C
- Develop power uprate database for all U.S. plants.	10/95 C
- Issue Staff Position Paper.	1/96 T
- Issue Secy Information paper.	2/96 T
Milestone 3: Receive ELTR2. (GE plans to submit ELTR2 in two parts: the first part in December 1995 and the second part in April 1996.)	1/96 T
Actions:	
- Open TAC No. and issue work orders to technical branches to review ELTR2.	
Milestone 4: Issue SE on GE ELTR2.	
Actions:	
- Meeting with GE/Industry.	2/96 T
- Issue RAIs as appropriate.	3/96T (1st set) 7/96T (2nd set)
- Input to the SE from technical branches.	11/96 T
- Issue SE.	12/96 T
- ACRS presentation.	2/97 T
Milestone 5: Receive Lead Plant Application.	5/96 T
Milestone 6: Issue SE for Lead Plant.	
Actions:	
- Meeting with GE/Industry.	2/96 T
- RAIs input from tech branches.	9/96 T
- Issue RAIs as appropriate.	9/96 T
- Input to the SE from tech branches.	6/97 T
- Issue SE.	6/97 T

MILESTONES		DATE (T/C)
Milestone 7:	Develop a Standard Review Procedure. Incorporate lessons learned from Lead Plant activity.	6/97 T

Description: This action plan describes the strategy for completing both the generic and plant-specific reviews for extended power uprate submittals for boiling water reactors (BWRs). General Electric Company (GE) submitted a licensing topical report (ELTR1), which outlines the methodology for implementation of an extended power uprate program. ELTR1 encompasses power uprates of up to 120 percent of the original licensed thermal power. Individual plant submittals for uprates will likely contain requests for an optimum power level specific for that plant which is something less than the full 120 percent.

The technical branches will review the applicable portions of the ELTR2, GE topical report containing generic analyses and the lead plant application, and provide input into both safety evaluation reports. Review criteria from the reviews performed on ELTR1, generic analyses, and the lead plant submittal will be developed and assembled into a review procedure for individual PMs to use for subsequent plant-specific reviews. If an area in an individual plant submittal is outside the bounds of the previously established criteria, the applicable technical branch will perform a review of that specific area and provide input into the safety evaluation.

Historical Background: The generic BWR power uprate program was created to provide a consistent means for individual licensees to recover additional generating capacity beyond their current licensed limit. In 1990, GE submitted licensing topical reports to initiate this program by proposing to increase the rated thermal power levels of the BWR/4, BWR/5, and BWR/6 product lines by approximately 5 percent. Since 1990, the staff has reviewed and approved at least 9 such power uprate requests under this generic BWR power uprate program. As a follow-on to this program, GE submitted ELTR1 in February 1995 to propose "extended" power uprates of up to 120 percent of the original licensed thermal power.

Proposed Actions: Specific actions included in the generic action plan are: (1) review ELTR1 and issue a staff position paper, (2) review ELTR2 and issue a safety evaluation report, (3) review the lead plant application and issue a safety evaluation report, and (4) develop a standard review procedure based on ELTR1, ELTR2, and the lead plant review.

Originating Document: GE Licensing Topical Report (NEDC-32424), "Generic Guidelines for General Electric Boiling Water Reactor Extended Power Uprate," dated February 1995.

Regulatory Assessment: Not applicable. (A safety assessment is not needed for this action plan because a justification for continued operation of a plant is not required.) This program is an industry initiative that is strictly voluntary.

Current Status: The staff has developed a staff position paper based on its review of the ELTR1. NRR Management/OGC review and concurrence are ongoing. The staff position paper is expected to be issued by the end of January 1996. The staff is expecting to receive the ELTR2, generic bounding analyses supporting the program, from GE in mid-January 1996.

NRR Lead PM: T. J. Kim, DRPW, 415-1392

DRY CASK STORAGE ACTION PLAN

TAC Nos. M93821 (issue 2.a)
M93927 (issue 3.b)
M94107 (issue 4.c.)
M94108

Last Update: 12/31/95
Lead NRR Division: DRPW

MILESTONES	DATE (T/C)
1. Develop action plan	07/95C
2. Near-term technical issues	
a. Heavy Loads/Cranes	
- develop working group plan	11/95C
- complete actions	12/96T
b. Cask Trunnions[1]	
- develop staff position	09/95C
- modify standards/guidance	No changes required
c. Hydrostatic Testing[1]	
- issue draft SRP	03/96T
d. Seismic Requirements for Pads	
- issue Information Notice	06/95C
3. Long-term technical issues	
a. Cask weeping[1]	
- meet with NEI	08/95C
- determine NRC actions to resolve	As Necessary
b. Cask loading/unloading procedures	
- contact NEI about industry efforts	08/95C
- resolve high priority issues	09/95C
- form working group	10/95C
- complete working group determination on further issues	04/96T
c. Off Loading after fuel pool is decommissioned[1]	
- develop guidance and modifications to inspection procedures	As required in response to submittals
d. Failed Fuel Storage[1]	
- review proposed solutions	Reviewing first submittal, ECD 06/96T
e. Safeguards Concerns[1]	
- complete analysis of designs	01/96T

[1] NMSS has the lead for this issue.

MILESTONES	DATE (T/C)
4. Procedural issues	
a. Change processes	
- issue SRP and 50.59 guidance	03/96T
- training for staff	06/96T
b. Reporting Requirements[1]	
- develop position, communicate to licensees	09/95C
c. Inspection of site activities	
- issue revised procedures	03/96T
- develop resource estimates and inspection schedule	02/96T
d. Vendor Inspections[1]	
- issue revised procedures	03/96T
- develop resource estimates and inspection schedule	10/95C
e. Cask and SAR differences[1]	
- contact vendors	09/95C
5. Communications	
a. Interface meetings	Ongoing
b. Staff training[1]	10/95C
c. Industry workshop[2]	07/95C

Description: The Plan was developed to identify and resolve major issues and problems in the area of dry cask storage of spent reactor fuel in independent spent fuel storage installations (ISFSIs). Specific issues encompassed by the plan include heavy load control, procedures for cask loading and unloading, failed fuel storage, change processes, inspection activities, and communications (internal and external). Issues have been divided into the following categories: near-term technical, long-term technical, communications, and process issues.

Historical Background: Since 1986, several U.S. nuclear power plant licensees have installed independent spent fuel storage installations (ISFSIs), that is, licensee-owned dry cask storage facilities. Other licensees are also planning such installations. In recent years, licensees have encountered a number of problems during the fabrication, installation and licensing of some of these ISFSIs and there has been an inconsistent level of performance by involved licensees and cask fabricators with respect to the use of dry cask storage of spent reactor fuel. Because of the anticipated increased industry effort in this area, the staff needed to fully understand the problems that occurred and take appropriate measures to reduce such problems in the future. Therefore, NMSS and NRR reviewed the lessons learned from past experience with ISFSIs, both our experience and the experience of other headquarters and regional offices, and developed a plan to resolve major issues and problems.

Proposed Actions: Actions included in the plan are: (1) review each general issue and identify the specific problems to be addressed, (2) develop corrective actions for each problem, and (3) implement the corrective actions.

Originating Document: Memorandum from Carl J. Paperiello and William T. Russell to James M. Taylor, July 28, 1995, "Dry Cask Storage Action Plan".

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[2] An additional workshop has been tentatively scheduled for the first half of 1996.

Regulatory Assessment: The plan addresses dry storage of fuel that is several years old. Technical issues have been addressed on a site-specific basis for existing facilities. The action plan will improve guidance, enhance communications with industry and the public, and aid future applicants.

Current Status: The following action plan issues have been completed: cask trunnions, cask weeping, and Part 72 reporting requirements. Closure of the hydrostatic testing issue is pending the issuance of the draft SRP by NMSS. The Safeguards Concerns issue is nearly complete. The balance of the technical issues are on schedule. The procedural issues related to the SRP and the inspection procedures are delayed and will be completed by the end of March, 1996. All of the communications issues are ongoing efforts with no specific criteria for closure. However, there have been significant improvements in these areas. The Regions, NMSS, and NRR hold regular interface calls to discuss dry cask issues, training has been given to many of the affected staff, and NRC has established open communications with the newly-formed Nuclear Energy Institute Dry Cask Storage Issue Task Force. Based on these improvements, the staff will review these issues for closure in the coming months.

NRR Contact: Andrew Kugler, DRPW, 415-2828
NMSS Contact: Patricia Eng, SFPO, 415-8577

References:

Memorandum from Robert M. Bernero and William T. Russell to James M. Taylor, March 15, 1995, "Realignment of Reactor Decommissioning Program"

Memorandum from Carl J. Paperiello and William T. Russell to James M. Taylor, July 28, 1995, "Dry Cask Storage Action Plan"

BWR SUCTION STRAINER CLOGGING ISSUE

TAC No. M86925

Last Update: 1/3/96
Lead NRR Division: DSSA

MILESTONES	DATE (T/C)
1. Barsebäck Event	07/92C
2. BWROG Survey Results	10/92C
3. Perry Event	03/93
4. IN 93-34 Supp 1	05/93C
5. Bulletin 93-02	05/93C
6. Preliminary Scientific Engineering Associates (SEA) Study	01/94C
7. OECD/CSNI Workshop	01/94C
8. NRCB 93-02 Supplement 1	02/94C
9. Response to NRCB 93-02 Supp 1	04/94C
10. User Need letter to RES for filtering experiments	05/94C
11. Review of NRCB 93-02 Supp 1 complete	08/94C
12. Alden Laboratories starts preparing experimental program	08/94C
13. SEA report out for public comment	08/94C
14. Draft Consensus of CSNI Working Group	04/95C
15. Public comment period ends for SEA report. Input from BWROG on proposed resolution.	11/94C
16. Alden commences experimental program	10/94C
17. Final SEA report issued	12/95C
18. Final test report from Alden	09/95C
19. Establish technical position in Draft Bulletin and Draft Reg. Guide 1.82, Rev. 2.	03/95C
20. CRGR Brief on Draft Bulletin	06/95C
21. Draft Bulletin on resolution of issue out for public comment	07/95C
22. Issue Urgent Bulletin 95-02 on Limerick Event	10/95C
23. Complete review of Licensee responses to Bulletin 95-02/Complete resolution of public comments on draft bulletin.	1/96T
24. Brief CRGR	1/96T
25. Brief ACRS	2/96T

MILESTONES	DATE (T/C)
26. Issue final Bulletin and Reg. Guide	2/96T

Description: Two operating reactor events have led to the re-examination of the issue of the potential for blockage of BWR ECCS strainers by debris generated during a LOCA.

Historical Background: On July 28, 1992, an event occurred at Barsebäck Unit 2, a Swedish BWR, which involved the plugging of two ECCS suction strainers. The strainers were plugged by mineral wool insulation that had been dislodged by steam from a pilot-operated relief valve that spuriously opened while the reactor was at 3,100 kPa [435 psig]. Two of the five strainers on the suction side of the containment spray pumps were in service and became partially plugged with mineral wool. Following an indication of high differential pressure across both suction strainers 70 minutes into the event, the operators shut down the containment spray pumps and backflushed the strainers. The Barsebäck event demonstrated that the potential exists for a pipe break to generate insulation debris and transport a sufficient amount of the debris to the suppression pool to clog the ECCS strainers. Following this event, the staff issued NRC Information Notice 92-71 informing U.S. licensees of this event.

On January 16 and April 14, 1993, two events involving the clogging of ECCS strainers also occurred at the Perry Nuclear Power Plant, a domestic BWR. The first Perry event involved clogging of the suction strainers for the residual heat removal (RHR) pumps by debris in the suppression pool. The second Perry event involved the deposition of filter fibers on these strainers. The debris consisted of glass fibers from temporary drywell cooling unit filters that had been inadvertently dropped into the suppression pool, and corrosion products that had been filtered from the pool by the glass fibers which accumulated on the surface of the strainer. The Perry events demonstrated the deleterious effects on strainer pressure drop caused by the filtering of suppression pool particulates (corrosion products or "sludge") by fibrous glass materials entrained on the ECCS strainer surfaces. Following these two events, the staff issued NRC Information notice 93-34 and its supplement, and NRC Bulletin 93-02, which requested licensees to remove all temporary sources of fibrous material from their containments.

The staff then performed calculations to assess the vulnerability of each domestic BWR. The results of these calculations showed that the potential existed for the ECCS pumps to lose net positive suction head (NPSH) margin due to clogging of the suction strainers by LOCA-generated debris. This led the staff to conduct a detailed study of a reference BWR 4 plant with a Mark I containment. The results of the staff study are contained in NUREG/CR-6224, "Parametric Study of the Potential for BWR ECCS Strainer Blockage Due to LOCA Generated Debris," which was published in November 1995. The study results reaffirmed the results of the earlier staff calculations.

Members of the NRC staff also attended an Organization for Economic Cooperation and Development/Nuclear Energy Agency (OECD/NEA) workshop on the Barsebäck incident held in Stockholm, Sweden, on January 26 and 27, 1994. Representatives from other countries at this conference discussed actions taken or planned which would prevent or mitigate the consequences of BWR strainer blockage. Based on the preliminary results of the staff's study, described above, as reinforced by information learned at the OECD/NEA workshop, the staff issued NRC Bulletin 93-02, Supplement 1, which requested licensees to implement interim measures to ensure ECCS reliability until a generic resolution for this issue could be achieved. In addition, an action plan for this issue was developed for taking generic action to ensure that the ECCS in all BWRs are capable of performing their safety functions.

Proposed Actions: Specific actions included in the generic action plan are: (1) issuance of NRC bulletins 93-02 and its supplement to request licensees to take appropriate interim actions to ensure reliability of the ECCS so that the staff and industry have sufficient time to develop a permanent resolution, and (2) to develop for issuance a final bulletin which will request licensees to implement appropriate programs and hardware modifications to ensure that their ECCS can perform its safety function.

Originating Documents: NRC Information Notice 92-71, "Partial Plugging of Suppression Pool Strainers at a Foreign BWR," dated September 30, 1992, and NUREG/CR-6224, "Parametric Study of the Potential for BWR ECCS Strainer Blockage Due to LOCA Generated Debris," published in November 1995.

Regulatory Assessment: Continued operation is allowed while a final resolution is developed because BWR licensees have adequately responded to NRCB 93-02 and its supplement. These bulletins requested licensees to take interim actions to ensure their ability to mitigate a LOCA/ECCS strainer clogging event. Measures have been requested on a related issue in NRCB 95-02 as of October 17, 1995 which will have an impact on the LOCA debris issue. The bulletin requested licensees to implement a suppression pool cleaning program and to strengthen their foreign material exclusion (FME) practices. The effect of the actions requested in the bulletin will be to minimize the amount of debris in the suppression pool which could potentially clog the ECCS strainers.

Current Status: Draft Bulletin and Regulatory Guide (RG) have undergone a 60-day public comment period. The staff is currently dispositioning the public comments on the draft Bulletin and RG. The proposed resolution in the draft bulletin consists of three options. The first option is to install a large capacity passive strainer design with sufficient capacity to handle a bounding scenario. The second option is to install a self-cleaning strainer design and implement a program to clean the suppression pool every outage. The third option is to install a backflush system. RES contractor analytical work is completed and a confirmatory experimental phase is ongoing. Public comments have been received and dispositioned on the contractor (SEA) report (NUREG/CR-6224). The staff issued an urgent bulletin on October 17, 1995 (NRCB 95-02). The staff will track the bulletin and its responses through an MPA number.

Contacts:

NRR Technical Contact:	R. Elliott, SCSB, 415-1397
RES Contact:	A. Serkiz, EIB, 415-3942
NRR Lead PM:	D. Lynch, DRPW, 415-3023

References:

1. NUREG/CR-6224, "Parametric Study of the Potential for BWR ECCS Strainer Blockage Due to LOCA Generated Debris," dated October 1995.

2. NRC Bulletin 95-02, "Unexpected Clogging of a Residual Heat Removal (RHR) Pump Strainer While Operating in Suppression Pool Cooling Mode," dated October 17, 1995.

3. NRC Information Notice 95-47, Revision 1, "Unexpected Opening of a Safety/Relief Valve and Complications Involving Suppression Pool Cooling Strainer Blockage," dated November 30, 1995.

4. NRC Information Notice 93-34 and Supplement 1, "Potential for Loss of Emergency Core Cooling Function due to a Combination of Operational and Post-LOCA Debris in Containment," dated April 26, 1995, and May 6, 1995.

5. NRC Bulletin 93-02 and Supplement 1, "Debris Plugging of Emergency Core Cooling Suction Strainers," dated May 11, 1993, and February 18, 1994.

6. NRC Information Notice 92-85, "Potential Failures of Emergency Core Cooling Systems Caused by Foreign Material Blockage," dated December 23, 1992.

7. NRC Information Notice 92-71, "Partial Plugging of Suppression Pool Strainers at a Foreign BWR," dated September 30, 1992.

8. NRC Information Notice 88-28, "Potential for Loss of Post LOCA Recirculation Capability Due to Insulation Debris Blockage" dated May 19, 1988.

ACCIDENT MANAGEMENT IMPLEMENTATION

TAC #: M91966 - Overall
M91641 - BWROG SAMG Review

Last Update: 1/3/96
Lead NRR Division: DSSA

MILESTONES	DATE (T/C)
1. Review BWROG Severe Accident Management Guidance (SAMG) documents	3/96T
2. Review severe accident training materials and BWROG prioritization methodologies	06/95C
3. Develop TI for pilot inspections	
Initial draft (for internal use)	11/95C
Site visits of "in-progress" activities	11/96T
Revised draft (to NEI and public)	12/96T
Final TI	03/97T
4. Complete pilot inspections and followup	12/97T
5. Revise inspection procedures (IP) and hold public workshop	
Draft IP	03/98T
Public meeting/workshop	05/98T
Final IP	07/98T
6. Review remaining plants	TBD

Description: This action plan is intended to guide staff efforts to assess the quality of utility implementation of accident management (A/M), and the manner in which insights from the IPE program have been incorporated into the licensees A/M program. Specific review areas will include: developmen and implementation of plant-specific severe accident management guidelines (SAMG), integration of SAMG with emergency operating procedures and emergency plans, and incorporation of severe accident information into training programs.

Historical Background: The issue of A/M and the potential reduction in risk which could result from developing procedures and training operators to manage accidents beyond the design basis was first identified in 1985 [1]. A/M was evaluated as Generic Issue 116 and subsumed by A/M-related research activities in late 1989. Completion of A/M is a major remaining element of the Integration Plan for Closure of Severe Accident Issues [2]. The development of generic and plant-specific risk insights to support staff inspections utility A/M programs is also identified in the Implementation Plan for Probabilistic Risk Assessment [3]. NRC's goals and objectives regarding A/M were established at the inception of this program [4]. Generic A/M strategies were issued in 1990 for utility consideration in the IPE process [5]. The staff has continued to work with industry to define the scope and content of utility A/M programs and these efforts have culminated in industry-developed A/M guidance for utility implementation. Industry has committed to implement an accident management program at each NPP [6]. NRC has accepted the industry commitment and developed tentative plans for staff inspection of utility implementation [7].

Proposed Actions: Specific actions included in the A/M action plan are: (1) complete the review of BWROG SAMG documents, (2) conduct site visits in 1996 to observe how the elements of the formal industry position are being implemented, (3) complete the draft TI using the information and perspectives obtained through the site visits, (4) complete pilot inspections and followup, and (5) develop an inspection procedure for use at remaining plants and hold a public

workshop. Based on feedback from the workshop, the staff will finalize the inspection procedure, and the approach and schedule for evaluating A/M implementation for the remaining plants.

Originating Document: SECY-88-147, Integration Plan for Closure of Severe Accident Issues, May 25, 1988.

Regulatory Assessment: Accident management programs are being implemented by licensees as part of an initiative to further reduce severe accident risk below its current, and acceptable, level. Consequently, this is a non-urgent regulatory action and continued facility operation is justified.

Current Status: Severe accident management guideline documents have been submitted by each of the PWR owners groups, and reviewed by the staff. The BWROG has submitted two major accident management products: an overview document (February 3, 1995), and an emergency procedure and severe accident guidelines document (April 6, 1995). Staff comments on the overview document were transmitted to the BWROG by letter dated August 1, 1995. A meeting with the BWROG to discuss the latter document was held on July 7, and a follow-up meeting to address specific staff concerns is planned for early 1996. Licensee target dates for completing AM implementation have been submitted to NRC. A draft TI for use in the pilot inspections has been completed.

The staff will visit approximately 2 to 4 sites in 1996 for the purpose of obtaining an early understanding of how the various elements of the formal industry position are being implemented. The information and perspectives obtained through these visits as well as comments from the Region offices will be used to complete the draft TI. The draft TI will be made available to NEI and the public after the information-gathering visits. A letter to NEI describing this modified approach and schedule is in concurrence.

References:

1. Memorandum from F. Rowsome to W. Minners, "A New Generic Safety Issue: Accident Management," April 16, 1995

2. SECY-88-147, Integration Plan for Closure of Severe Accident Issues

3. SECY-95-079, Implementation Plan for Probabilistic Risk Assessment

4. SECY-89-012, Staff Plans for A/M Regulatory and Research Programs

5. Generic Letter 88-20, Supplement 2, April 4, 1990

6. Letter from W. Rasin to W. Russell, November 21, 1994

7. Letter from W. Russell to W. Rasin, January 9, 1995

NRR Technical Contact: R. Palla, SCSB, 415-1095
NRR Lead PM: Ramin Assa, DRPW, 415-1391

FIRE PROTECTION TASK ACTION PLAN

TAC Nos. M86652, M82809, M84592, M85142, and M89509

Last Update: 12/27/95
Lead NRR Division: DSSA

MILESTONES	DATE (T/C)
1. Semiannual Commission status reports	Last: 09/20/95C Next: 03/96T
2. Recommendations for action (Part I)	01/97T
3. Recommendations for future study (Part II)	06/96T
4. Confirmation issues (Part III)	05/97T
5. Other issues (Part IV)	08/95C

Description: The Fire Protection Task Action Plan (FP-TAP) is used to track and manage implementation of the recommendations made in the "Report on the Reassessment of the NRC Fire Protection Program," of February 27, 1993.

Historical Background: In February 1993, the Office of Nuclear Reactor Regulation staff completed a reassessment of the (NRR) reactor fire protection review and inspection programs in response to programmatic concerns raised during the review of Thermo-Lag fire barriers. The results of the reassessment were documented in the "Report on the Reassessment of the NRC Fire Protection Program," of February 27, 1993. The staff prepared a Fire Protection Task Action Plan (FP-TAP) to implement the recommendations made as a result of the reassessment.

Proposed Actions: The FP-TAP tracks the implementation of a wide range of technical and programmatic fire protection issues. It includes recommendations for action (Part I), recommendations for further study (Part II), confirmation issues (Part III), and lessons learned (Part IV). The staff will implement each recommendation, in priority order, as resources allow. The staff focus is now on developing the framework for future direction of the NRC fire protection program with emphasis on a fire protection functional inspection (FPFI) program, a plan for developing and implementing this program, and a plan for centralized management, by NRR, of the FPFI program and all other reactor fire protection work. The principal objective of these efforts is to ensure that the NRC has a strong, broad-based and coherent fire protection program which is commensurate with the safety significance of the subject. To accomplish this, the staff needs to leverage the limited fire protection staff resources, to provide adequate resources, to focus those resources on the fire protection issues of most importance, to provide clear guidance to the staff and the nuclear industry regarding NRC oversight of the reactor fire protection program, and to improve consistency in the oversight of the program.

Originating Document: "Report on the Reassessment of the NRC Fire Protection Program," of February 27, 1993.

Regulatory Assessment: Each operating reactor has an NRC-approved fire protection plan that, if properly implemented and maintained, satisfies 10 CFR 50.48, "Fire protection," and General Design Criterion 3, "Fire protection." Therefore, each plant has an adequate level of fire safety and the individual action plan items are receiving appropriate priority.

Current Status: Since the last update, Plant Systems Branch (SPLB) completed a statement of work (SOW) to obtain technical assistance to help develop input to the Fire Protection Functional Inspection (FPFI) program inspection procedures and guidance. SPLB will provide the final SOW to the Division of Systems Safety and Analysis Technical Assistance Project Manager for processing. SPLB also drafted a plan for centrally managing all reactor fire protection reviews and inspections using headquarters and regional staff qualified to perform such work. SPLB and PRA Branch staff and Brookhaven National Laboratory (BNL) also continued to develop the probabilistic risk assessment (PRA) model for the self-induced station blackout study and BNL submitted its final draft report on risk-based approaches for evaluating fire mitigation features in nuclear power plants. The staff is reviewing this report. The staff met with the Chairman of the ACRS Subcommittee on Secondary and Auxiliary Systems on 12/7/95 to discuss these two efforts and will discuss these issues at a future subcommittee meeting.

Contact: S. West, DSSA,301-415-1220

References:

"Report on the Reassessment of the NRC Fire Protection Program," of February 27, 1993.

SECY-95-034, "Status of Recommendations Resulting From the Reassessment of the NRC Fire Protection Program," February 13, 1995.

Memorandum of September 20, 1995, from J. M. Taylor, EDO, to the Commission, "Semiannual Report on the Status of the Thermo-Lag Action Plan and Fire Protection Task Action Plan."

PRA IMPLEMENTATION ACTION PLAN

TAC Nos. M90370, M90371, M90227, M90977, M91787-M91802

Last Update: 12/21/95
Lead NRR Division: DSSA

MILESTONES		DATE(T/C)
1. ACRS Briefing		07/94C
2. Commission Briefing		08/94C
3. Publish PRA Policy Statement for 60-day comment period		12/94C
4. ACRS Subcommittee Briefing		09/94C
5. Conduct Public Workshop on PRA Implementation Plan		12/94C
6. Publish final PRA policy statement		08/95C
7. Annual Update to Commission		04/95C
8. Detailed Implementation		NA
1.1(a)	Develop Decision Criteria	05/96T
1.1(b)	Risk-Based criteria for Plant-Specific Applications	03/96T
1.1(c)	Review Decision Criteria Based on Experience	12/97T
1.2	Pilot Applications to Specific Regulatory Initiatives: (a) MOVs (b) Confg. Risk Monitoring Sys. (c1) IST (c2) ISI (d) Graded QA (g) Maintenance Rule (h) Technical Specifications	 (a) 2/96T (b) 09/96T (c1) 12/96T (c2) 12/97T (d) 07/97T (g) 09/95C (h) 09/96T
1.3(a)	Inspections - Pilot Application to Integrated Performance Assessment Process (IPAP)	12/96T
1.3(b)	Develop Inspection Guidance to Use IPEs and Plant-Specific PRAs	12/96T
1.4	Operator Licensing - Revise Examiner's Handbook to Reflect Revised Knowledge & Abilities Based on Risk Insights	06/96T
1.5	Event Assessment - Develop Guidance/Procedures for Risk Assessment of Reactor Events: (a) at Power (b) at Low Power or Shutdown (c) due to External Events (d) of Non-Power Reactors	 (a) 09/96T (b) 09/96T (c) 09/96T (d) 09/97T

	MILESTONES	DATE(T/C)
1.6	Review Adequacy of Licensee Analysis in IPEs/IPEEEs	07/96T
1.7(a)	Develop Guidance for Evaluating Risk Due to Cumulative Change in Plant Design, TS, etc...	09/96T
1.7(b)	Apply Guidance to Assess Effectiveness of SBO and ATWS Rules	09/97T
1.8(a)	Develop SRP for Review of PRAs for Evolutionary Reactor Designs	06/96T
1.8(b)	Develop Guidance for Use of Risk as Part of Construction/Start-Up Inspection Program	05/97T
1.8(c)	Develop Guidance for Use of Updated PRAs Beyond Design Certification	05/97T
1.8(d)	Develop Guidance for Use of Risk in Simplification of Emergency Planning Requirements	06/96T
1.9	Accident Management - Develop Risk Insights to Review and Inspect Industry Accident Management Programs	TBD

Description: This action plan is intended to describe the process for the staff to use PRA method and technology in the agency's effort toward risk-informed regulatory approach. The plan encompasses methods development, pilot applications, and staff training. The plan will be used to ensure timely and integrated agency-wide effort that is consistent with the PRA Policy Statement.

Historical Background: The NRC has been making use of PRA technology to varying degrees in its regulatory activities since WASH-1400. Prior to 1991, this had been an ad hoc application, depending on the availability of expertise in various technical groups. Since 1991, there have been a number of high-level studies within NRC that have focused on the status of PRA use and its role in the regulatory process. Collectively, the findings and recommendations from these studies support the view that there is a need for increased emphasis on PRA technology applications. For the full value of our investment in risk assessment methodology to be achieved, it is important that consistent high-level agency guidance be provided on the appropriate use of PRA. To this end, in November 1993, the Office Directors of NRR, AEOD, NMSS, and RES proposed to take the initiative in providing guidance on coordination and expectations for PRA efforts. Specifically, they proposed to develop an integrated plan for the staff's risk assessment and risk management practices. In August 1994, the staff submitted SECY-94-219, "Proposed Agency-Wide Implementation Plan For Probabilistic Risk Assessment," for the Commission's information. On March 30, 1995, The staff submitted SECY-95-079, "Status Update of the Agency-Wide Implementation Plan for PRA," and briefed the Commission on the subject on April 5, 1995. On May 18, 1995, the staff forwarded SECY-95-126, "Final Policy Statement on the Use of Probabilistic Risk Assessment Methods in Nuclear Regulatory Activities," for Commission vote. On June 8, 1995, the staff briefed the ACRS on the PRA policy statement. The final PRA policy statement was published in the *Federal Register* on August 16, 1995.

Proposed actions: The PRA Implementation Plan includes activities for NRR, RES, AEOD, and NMSS staff to increase the use of PRA methods in all regulatory matters. NRR focuses on the PRA applications in reactor regulations, the development of standard review plans, the pilot programs to

use PRA technology in specific regulatory initiatives, events assessment, and working with regions on risk-informed inspections. RES focuses on the IPE/IPEEE reviews, PRA method and quality, and the development of PRA regulatory guides for the industry. AEOD focuses on risk-informed trends and patterns analysis, reliability data for PRA applications, and staff training. NMSS focuses on using PRA in high and low level waste issues. The detailed actions are described in the PRA Implementation Plan.

Originating Document: Memorandum dated November 2, 1993, T. Murley et al. to J. Taylor, "Agency Directions For Current and Future Uses of Probabilistic Risk Assessment".

Regulatory Assessment: This action plan is meant to improve the regulatory process by developing state-of-the-art PRA tools that will expand the use of PRA technologies in making regulatory decisions. The plan is not intended to correct safety problems at licensed facilities. Therefore, continued facility operation is justified.

Current Status: On November 17, 1995, a memorandum was forwarded to senior NRR management providing additional guidance on implementing the Commission's PRA Policy Statement and managing tasks contained in the PRA Implementation Plan. As a result of this memorandum, several additional Action Plans are expected to be developed for individual line items in the PRA Implementation Plan. In addition, more detailed information concerning PRA Implementation Plan activities will be collected so that more accurate and timely status of all NRR PRA Implementation Plan activities can be maintained in the "living" PRA Implementation Plan. On November 27, 1995, the staff forwarded SECY-95-280, "Framework For Applying Probabilistic Risk Analysis In Reactor Regulation," to provide a general structure to ensure consistent and appropriate application of PRA methods and outlined a process for developing guidance and standards.

On November 20, the staff briefed Chairman Jackson on the activities regarding risk-informed technical specifications. On November 30, 1995, Chairman Jackson issued a memorandum requesting the staff to develop action plans and timetables to provide better focus and accelerate NRC's risk-informed regulatory effort. A staff response is expected before the end of 1995. The staff briefed Chairman Jackson concerning PRA Implementation Plan Pilot Applications and Guidance Development on December 7, 1995.

NRR Technical Contacts: Tony Hsia, SPSB, 415-1075

References:

SECY-94-219, "Proposed Agency-Wide Implementation Plan for Probabilistic Risk Assessment"

SECY-95-079, "Status Update of The Agency-Wide Implementation Plan for Probabilistic Risk Assessment"

SECY-95-126, "Final Policy Statement on The Use of Probabilistic Risk Assessment Methods In Nuclear Regulatory Activities"

SECY-95-280, "Framework For Applying Probabilistic Risk Anaiysis In Reactor Regulation"

PRA IMPLEMENTATION ACTION PLAN 1.2(d)
Graded Quality Assurance Action Plan

TAC Nos. M91429, M91431, M92420, M92450, M92451, M92447, M92448, M92449, M88650, M91431, M91432, M91433, M91434, M91435, M91436, M91437

Last Update: 1/3/96
Lead NRR Division: DRCH
Support Division: DSSA

MILESTONES	DATE (T/C)
1. Issued SECY 95-059	03/95C
2. Begin interactions with volunteer licensees - Palo Verde letter dated 4/6/95 - Grand Gulf meeting 5/4/95 - South Texas meetings on 4/19/95 and 5/8/95	05/95C
3. NRC Steering Group meetings to guide working level staff activities - Meetings on: 8/25/95, 10/10/95, 10/25/95	As Needed
4. Staff interactions with Palo Verde - Site visit on 5/23/95 on ranking and QA controls - NRC letter dated 7/24/95 on proposed QA controls - Site visit on 8/29-30/95 on risk ranking - Site visit on 9/6-7/95 on procurement QA controls - NRC letter conveying trip reports issued on 12/4/95	Ongoing through 12/30/96
5. Staff interactions with South Texas - Meeting on 7/17/95 on project status - Site meeting on 10/3-4/95 on risk ranking and QA controls - Meeting on 12/7-8/95 to discuss risk ranking and QA controls - South Texas Submittal of QA Plan for implementation of graded QA, 1/96 est. - South Texas begins implementation of grading specific QA elements, 7/96 est.	Ongoing through 12/30/96
6. Staff interactions with Grand Gulf - Site meeting on 7/11-14/95 to observe expert panel - Meeting at hdqt. on 10/24/95 on QA controls - Meeting at RIV on 11/16/95 on graded QA effort - Site meeting on 11/17 to observe expert panel - GGNS system and component ranking criteria under staff evaluation	Ongoing through 12/30/96
7. Revision 3 of Draft Evaluation Guide for Volunteer Plants issued for staff comment	07/95C
8. Revision 4 of Draft Evaluation Guide for Volunteer Plants Issued for Steering Group Review	10/95C
9. Issue letter to 3 volunteer plants outlining program objectives and review expectations. Distribute staff evaluation guide to licensees.	1/96T
10. Evaluation Guide Issued for use by staff in evaluating volunteer plants	1/96T
11. Draft refined risk ranking methodology and criteria developed by SPSB	1/96T

12. ACRS Briefings - Expert Panel and deterministic considerations - graded QA	1/10-11/96T 3/96T
13. Disseminate lessons learned to date at regional counterpart meetings	5/96T
14. Issue Lessons Learned NUREG report regarding Graded QA Programs at volunteer plants	11/96T
15. Propose Draft Regulatory Guidance - deciding on technical issues and form (e.g.: generic communication, regulatory guide, or NUREG) to Steering group or NRC line management	12/96T
16. Public Workshop on Graded QA	12/96T
17. Prepare draft Regulatory Guides/SRP revisions to reflect lessons learned from graded QA effort	12/96T
18. Issue Staff Inspection Guidance (Reactive IP)	5/97T
19. Conduct NRC Staff Training	5/97T
20. Issue Final Regulatory Guidance, via generic communication	9/97T
21. Issue SECY Update (close-out of action plan)	9/97T

Description: Prepare staff evaluation guidance and regulatory guidance for industry implementation for the grading of quality assurance (QA) practices commensurate with the safety significance of the plant equipment. The development of this guidance will be based on staff reviews of regulatory requirements, proposed changes to existing practices, and assessment of the actual programs developed by the three volunteer utilities implementing graded quality assurance programs.

Historical Background: The NRC's regulations (10 CFR Part 50, Appendices A & B) require QA programs that are commensurate (or consistent) with the importance to safety of the functions to be performed. However, the QA implementation practices that have evolved have often not been graded. In the development of implementation guidance for the maintenance rule, a methodology to determine the risk significance of plant equipment was proposed by the industry (NUMARC 93-01). During a public meeting on December 16, 1993 the staff suggested that the industry could build on the experience gained from the maintenance rule to develop implementation methodologies for graded QA. The staff had numerous interactions with the Nuclear Energy Institute (NEI) during calendar year 1994 as the graded QA concepts were discussed and the initial industry guidelines were developed and commented on. In early 1995, three licensees (Grand Gulf, South Texas, and Palo Verde) volunteered to work with the staff. The staff has reviewed the licensee developmental graded QA efforts.

Proposed Actions: The goal of the action plan is to utilize the lessons learned from the 3 volunteer licensees to formulate regulatory guidance on acceptable methods for implementing graded QA. The staff will develop a regulatory guide, a standard review plan revision for Chapter 17, and a reactive inspection procedure (IP) for graded QA.

Originating Document: Letter from J. Sniezek, NRC to J. Colvin (NUMARC) dated January 6, 1994, describing the establishment of NRC steering group for the graded QA initiative.

Regulatory Assessment: Existing regulations provide the necessary flexibility for the development and implementation of graded quality assurance programs. The staff will issue a NUREG report regarding the lessons learned from the volunteer plant implementations. Additional regulatory guidance will be issued to either disseminate staff guidance or endorse an industry approach. Planned guidance for the staff will involve an evaluation guide for application to the volunteer plants, the lessons learned report, training sessions and public workshops, Standard Review Plan revision, and inspection guidance in the form of a reactive IP. The staff is evaluating the appropriate mechanism for inspections of the risk significance determination aspects of graded QA programs.

The safety benefits to be gained from a graded QA program could be significant since both NRC reviews and inspections and the industry's quality controls resources would be focused on the more safety significant plant equipment and activities. Secondarily, cost savings to the industry could be realized by avoiding the dilution of resources expended on less safety significant issues. The time frame to complete this action plan is directly related to the overall PRA implementation plan schedules.

Current Status: A draft evaluation guide for NRC staff use has been prepared for application to the volunteer plants implementing graded quality assurance programs. The staff will utilize the guide for the review of the volunteer plant graded QA programs. The guide and the staff's proposed interaction framework will be transmitted in a forthcoming letter to the three volunteer licensees. The letter will seek licensee comments.

Lead NRR Division: DRCH

Supporting NRR Division: DSSA

NRR Contact: S. Black 415-1017, R. Gramm 415-1010

References:

1) Letter from J. Sniezek (NRC) to J. Colvin (NEI) dated 1/6/94
2) Regulatory Guide 1.160
3) NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants"
4) SECY-95-059, "Development of Graded Quality Assurance Methodology", 3/10/95
5) Letter from B. Holian (NRC) to W. Stewart (APSCo) dated 7/24/95
6) Letter from C. Thomas (NRC) to W. Stewart (APSCo) dated 12/4/95

ENVIRONMENTAL QUALIFICATION TASK ACTION PLAN

TAC No. M85648

Last Update: 12/26/95
Lead NRR Division: DSSA

MILESTONES	DATE (T/C)
1. Inform Commission	05/93C
2. Meet With Industry	Ongoing
3. Programmatic Review	12/95T
4. Risk Assessment	Under Review
5. Data Collection and Analysis	Ongoing
6. Status Review	02/96T
7. Technical Issues	10/98T
8. Options for Resolution	TBD
9. Implementation	TBD

Description: This action plan will evaluate environmental qualification (EQ) issues, including operating experience, testing methodology, and adequacy of current rule and guidance for operating reactors. It will resolve EQ issues for aging operating reactors and license renewal.

Historical Background: A review of environmental qualification requirements for license renewal and failures of qualified cables during research tests led to the development of the EQ Task Action Plan (TAP), which was issued in July 1993. The EQ TAP was developed to address: (1) staff concerns regarding the differences in EQ requirements for older and newer plants; (2) concerns raised by some research tests which indicate that qualification of some electric cables may have been non-conservative; and (3) concerns that programmatic problems identified in the staff Fire Protection Reassessment Report might also exist in the NRC EQ Program.

Proposed Actions: The EQ TAP includes meetings with industry, a program review of EQ, data collection and analysis, a risk assessment, and research on aging and condition monitoring. Annual Commission papers are written to update the status of the EQ TAP. The staff will develop options for resolving EQ concerns, which may include issuing a generic letter, changing the rule, or documenting the acceptability of the current EQ rule and standards. The basis for the appropriate regulatory action will be documented.

Originating Document: June 28, 1993, memorandum from Samuel J. Chilk to James M. Taylor (SECY 93-049); May 27, 1993, letter to the Commission from J. Taylor on Environmental Qualification of Electric Equipment.

Regulatory Assessment: Depending on the application, failure of these cables during or following design-basis events could affect the performance of safety functions in nuclear power plants. There is no immediate safety issue because of the degree of conservatism already included in the EQ qualification test margins.

Current Status: The programmatic review is nearing completion. The second draft of the report that summarizes the results of the program review will be complete in December and will be

released to the public after management review and approval. The program review involved a look back at the basis for the different requirements and a review of the adequacy of the requirements and their implementation. The staff conducted surveys, met with industry representatives, conducted an extensive document research effort, and documented its findings. The staff issued reports on the following topics: License renewal background information, the Fire Protection Reassessment Report, the survey of NRC and industry EQ experts, existing program requirements, NRC EQ inspection practices, and licensee implementation practices.

Data collection and analysis activities are continuing. In 1994, the staff reviewed operating experience to determine whether there are significant problems with EQ in the industry and to focus research on those problems. The staff visited sites to gather information on licensee EQ activities. The staff issued reports on equipment replacement and operating experience. The staff is reviewing past and ongoing EQ-related work, including literature from qualification tests and research. The final draft Literature Review Report and dossiers were submitted to RES by Brookhaven National Laboratory (BNL) on October 20, 1995. BNL made a presentation on the literature review results at the Water Reactor Safety Meeting on October 24. The literature database was submitted to the staff on September 14, 1995. The staff met with BNL in December to provide final comments on the Literature Review Report before it is published as a NUREG/CR report in early 1996.

In addition, to gain an international perspective on EQ practices and requirements, the staff met with EQ experts in Germany and France in December, 1993, and in Sweden and the United Kingdom in 1994. The staff also participated in a technical committee meeting at the International Atomic Energy Agency in the fall of 1994. The staff issued a report on the impact of the new source term (NUREG-1465) on environmentally qualified equipment at operating power plants in early 1995.

As part of its activities to support the EQ TAP, RES held a public workshop in November 1993 and used the information received at the workshop to develop a Research Program Plan. RES issued its revised EQ program plan in March, 1995, which provides for a cable condition monitoring program, a cable testing program, and an EQ database in support of the EQ TAP. BNL is assisting RES in implementing major elements of the program plan. BNL has developed cable testing and cable acquisition programs and has identified some sources of naturally aged cable for the program. The cable test plan includes testing of new, naturally aged, and artificially aged cables and evaluation of condition monitoring techniques that could give insights into methods for determining how cable is actually aging and performing in plants. The plan includes LOCA testing of some cables under design-basis event conditions.

As activities of the program review and data collection proceed or are completed, the staff will make changes to the research program as necessary. Following completion of the program review and data collection effort, staff activities will focus on research in the areas of accelerated aging, condition monitoring techniques, and accident testing. Research activities will extend over the next few years.

Contacts:

NRR Technical Contact:	G. Hubbard, SPLB, 415-2870
RES Contact:	S. Aggarwal, EMEB, 415-5849
NRR Lead PM:	L. Olshan, DRPE, 415-3018

References:

Letter to the Commission from J. Taylor on Environmental Qualification of Electric Equipment dated May 27, 1993 (Accession No. 9308180153).

Staff requirements memorandum (SECY 93-049) dated June 28, 1993 (Accession No. 9409010107).

Task Action Plan for Environmental Qualification and updates, July 1, 1993, April 8, 1994, November 16, 1994, and June 27, 1995 (Accession Nos. 9308120145, 9404260206, 950110431, 9507110203, respectively).

RES Program Plan for Environmental Qualification, July 7, 1994 (Accession No. 9407250066).

GENERIC SPENT FUEL STORAGE POOL
PART A: OPERATING FACILITIES

TAC No. M88094

Last Update: 12/26/95
Lead NRR Division: DSSA

	MILESTONES	DATE (T/C)
1.	Identify significant SFP concerns.	12/94C
2.	Review existing NRC guidance and requirements.	08/94C
3.	Report significant SFP problems to NRR management.	12/94C
4.	Develop a SFP inspection plan.	1/95C
5.	Conduct inspections of selected plants.	06/95C
6.	Evaluate and report results of inspections.	09/95C
7.	Assess risk/significance of individual concerns.	3/96T
8.	Assess monitoring of potential off-site releases.	3/96T
9.	Assess radioactive material storage practices.	3/96T
10.	Propose course of action.	4/96T
11.	Take selected actions.	TBD

Description: The action plan is intended to encompass Spent Fuel Pool (SFP) issues identified through a 1994 special inspection at Dresden 1, the staff's review of loss of SFP cooling concerns at Susquehanna Steam Electric Station (SSES), and other SFP concerns identified as part of this plan. Specific review areas identified through implementation of this action plan include plant design features and administrative controls that affect the probability of spent fuel pool boiling, adverse environmental effects on essential equipment due to boiling, significant loss of spent fuel pool coolant inventory, adverse radiological conditions, unplanned spent fuel pool reactivity changes, undetected spent fuel pool events, and adverse effects of control system actuations.

Historical Background: In November 1992, two engineers, who formerly worked under contract for the Pennsylvania Power and Light Company (PP&L), filed a report contending that the design of the Susquehanna station failed to meet regulatory requirements with respect to sustained loss of the cooling function to the SFP that mechanistically results from a loss-of-coolant accident (LOCA) or a loss of offsite power (LOOP). The licensee (PP&L) and the engineers each made a series of additional submittals to the NRC and participated in public meetings with the NRC staff to describe their respective positions on a number of technical and licensing issues. In order to inform the nuclear power industry of the issues, the agency issued Information Notice (IN) 93-83 on October 7, 1993. The staff evaluated these issues as they related to Susquehanna using a probabilistic safety assessment, a deterministic engineering assessment, and a licensing basis analysis. The staff issued their final safety evaluation report on June 19, 1995. This closed the Susquehanna action plan (TAC No. M85337).

A generic action plan was developed and adopted on October 13, 1994, with two parts. Part A (TAC No. M88094) encompasses the staff's review of generic issues relating to the SFP at

operating reactor facilities. Part B (TAC Nos. M40004, M90441, and M93805) includes applicable issues from the Part A review and concerns from the Dresden 1 special inspection particular to permanently shutdown facilities with stored, irradiated fuel to establish evaluation criteria for spent fuel pools at permanently shutdown facilities. Part B was included after the special inspection at Dresden 1 determined that problems in implementing the facility's decommissioning plan combined with certain SFP design features created the potential for a substantial loss of SFP water inventory. Dresden 1, which is permanently shutdown, experienced containment flooding due to freeze damage to the service water system on January 25, 1994, and the licensee for Dresden 1 reported a similar threat to SFP integrity. This licensee report resulted in the special inspection.

Proposed Actions: Specific actions included in Part A of the generic action plan are: (1) determination of the safety significance of identified concerns, (2) determination of the facilities where the concerns may be applicable, (3) evaluation of the adequacy of present SFP designs, (4) evaluation of the adequacy of current NRC guidance for SFP designs, and (5) evaluation of the need for generic actions to address significant issues at operating and permanently shutdown facilities. Based on findings from these review areas and their risk significance, the staff will develop criteria for specific spent fuel pool operations for potential use in formulating generic communications, revisions of regulatory guidance, and other appropriate regulatory actions.

Originating Documents: (1) Letter from D.A. Lochbaum and D.C. Prevatte to T. Martin, NRC, November 27, 1992, "Susquehanna Steam Electric Station Docket No. 50-387, License No. NPF-14, 10 CFR 21 Report of Substantial Safety Hazard;" (2) Inspection Report No. 50-010/94001.

Regulatory Assessment: The principal concerns involve a sustained loss of SFP cooling capability or a substantial loss of SFP coolant inventory. Postulated adverse conditions that may develop following a LOCA or a sustained loss of power to SFP cooling system components could prevent restoration of SFP decay heat removal. The heat and water vapor added to the building atmosphere by subsequent SFP boiling could cause failure of accident mitigation or other safety equipment and an associated increase in the consequences of the initiating event. Incomplete administrative controls combined with certain design features, particularly at the oldest facilities, may create the potential for a substantial loss of SFP coolant inventory and the associated consequences, which include high local radiation levels due to loss of shielding, unmonitored release of radiologically contaminated coolant, and inadequate cooling of stored fuel.

The postulated events do not pose an undue risk to the public, because, among other things, the availability of the following common design features help protect stored irradiated fuel, protect essential reactor safety systems, and prevent development of adverse radiological conditions: diverse means of cooling, anti-syphon protection on piping within the spent fuel pool, multiple sources of make-up water, instrumentation with control room annunciation, and spent fuel pool water purification systems. Additionally, the relatively slow evolution of these events creates significant opportunity for operator recovery prior to experiencing adverse conditions or consequences. Therefore, continued facility operation is justified.

Current Status: The identification of concerns for evaluation, and review of existing guidance have been completed. On-site safety assessments of spent fuel storage have been completed at Brunswick, Monticello, Comanche Peak, and Ginna. The assessment team concluded that the potential for a sustained loss of spent fuel pool cooling or a significant loss of spent fuel pool coolant inventory at the sites visited was remote, based on certain design features and operational controls. The team found that other concerns within the scope of the action plan review were much less significant in terms of risk at the plants visited. Individual assessment reports have been completed for Brunswick, Monticello, Comanche Peak, and Ginna. An FSAR-based review to identify facilities whose design is not well represented by any of the facilities reviewed through on-site assessments is underway. This FSAR-based review has been expanded to encompass development of a data-base specifying the current licensing basis for the SFP cooling system,

selected design basis parameters, and current operating procedures relevant to SFP cooling for all facilities.

Approximately 26 total issues in the major review areas have been identified through this plan. Additional issues associated with the Millstone 1 SFP (adequacy of SFP cooling during refueling with a full core off-load) have been included in the plan. Each issue is being tracked for resolution and will be addressed on the basis of a qualitative safety assessment. An issue relating to spent fuel pool criticality control (Boraflex degradation) is being pursued through issuance of an information notice and a planned generic letter.

Contacts: S. Jones, 415-2833
J. Shea, 415-1428

References:

Letter from Lochbaum and Prevatte, November 1992

Task Action Plan for Spent Fuel Storage Pool Safety, October 13, 1994 (publicly available, Accession No. 9410190155)

SER for Susquehanna, June 19, 1995 (publicly available, Accession No. 9507070008)

Information Notice 95-54, December 1, 1995 (SFP cooling design basis at Millstone 1 and Cooper)

Information Notice 93-83 (and Supplement 1), October 7, 1993 and August 24,1995.

Information Notice 94-38, May 27, 1994 (Dresden 1 Special Inspection Results)

Inspection Report No. 50-010/94001, April 14, 1994 (Dresden 1 Special Inspection)

GENERIC SPENT FUEL STORAGE POOL
PART B: PERMANENTLY SHUTDOWN FACILITIES

TAC Nos. M90441 & M93805

Last Update: 12/26/95
Lead NRR Division: DSSA

	MILESTONES	DATE (T/C)
1.	Identify significant SFP concerns applicable to permanently shutdown facilities.	11/95C
2.	Provide technical assistance to DRPM for rulemaking or other generic activity.	TBD

Description: This Part B effort will use the results of Part A activities to establish evaluation criteria for spent fuel pools (SFPs) at permanently shutdown plants to support rulemaking and other generic activities initiated by the Decommissioning and Non-Power Reactor Project Directorate (PDND).

Historical Background: A generic action plan was developed and adopted on October 13, 1994, with two parts. Part A (TAC No. M88094) encompasses the staff's review of generic issues relating to the SFPs at operating reactor facilities. Part B (TAC Nos. M40004, M90441, and M93805) includes applicable issues from the Part A review and concerns from the Dresden 1 special inspection particular to permanently shutdown facilities with stored, irradiated fuel to establish evaluation criteria for SFPs at permanently shutdown facilities. Part B was included after the special inspection at Dresden 1 determined that problems in implementing the facility's decommissioning plan combined with certain SFP design features created the potential for a substantial loss of SFP water inventory. Dresden 1, which is permanently shutdown, experienced containment flooding due to freeze damage to the service water system on January 25, 1994, and the licensee for Dresden 1 reported a similar threat to SFP integrity. This licensee report resulted in the special inspection.

The staff issued NRC Bulletin 94-01, "Potential Fuel Pool Draindown Caused by Inadequate Maintenance Practices at Dresden Unit 1," on April 14, 1994. This bulletin requested all holders of licenses for nuclear power reactors that are permanently shut down with spent fuel in the spent fuel pool to take actions to ensure the quality of the SFP coolant, the ability to maintain an adequate coolant inventory for cooling and shielding, and the necessary support systems are not degraded. In order to evaluate the management controls and SFP activities at permanently shutdown reactors, the NRC staff initiated a series of special team inspections at permanently shutdown facilities with stored, irradiated fuel in the SFP. These inspections were completed at all of the subject facilities by the first quarter of 1995.

Proposed Actions: Specific actions included in Part B of the generic action plan are: (1) the determination of significant identified concerns from Part A applicable to permanently shutdown facilities and (2) the evaluation and implementation of additional requirements specifically applicable to permanently shut down facilities with stored, irradiated fuel.

Originating Documents: Inspection Report No. 50-010/94001 for Dresden Unit 1.

Regulatory Assessment: The postulated events involving a loss of cooling do not pose undue risk to the public, because of the low residual decay heat in the spent fuel at permanently shutdown

reactors and the associated long period of time available for recovery. Concerns involving maintenance of the coolant quality and ability to control coolant inventory have been addressed through the special inspection activities. Therefore, continued facility operation is justified.

Current Status: The staff determined that all significant identified concerns from Part A applicable to permanently shutdown facilities were encompassed by the special inspection activities. The special inspections found no significant deficiencies other than at Dresden 1. In response to the Dresden 1 Special Inspection findings, PDND will proceed with issuance of their decommissioning action plan. The Division of Systems Safety and Analysis will provide technical support for that action plan and other existing action plans associated with rulemaking for decommissioning facilities. Staff resources will be tracked through TACs assigned to the associated action plans.

NRR Technical Contact: S. Jones, SPLB, 415-2833
NRR Lead PM: T. Markley, PDND, 415-1169

References:

Task Action Plan for Spent Fuel Storage Pool Safety, October 13, 1994 (publicly available, Accession No. 9410190155)

Information Notice 94-38, May 27, 1994 (Dresden 1 Special Inspection Results)

NRC Bulletin 94-01, April 14, 1994.

Inspection Report No. 50-010/94001, April 14, 1994 (Dresden 1 Special Inspection)

Inspection Report No. 50-409/94, July 1, 1994 (La Crosse Special Inspection)

Inspection Report No. 50-133/94-03, October 5, 1994 (Humbolt Bay Special Inspection)

Inspection Report No. 50-312/94-02, September 22, 1994 (Rancho Seco Special Inspection)

Inspection Report No. 50-344/94-04, October 24, 1994 (Trojan Special Inspection)

Inspection Report No. 50-206/94-23, December 13, 1994 (San Onofre 1 Special Inspection)

Inspection Report No. 50-029/94-80, December 9, 1994 (Yankee Rowe Special Inspection)

Inspection Report No. 50-003/94-80, February 10, 1995 (Indian Point 1 Special Inspection)

CORE PERFORMANCE ACTION PLAN

TAC Nos. M91257 - DSSA
M91602 - DISP

Last Update: 12/31/95
Lead NRR Division: DSSA
Supporting Division: DISP

MILESTONES	DATE (T/P/C)
Task 1 - Inspection of Nuclear Fuel Vendors (DISP)	07/96T
SPC [PWR]	06/94C
ABB/CE [PWR]	11/94C
TWC	12/94C
SSM	12/94C
WESTINGHOUSE	07/95C
GE	10/95C
B&W	02/96T
ABB/CE [BWR]	05/96T
SPC	07/96T
Task 2 - Inspection of Licensee Reload Analyses (DSSA)	06/96T
RI - GPU [TMI-1]	12/95T
RII - Duke [Oconee]; SSI [Hatch]	03/95C; 03/96T
RIII - ComEd [Zion]; [Byron/Braidwood]	10/94C; 04/96T
RIV - NPPD [Cooper]; WPPS [WNP-2]	04/96T; 05/96T
*** - APS (original pilot audit)	04/93C
Task 3 - Core Performance Data Gathering/Evaluation (DSSA)	06/96T
PNL - Core Performance Evaluation Analysis	06/96T
Other - Data Acquisition and Collation	03/96T
Regions - Morning Reports & Event Notification	06/96T
Task 4 - Participation of Regions in Action Plan (DSSA)	06/96T
Training Seminars	
Feedback from Licensee Inspections	
Identification of Vendor Issues	
Task 5 - Determine Inspection Manual Chapter Update (DSSA/DISP)	08/96T
Evaluate Results of Vendor/Licensee Inspections	
Incorporate Feedback from Regions	
Draft Inspection Manual Chapter	
Draft Inspection Criteria and Plan	

Description: The action plan is intended to improve safety through inspections of fuel vendors, evaluation of licensee's reload analyses and core performance information, and regional training and interaction.

Historical Background: The action plan addresses the review of fuel fabrication, core design, and

reload analysis issues that were discussed during the March 29, 1994, briefing given to James M. Taylor, Executive Director for Operations. The briefing presented by the Reactor Systems Branch (SRXB), Division of Systems Safety and Analysis (DSSA) covered generic fuel and core performance issues and related evaluations of fuel failures. Representatives of the Vendor Inspection Branch (VIB), Division of Reactor Inspection and Licensee Performance (DRIL) participated in the briefing. As a result of this briefing, the Office of Nuclear Reactor Regulation (NRR) was requested to prepare an action plan for a proactive approach to improve core performance in operating reactors.

Proposed Actions: Specific actions included in the action plant are: (1) evaluate fuel vendors performance through performance-based inspections that evaluate the reload core design, safety analysis, and licensing process, fuel assembly mechanical design, and fuel fabrication activities, (2) evaluate the performance of licensees that perform core reload analysis functions, (3) identify, document, and categorize core performance problems and root cause evaluations that will be further evaluated during these inspections, provide input to SALP evaluations as well as regional enforcement actions as appropriate, and (4) train and coordinate regional support staff participating in these activities as well as evaluating the results of these activities for use in formulating generic communications, revisions of regulatory guidance and IMCs, and other appropriate regulatory actions.

DSSA — The action plan identifies one or more licensee inspections in each region that shall be performed, in coordination with the regional inspectors, to assess licensee performance in reload core analysis oversight and participation. The data acquired through licensee/vendor inspections will be integrated with information supplied by the regions and other sources and will be evaluated for generic core performance indicators and industry conformance to current regulatory requirements. The end product of the overall assessment will include guidance for resident inspectors and regional staff and draft updates to Inspection Manual Chapters. These activities are scheduled to be completed in September 1996.

DISP — The action plan currently identifies nine vendor inspections that shall be performed by multi-disciplined inspection teams lead by the Special Inspection Branch (PSIB) with contracted technical assistance. These inspections are will be completed in July 1996.

Originating Document: Memorandum from Gary M. Holahan and R. Lee Spessard to Ashok C. Thadani, dated October 7, 1994, "Action Plan to Monitor, Review, and Improve Fuel and Core Components Operating Performance"

Regulatory Assessment: Core design is a fundamental component of plant safety because maintaining fuel integrity is the first principal safety barrier (i.e., fuel cladding, reactor coolant system boundary, or the containment) against serious radioactive releases. Likewise, the safety analyses must be properly performed in order to verify, in conjunction with startup tests and normal plant parameter monitoring, that the core reload design is adequate and provide assurance that the reactor can safely be operated. Quality assurance activities are important to ensure that proper interfaces are established and that shortcuts are not taken that could degrade safety or quality.
Current Status:

DSSA — The data acquired from the vendor inspections at SPC, ABB/CE, Westinghouse, and GE are being evaluated. The vendor inspection at Framatome (B&W), in March 1996, will be supported by SRXB/DSSA staff and contract specialists in reload design. Interaction with the regions is ongoing to coordinate a license inspection schedule, and SRXB participated in the Region I inspector counterparts meeting in December 1995.

DISP — The inspection of GE was performed from August 14 through September 1, 1995. Other overcoming events resulted in issuing the report in December 1995. The inspection of Framatome

Cogema Fuels (formerly Babcock and Wilcox Fuel Company), located in Lynchburg, Virginia has been scheduled for March 1996. The remaining planned inspections include ABB Combustion Engineering's supply of a transition core reload for WNP-2 as well as a follow up inspection of Siemens Power Corporation issues.

NRR Technical Contacts: E. Kendrick, SRXB, 415-2891
S. Matthews, PSIB, 415-3191

* time spent on-site at vendor inspections (Task 1) is allocated to appropriate fuel vendor docket #

HIGH BURNUP FUEL ACTION PLAN

TAC No. M91256

Last Update: 12/31/95
Lead NRR Division: DSSA
Supporting Office: RES

	MILESTONES	DATE (T/C)
1.	Issue User Need Letter to RES	10/93C
2.	Contracts Issued by RES	03/94C
3.	Schedule and Coordinate Meetings with Foreign Experimenters and Regulatory Authorities	09/95C
4.	Issue Information Notice (IN 94-64) Announcing New RIA Data	08/94C
5.	Present High Burnup Data at Water Reactor Safety Meeting	10/94C
6.	Schedule/Coordinate Industry Meetings to Discuss Actions	10/94C
7.	Determine Need for Further Generic Communications	11/94C
8.	Issue Letter to Vendors	11/94C
9.	Issue IN 94-64, Suppl. 1, Providing Data and Vendor Letter	03/95C
10.	RES Update NUREG-0933 on Generic Issue and Plan of Action*	03/95C* 01/96T
11.	Review Industry (NEI) Response	09/95C
12.	Assess Effects on Design Basis Accidents of Reduced Failure Threshold for High Burnup Fuel	09/95C
13.	Committee on the Safety of Nuclear Installations Specialists Meeting on the Transient Behavior of High Burnup Fuel	09/95C
14.	CNRA (OECD) Committee on Nuclear Regulatory Activities and CSNI annual meetings.	11/95C
15.	Issue Letter to NEI Responding to Industry Actions	12/95T
16.	Water Reactor Safety Information Meeting on High Burnup	10/95C
17.	RES Completes Response to NRR User Need Letters	07/96T
18.	Complete Review of Available Fuel Transient Data Relevant to Design Basis Event; Define Acceptance Criteria; Establish Schedule for Final Assessment and State Need for Further Regulatory Action	08/96T

*RES has prioritized as Generic Issue #170.

Description: The action plan covers assessment of fuel performance for high burnup fuel and evaluation of the adequacy of SRP licensing acceptance criteria.

Historical Background: Recent experimental data on performance of high burnup (>50 GWd/MTU) under reactivity insertion conditions became available in mid-1993. The unexpectedly low energy deposition (30 cal/gm) to initiation of fuel failure in the first test rod (at 62 GWd/MTU) led to a re-evaluation of the licensing basis assumptions in the SRP. As a result, the Office of Nuclear Reactor Regulation (NRR) was requested to prepare an action plan, in coordination with the Office of Nuclear Regulatory Research (RES).

Proposed Actions: After a preliminary safety assessment had been performed, an action plan was developed to include a user need letter to RES and the issuance of contracts to assess all aspects of the high burnup fuel issue. Concurrently, meetings would be scheduled with the non-domestic experimenters and regulatory authorities to discuss the experimental data and to assess potential consequences and regulatory actions. Meetings with industry would be scheduled to discuss their planned actions and solicit cooperation with the safety evaluations. Based on a complete review of all available fuel transient data relevant to design basis events, NRR/RES define acceptance criteria, establish a schedule for final assessment and state need for further regulatory action.

Originating Documents: Commission memorandum from James M. Taylor (EDO), "Reactivity Transients and High Burnup Fuel," dated September 13, 1994, including IN 94-64, 'Reactivity Insertion Transient and Accident Limits for High Burnup Fuel,' dated August 31, 1994. Commission Memorandum from James M. Taylor, "Reactivity Transients and Fuel Damage Criteria for High Burnup Fuel," dated November 9, 1994, including an NRR safety assessment and the joint NRR/RES action plan.

Regulatory Assessment: There is no immediate safety issue, because of the low to medium burnup in currently operating cores. Since the fuel failure threshold declines with increasing burnup, the licensing basis design acceptance criteria may need to be redefined as a function of burnup. The end product of the plan will determine the need for regulatory action and will establish and define the need for further action on extended burnup cycles and high burnup fuel issues.

Current Status: The industry (NEI) submittal, evaluating the safety significance of recent high burnup data, was reviewed by the staff and initial feedback was provided at a meeting, in which the industry further discussed their submittal. Further analytical assessments were presented at the CSNI Specialists Meeting in September and at the October Water Reactor Safety Information Meeting, which gave a summary of the industry (including EPRI) position. The Siemens, Westinghouse, B&W, ABB/CE, and GE evaluations of potential impact on their topical reports are being reviewed. The preliminary review indicates that the industry responses provides, in general, sufficient justification to show no current safety issues and to confirm that there is no present licensing concern. However, the industry responses were not wholly consistent in detailing their plans for resolution and closeout of the high burnup fuel issue. The staff has contacted the individual fuel vendors to discuss their planned actions and schedule meetings. The first meetings were held on 9/28/95 (Westinghouse) and 12/12/95 (General Electric). The Industry Task Force stated that NRC formal feedback on the submittals was needed before additional industry actions are defined. A staff letter response is in concurrence, based on the industry assessments, which outlines the staff's ongoing plans and requests continued industry support. This letter will be sent to NEI, as the industry coordinator. The staff has concluded that additional actions by industry, other than the fuel vendor assessments that have been received and the continued vendor meetings, will not be needed at this time.

NRR Technical Contacts: Laurence Phillips, NRR/DSSA/SRXB, 415-3232
Edward Kendrick, NRR/DSSA/SRXB, 415-2891

RES Contact: Ralph Meyer, RES/RPSB, 415-6491

RRG TOPIC AREA 55: CYCLE SPECIFIC PARAMETER LIMITS IN TECH SPECS AND GENERIC LETTER 88-16 REVISION

TAC Nos. M89033 and M85023

Last Update: 12/29/95
Lead NRR Division: DSSA

MILESTONES	DATE (T/C)
1. Complete draft guidance for GL 88-16 revision	8/94C
2. Office concurrences on GL (NRR/OGC/RES/OC)	n/a
3. Contractor report received on reload report content	6/94C
4. Complete draft guidance on contents of reload package (Reg. Guide) and GL 83-11 revision	9/94C
5. Office concurrences on GL 83-11 revision	9/95C
6. CRGR concurrence on GL 83-11 revision	10/95C
7. EDO concurrence on GL 83-11 revision	n/a
8. Publish proposed GL 83-11 revision for public comment	10/25/95C
9. Receive public comments on GL 83-11 revision	12/11/95C
10. Office concurrence on GL 83-11 revision	5/96T
11. CRGR concurrence on GL 83-11 revision	6/96T
12. EDO concurrence on GL 83-11 revision	8/96T
13. Publish GL 83-11 revision	9/96T

Brief Description: This item recommended actions to reduce schedule and resource requirements for the NRC's review of reactor core reloads and the reload analysis methodology.

Historical Background: The objective of this task is to respond to the Regulatory Review Group (RRG) Item #55. The RRG recommendations were to provide quicker review of core reload codes and to revise current Tech Specs to permit changes in accordance with approved core topical reports to take advantage of improved analyses without a license amendment by revising Generic Letter (GL) 88-16 (Core Operating Limits Report [COLR] Guidance. The task was subsequently revised to address the first recommendation only by preparing a supplement to GL 83-11 (Licensee Qualification for Performing Safety Analyses).

Proposed Actions: Prepare a supplement to GL 83-11 which presents criteria intended for licensees who wish to perform their own licensing analyses using previously approved methods. By complying with these criteria, the licensee would eliminate the need to submit a topical report qualifying its use of a previously approved methodology.

Originating Document: Regulatory Review Group Topic Area Item #55, Cycle Specific Parameter Limits in Tech Specs and Generic Letter 88-16 Revision.

Regulatory Assessment: This regulatory action has no safety impact on operating plants; it is

intended to reduce resources required for methodology reviews.

Current Status: The proposed supplement to GL 83-11 was published for comment in the *Federal Register* on October 25, 1995. The comment period expired December 11, 1995, and comments are currently being reviewed.

NRR Technical Contact: Larry Kopp, SRXB, 415-2879
NRR Lead PM: Steve Bloom, DRPW, 415-1313

References: Generic Letter 83-11 (February 8, 1983) and *Federal Register* Notice 60 FR 54712 (October 25, 1995).

THERMO-LAG ACTION PLAN

TAC Nos. M82809, M90203, M90284

Last Update: 12/27/95
Lead NRR Division: DSSA

MILESTONES	DATE (T/C)
1. Semi-annual Commission status reports	Last: 9/20/95 Next: 03/96T
2. Resolve technical issues (Part I)	03/96T
3. Testing (Part II)	03/96T
4. Assess NRC fire prot. program (Part IV)	02/93C

Description: Evaluation and resolution of generic Thermo-Lag fire barrier issues regarding toxicity, construction and installation, fire endurance, ampacity derating, combustibility, seismic capabilities, and uniformity of materials. Includes special review team findings, public concerns, coordinating with Nuclear Energy Institute (NEI) and licensees, conducting fire endurance and ampacity derating tests, and assessing NRC reactor fire protection program. The staff has issued 16 generic communications regarding Thermo-Lag fire barriers.

Historical Background: In June 1991, the Office of Nuclear Reactor Regulation (NRR) established a special team to review the safety significance and generic applicability of technical issues regarding the use of Thermo-Lag fire barriers. In April 1992, the special review team issued its final report, which identified concerns about fire endurance, combustibility, and ampacity derating. Subsequently, the NRR staff prepared an action plan to address the issues associated with Thermo-Lag and the NRC fire protection program. The scope of the action plan includes coordination with industry and testing by the staff.

Proposed Actions: Specific actions include (1) the resolution of concerns and generic issues raised by the special review team and (2) resolution of plant-specific issues that emerge from the generic issues. In June 1994, the Commission approved a staff recommendation to resolve Thermo-Lag concerns by requiring compliance with existing NRC requirements and to permit plant-specific exemptions, where justified.

Originating Document: Final Report of the Special Review Team for the Review of Thermo-Lag Fire Barrier Performance, April 1992.

Regulatory Assessment: In response to Bulletin 92-01 and its supplement, licensees with Thermo-Lag fire barriers established NRC-approved measures, such as fire watches, to compensate for possibly inoperable fire barriers. The combination of compensatory measures and the defense-in-depth fire protection features provides an adequate level of fire protection until licensees implement permanent corrective actions.

Current Status: NRR staff briefed the EDO on 11/8/95, and will brief the Chairman on 01/17/96.

Three major milestones remain: (1) complete the chemical analysis and mechanical properties tests, (2) reassess previous technical conclusions, and (3) complete the plant-specific fire test curve feasibility study. All generic work is progressing approximately as scheduled and will be completed by March 1996.

By letter of October 3, 1995, NEI submitted the title page and Executive Summary of NUCON International, Inc., Report 06VA764/04, entitled "Pyrolysis Gas Chromatography Analysis and Energy Dispersive Spectroscopy of Thermo-Lag Fire Barrier Samples." In its letter, NEI stated that on the basis of the tests, all samples (169 from 18 utilities representing 25 nuclear power plants) contained the constituents essential to fire barrier performance, and that the composition of the samples was consistent. The NRC staff performed chemical composition tests and analyses at the National Institute of Standards and Technology (NIST). The test results, which NIST submitted 12/95, confirm the results of the NEI analyses. Concerns about the reliability of information and data supplied by TSI prompted the staff to reassess previous technical conclusions and determine the extent to which the NRC or the nuclear industry relied on information supplied by TSI to reach these conclusions. The staff has identified and categorized the issues and previous conclusions. On the basis of the results of the chemical analysis performed by NIST and NEI the staff concluded that additional action is not needed to reassess the issues or verify the conclusions. The staff continues to work with NIST to evaluate the feasibility of developing fire curves for rating fire barriers on the basis of representative nuclear power plant fire hazards rather than the fire curves specified in existing fire test standards. NIST submitted its draft report on 11/09/95. Certain aspects of the draft report will require rework. The staff provided comments and technical direction to NIST by letter dated 11/30/95 and during a meeting on 12/07/95.

The review, implementation, and inspection of plant-specific corrective actions is tracked as Multi-Plant Action L208 with plant-specific TAC numbers in WISP. Responses to 2.206 petitions are also tracked by TAC numbers in WISP. These actions are not part of the Thermo-Lag Action Plan.

Contacts: S. West, SPLB, 301-415-1220
M. Gamberoni, DRPW, 301-415-3024

References:

Information Notice (IN) 91-47, "Failure of Thermo-Lag Fire Barrier Material To Pass Fire Endurance Test," August 6, 1991.

IN 91-79, "Deficiencies in the Procedures for Installing Thermo-Lag Fire Barrier Materials," December 6, 1991.

IN 92-46, "Thermo-Lag Fire Barrier Material Special Review Team Final Findings, Current Fire Endurance Tests, and Ampacity Calculation Errors," June 23, 1992.

Bulletin 92-01, "Failure of Thermo-Lag 330 Fire Barrier System to Maintain Cabling in Wide Cable Trays and Small Conduits Free From Fire Damage," June 24, 1992.

IN 92-55, "Current Fire Endurance Test Results for Thermo-Lag Fire Barrier Material," July 27, 1992.

Bulletin 92-01 Supplement 1, "Failure of Thermo-Lag 330 Fire Barrier System to Perform its Specified Fire Endurance Function," August 28, 1992.

Generic Letter 92-08, "Thermo-Lag 330-1 Fire Barriers," December 17, 1992.

IN 92-82, "Results of Thermo-Lag 330-1 Combustibility Testing," December 15, 1992.

IN 94-22, "Fire Endurance and Ampacity Derating Test Results for 3-Hour Fire-Rated Thermo-Lag 330-1 Fire Barriers," March 16, 1994.

Generic Letter 86-10, Supplement 1, "Fire Endurance Test Acceptance Criteria for Fire Barrier

Systems Used to Separate Redundant Safe Shutdown Trains Within the Same Fire Area," March 25, 1994.

IN 94-34, "Thermo-Lag 330-660 Flexi-Blanket Ampacity Derating Concerns," May 13, 1994.

IN 91-79, Supplement 1, "Deficiencies Found in Thermo-Lag Fire Barrier Installations," August 4, 1994.

IN 94-86, "Legal Actions Against Thermal Science, Inc., Manufacturer of Thermo-Lag," December 22, 1994.

IN 95-27, "NRC Review of Nuclear Energy Institute, "Thermo-Lag 330-1 Combustibility Evaluation Methodology Plant Screening Guide'," May 31, 1995.

IN 95-32, "Thermo-Lag 330-1 Flame Spread Test Results," August 10, 1995

IN 95-49, "Seismic Adequacy of Thermo-Lag Panels," October 27, 1995.

IN 94-86, Supplement 1, "Legal Actions Against Thermal Sciences, Inc., Manufacturer of Thermo-Lag," November 15, 1995.

WOLF CREEK DRAINDOWN EVENT: ACTION PLAN

TAC Nos.: M91621, M92635, M93568 Last Update: 12/29/95
Lead NRR Division:DSSA

MILESTONES	DATE (T/C)
1. Draft Generic Letter	11/95(C)
2. Issue Supplement to IN 95-03	01/96(T)
3. Complete Draft TI/ Issue to the Regions for Comments	01/96(T)
4. Generic Letter to be Concurred by CRGR/ Letter Issued	01/96(T)
5. Receive Regional Comments on TI	03/96(T)
6. Complete Evaluation of the Responses to the Generic Letter	06/96(T)
7. Issue TI	06/96(T)
8. Complete Inspections (As necessary)	09/96(T)

Description: The objective of this action plan is to collect and evaluate information from the licensees regarding plant system configurations and vulnerabilities to draindown events. A 10 CFR 50.54(f) letter will be used to gather the information.

Historical Background: On September 17, 1994, the Wolf Creek plant experienced loss of reactor coolant system (RCS) inventory, while transitioning to a refueling shutdown. The event occurred when operators cycled a valve in the train A side of the RHR system cross-connect line following maintenance on the valve, while at the same time establishing a flow path from the RHR system, train B, to the refueling water storage tank for reborating train B. The failure of the reactor operating staff to adequately control two incompatible activities resulted in transferring 9200 gallons of hot RCS water to the RWST in 66 seconds.

The Wolf Creek event represents a LOCA with the potential to consequentially fail all the ECCS pumps and bypass the containment. Another important feature of this event is the short time available for corrective action. Based upon calculations by the licensee and the staff, it is estimated that if the draindown had not been isolated within 3-5 minutes, net positive suction head would have been lost for all ECCS pumps, and core uncovery would follow in about 25-30 minutes. This event represents a PWR vulnerability which was not previously recognized.

Proposed Actions: Specific actions of this generic action plan are: (1) issue IN 95-03 issued January 12, 1995; and supplement to IN 95-03 which is being issued, (2) Request all PWR licensees, via an information gathering (10 CFR 50.54(f)) Generic Letter (GL), to provide information on draindown vulnerabilities and the measures they implemented to diminish the probability of a draindown.

Originating Document: AEOD/S95-01, "Reactor Coolant System Blowdown at Wolf Creek on September 17, 1994".

Regulatory Assessment: The staff performed an evaluation of the probability for event initiation and of the conditional core damage probability. The value of this probability for core damage along

with licensee awareness for this scenario makes the risk for continued PWR operation acceptably small.

Current Status: Information Notice IN 95-03 has been issued. Information Notice Supplement has been approved and is to be issued shortly. The generic letter CRGR package is in concurrence.

NRR Technical Contact: Lambros Lois, SRXB, 415-3233
NRR Lead PM: J. C. Stone, DRPW, 415-3063

References:

* AEOD/S95-01, "Reactor Coolant System Blowdown at Wolf Creek on September 17, 1994"
* IN 95-03, issued January 18, 1995.
* Action Plan dated October 20, 1995

UPDATE OF SRP CHAPTER 7 TO INCORPORATE DIGITAL INSTRUMENTATION AND CONTROLS (I&C) GUIDANCE

TAC Nos. M86387, M86392, M86423, M86769, M86997, and M87680

Lead NRR Division: DRCH

MILESTONES	DATE (T/C)
1. Develop Update of SRP Chapter 7	10/96T
2. ACRS Subcommittee Briefings	3/96T, 5/96T, 7/96T 10/96T
3. Incorporate new Regulatory Guides (provided by RES) in SRP Chapter 7 Update	8/96T
4. Incorporate results from National Academy of Sciences study	10/96T
5. Publish Draft SRP Chapter 7 for Public Comment	12/96T
6. Incorporate Public Comments	3/97T
7. Final ACRS/CRGR Review of SRP Chapter 7	4/97T
8. Publish Final SRP Chapter 7	5/97T

Brief Description: This task action plan is used to track and manage the final phase of codifying the digital I&C regulatory approach and criteria by updating the existing Standard Review Plan (SRP) Chapter 7.

Regulatory Assessment: The approach and criteria that form the current regulatory framework for review and acceptance of digital I&C systems in nuclear power plants is being codified in the update to SRP Chapter 7. This framework has been communicated to the industry and public in safety evaluations for digital modifications to operating plants and design certification of the advanced reactor designs, and in Generic Letter 95-02, "Use of NUMARC/EPRI Report TR-102348, 'Guideline on Licensing Digital Upgrades,' in Determining the Acceptability of Performing Analog-to-Digital Replacements Under 10 CFR 50.59 dated" dated April 26, 1995. This action plan tracks and manages the codification of the existing framework by updating SRP Chapter 7. Consequently, this is not an urgent regulatory action, and continued plant operation is justified.

Current Status: The staff and its contractor, Lawrence Livermore National Laboratories (LLNL), are currently revising the seven existing sections of SRP Chapter 7 and developing two new sections and several new branch technical positions (BTPs) to incorporate criteria and guidance related to digital I&C systems. In parallel, the Office of Nuclear Regulatory Research (RES) is developing several regulatory guides that endorse national standards related to digital I&C. In addition, the National Academy of Sciences is conducting a study of the NRC regulatory approach and criteria for digital I&C systems and will make recommendations for staff consideration regarding this subject. To expedite the development of the update of the SRP, the staff is planning a series of briefings with the cognizant ACRS subcommittee as parts of the SRP update are finalized.

NRR Technical Contacts: Matthew Chiramal, DRCH, 415-2845
Joe Joyce, DRCH, 415-2842

NUCLEAR POWER PLANT SHIFT STAFFING

TAC Nos. M40010, M91163, M81387, M83053, M88667, M88668, M89071

Description: The action plan addresses the adequacy of shift staffing level requirements at nuclear power plants (NPPs). It includes assessment of the generic implications of assigning conflicting multiple responsibilities to the operating staff of NPPs for response to resource-intensive accidents. The action plan considers whether there is a need to change or develop regulatory guidance regarding shift staffing requirements at NPPs. The action plan results in the issuance of an information notice which provides licensees the results and insights gained during this project and brings this project to closure.

Historical Background: The Commission's post TMI-2 accident shift staffing policy was codified through the issuance of 10 CFR 50.54(m) which became effective January 1, 1984. This rule specified minimum requirements for licensed operators at nuclear power reactor sites but not for non-licensed personnel. Subsequently, the NRC promulgated additional shift staffing requirements and specified actions required by certain plant personnel during an emergency. These include personnel requirements for fire brigades and emergency response personnel contained in Appendix R and Appendix E to 10 CFR Part 50 respectively, and the shift staffing implications commensurate with the reporting/notification requirements contained in 10 CFR 50.73 and 10 CFR Part 72. In addition, Generic Letter 86-04, "Policy Statement on Engineering Expertise on Shift," encouraged licensees to combine one of the required Senior Reactor Operator (SRO) positions with the Shift Technical Advisor (STA) position forming a dual role position (SRO/STA).

Subsequent events over the last several years at some nuclear power plants have led to questions regarding the adequacy of the shift staffing level requirements. In particular, concern was raised regarding the minimum shift staffing (including non-licensed personnel) needed during an event which challenges a backshift crew's ability to perform all necessary functions.
On November 26, 1991, the staff issued Information Notice (IN) 91-77, "Shift Staffing at Nuclear Plants," to alert licensees to the problems that could result from inadequate control of shift staffing levels. IN 91-77 identified fire brigade and security response as additional duties that some licensees had assigned to operations staff and reminded licensees that 10 CFR 50.54(m) specifies only minimum staffing levels for licensed operators and does not address personnel availability for all of the necessary actions specified in the licensee's administrative controls and required by an event.

In December 1992, the Office for Analysis and Evaluation of Operational Data (AEOD) issued NUREG-1275, Vol. 8, "Operating Experience Feedback Report - Human Performance in Operating Events." The report raised concerns regarding the use of Shift Technical Advisors (STAs) to perform duties during plant events that may interfere with their ability to perform their primary function of providing engineering and accident assessment advice to the shift supervisor. The Office of Nuclear Reactor Regulation (NRR) also completed a survey of licensee staffing practices, including how plant personnel were distributed to ensure necessary actions could be accomplished during an event.
The Nuclear Management and Resources Council (NUMARC) provided the NRC results of a NUMARC survey of industry staffing practices in a letter from R. Whitesel, NUMARC, to B. Boger, NRC, dated December 29, 1992. The survey received responses from 110 of the 113 licensees solicited. Ninety-three percent of the respondents stated that they conducted a staffing review after receiving IN 91-77, and the seven percent who did not had recently conducted a shift complement staffing study. Some licensees increased staffing to accomplish required tasks, reassigned duties to more evenly distribute the workload, or modified equipment to reduce the need for operator action. All respondents confirmed the adequacy of their existing staffing practices against the two actual occurrences cited in the IN.

In 1993 the staff took several actions to address the issues raised by the operating events and insights gained during 1991 and 1992. The staff issued IN 93-44, "Operational Challenges During a Dual-Unit Transient," and IN 93-81, "Implementation of Engineering Expertise on Shift." These INs were issued to alert the industry to the operational challenges that could result when responding to an event with minimum staffing levels or when STAs are distracted from their accident assessment duties by serving in concurrent roles such as fire brigade leader or communicator. NRR requested the Office of Nuclear Regulatory Research (RES) to evaluate the adequacy of the minimum staffing levels required by 10 CFR 50.54(m). The staff also issued two reports to the Commission on staffing issues. SECY-93-184, "Shift Staffing at Nuclear Plants," informed the Commission that an NRR survey indicated operators at some plants were concerned about the adequacy of their staffing to handle certain complex events and several AEOD event reviews indicated that shift resources had not been effectively allocated to ensure that individuals were not overburdened. SECY-93-193, "Policy on Shift Technical Advisor Position at Nuclear Power Plants," summarized for the Commission the staff's findings concerning the industry's implementation of the STA position at nuclear power plants. The staff found that the STA was an on-call position at 20 of the 79 sites using dedicated STAs and was concerned about the ability of on-call STAs to maintain an adequate awareness of plant configuration and status. The staff also reported that some licensees assign the STA to concurrent roles such as fire brigade leader or communicator during an event.

As a result of the January 1994 Senior Management Meeting, NRR was assigned the lead to evaluate the effectiveness of licensee shift staffing practices, with the focus on staffing levels outside the control room. The "Task Action Plan for Nuclear Power Plant Shift Staffing" was approved on April 13, 1995.

Proposed Actions: In April 1994 NRR broadened the scope of the staffing research requested from RES to include all licensee staff initially needed for an event. This research included: (1) a review and evaluation of experience and events for which staffing was a contributing factor, and (2) a detailed on-site survey of staffing practices at 7 facilities, including tabletop and walk-through exercises for specific accident sequences that could challenge staff resources. Upon completion of the research, the NRC would review the results and issue an IN regarding the findings.

Originating Document: Staff Requirements Memorandum (M910805A), regarding briefing on AEOD programs, dated August 14, 1991.

Regulatory Assessment: These actions provide assessment of the issue and issuance of results to licensees. These actions impose no new requirements. Accordingly, non-urgent regulatory action and continued facility operation are justified.

Resolution: The findings from the shift staffing study were published by Brookhaven National Laboratory (BNL) in two BNL letter reports to the NRC, "Identification of Issues Associated with Nuclear Power Plant Shift Staffing Levels" dated July 20, 1994 and "Nuclear Power Plant Shift Staffing" dated February 1995. The shift staffing study findings included:

Licensees did not use a systematic process for establishing site-specific staffing levels, despite the availability of such methods.

For all plants surveyed, the technical specifications staffing requirements for SROs and ROs were equivalent to the minimum requirements of 10 CFR 50.54(m).

Licensees frequently assign plant specific tasks to be performed during an event that are not required by regulation.

There was significant variation between plants in the number of licensed and non-licensed

personnel that were administratively required.

During scenario talkthroughs, similar-vendor licensees made significantly different decisions, resulting in very different control room activities and in-plant tasks.

For all plants surveyed, the typical staffing levels were greater than the technical specifications staffing requirements. However, these licensees were actively engaged in reducing operations and management costs. Such reductions could impact their future staffing levels.

On October 10, 1995, the staff issued NRC Information Notice 95-48, "Results of Shift Staffing Study" to provide licensees the results and the insights gained during this project.

Although there have been and continue to be occasional events in which the adequacy of shift staffing and task allocation are called into question, the staff believes that at this time there exists an insufficient basis for a regulatory analysis which would support a generic regulatory action in these areas. Accordingly, the staff will continue to monitor the adequacy of shift staffing and task allocation for events in which they are questioned, and will take plant-specific regulatory action as appropriate.

Contacts: J. Arildsen, NRR, 415-1026
D. Desaulniers, NRR, 415-1043
J. Persensky, RES, 415-6759

References:

BNL Letter Report, "Nuclear Power Plant Shift Staffing Levels: Site Data Collection Report," February 1995.

BNL Task 1 Letter Report, "Identification of Issues Associated with Nuclear Power Plant Shift Staffing Levels," July 20, 1994.

Generic Letter 86-04, "Policy Statement on Engineering Expertise on Shift," February 13, 1986.

Information Notice 91-77, "Shift Staffing at Nuclear Plants," November 26, 1991.

Information Notice 93-44, "Operational Challenges During a Dual-Unit Transient," June 15, 1993.

Information Notice 93-81, "Implementation of Engineering Expertise on Shift," October 12, 1995.

Information Notice 95-48, "Results of Shift Staffing Study," October 10, 1995.

Letter from R. Whitesel, NUMARC, to B. Boger, NRC, dated December 29, 1992.

NUREG-1275, Vol. 8, "Operating Experience Feedback Report - Human Performance in Operating Events," December 1992.

SECY-93-184, "Shift Staffing at Nuclear Plants," June 29, 1993.

SECY-93-193, "Policy on Shift Technical Advisor Position at Nuclear Power

Plants," dated July 13, 1993.

Staff Requirements Memorandum (M910805A), August 14, 1991.

"Task Action Plan for Nuclear Power Plant Shift Staffing," April 13, 1995.

10 CFR 50.54(m)

10 CFR 50.73

10 CFR 50 Appendix E

10 CFR 50 Appendix R

10 CFR 72

NOTICE OF ENFORCEMENT DISCRETION

TAC No. M90387

Description: A Notice of Enforcement Discretion (NOED) Review Team and, independently, an Office of Inspector General (OIG) audit team reviewed certain aspects of the NOED policy and the related guidance contained in Inspection Manual Part 9900. Their review results are documented in reports dated September 1, 1994 and October 17, 1994, respectively. These reports identified areas where improvements could be made to the NOED program. The Commission also requested public comments on its enforcement policy, including the NOED process. This action plan was initiated to address the recommendations and to implement those that were adopted.

Historical Background: The Nuclear Regulatory Commission (NRC) requires that a licensee operate its facility in compliance with the NRC's regulations and the specific facility's license. When a licensee fails to comply with the conditions of its license or the NRC's regulations, the staff will take enforcement action in accordance with its Enforcement Policy, NUREG-1600, "General Statement of Policy and Procedures for NRC Enforcement Actions," (previously Appendix C to Part 2 of Title 10 of the Code of Federal Regulations).

The NRC recognizes that it is not always possible to anticipate every contingency that might arise during the lifetime of a facility that might result in non-compliance with specific license conditions. In such instances, enforcement action may not be appropriate, even though, technically, a non-compliance situation may exist. For such circumstances, the Enforcement Policy provides for a specific type of enforcement discretion that is known as an NOED. The NOED policy indicates when the staff, under certain limited circumstances, may choose not to enforce compliance with a license condition when specific safety criteria are met. Staff guidance for implementing the NOED policy is contained in the NRC Inspection Manual Part 9900 (Part 9900):Technical Guidance.

In May 1994, the NRC discovered some inconsistencies in the staff's implementation of the NOED policy. The NRC established a team to review the NOED policy, implementation process, and staff practices and develop appropriate recommendations. Concurrently, the NRC's Office of the Inspector General (OIG) assessed NRC's compliance with the NOED policy and procedures.

These evaluations found that, in general, the staff complied with its procedures and requirements for review and determinations relating to NOEDs and that staff actions reflected adequate consideration of radiological health and safety of the public and sound technical and safety bases. However, a number of areas were identified where improvements could be made to the NOED policy and its implementation. The areas involved changes to the NOED policy, staff's guidance and procedures for implementing the NOED policy, and other support/administrative aspects.

Also, as part of its overall enforcement policy review, the NRC asked for, and received, public comments on the NOED policy as published in the Federal Register, 59 FR 49215, September 27, 1994.

Originating Document: Commission paper (SECY 95-078), Staff Actions to Address Recommendations Resulting From Recent Evaluations of the Notice of Enforcement Discretion (NOED) Policy and Process, dated March 29, 1995.

Regulatory Assessment: After reviewing the results of these evaluations and associated recommendations, the staff concluded that the present NOED policy is technically sound and, therefore, need not be revised. The staff documented its conclusions in a Commission paper (SECY

95-078) dated March 29, 1995. The staff, however, determined that several aspects of the NOED guidance and procedures needed clarification to ensure proper implementation of the policy. In addition to these recommendations, the staff subsequently identified other areas for improving the NOED guidance.

Resolution: On November 2, 1995, the staff issued a revised NRC Inspection Manual Part 9900 (Part 9900), Technical Guidance, which contains improved staff guidance for implementing the NOED policy. Also, on November 7, 1995, the NRC issued an Administrative Letter, 95-05, Revisions to Staff Guidance for Implementing NRC Policy on Notices of Enforcement Discretion, to inform the nuclear industry of this improved guidance.

Contacts: L. Raghavan, NRR
415-1471

References: As stated

GENERIC COMMUNICATIONS AND COMPLIANCE ACTIVITIES

PUBLIC JANUARY 1996 DIRECTOR'S MONTHLY STATUS REPORT
Open Generic Communication and Compliance Activities
Sorted by Lead Technical Division and Branch

TAC	Type	Contact	LA Comp	Title	Description
** LTD = Associate Director for Projects					
* LTB = ADPR Project Directorates					
M93911	GL	JWShapaker	1/31/96 T	GL: ASLB/OGC Determination to Treat non-TS Changes Requiring Prior NRC Approval as License Admendments	Based on ASLB decision issued 10/4/95 (LBP-95-17) in a Perry license amendment proceeding.
* LTB = Technical Specifications Branch					
M91404	GL	JWShapaker	2/2/96 T	GL: Administrative Controls Sec'ion	Line item improvement, guidance on revising the admin controls section of T.S.
M91749	GL	JWShapaker	1/26/96 T	GL: Relocation of RCS Pressure/Temperature Limits	Line item improvement, guidance to relocate PT limits curves to a report outside T.S.
M92544	GL	JWShapaker	6/28/96 T	GL: Design Features Technical Specifications	Guidance to revise the design features section of T.S. (line item improvement)
** LTD = Division of Engineering					
* LTB = Civil Engineering and Geosciences Branch					
M85236	LT	TAGreene	9/30/96 T	Problem of Grease Leakage in Prestressed Concrete Containment	Petroleum-based grease leaks could reduce concrete strength. 40 plants have greased unbonded tendons in their containment.

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Open Generic Communication and Compliance Activities
Sorted by Lead Technical Division and Branch

TAC	Type	Contact	LA Comp	Title	Description
M92553	LT	RABenedict	9/1/96 T	Investigate Impact of Failure of SMRFs (During Northridge EQ) to NPP Steel Structures	Certain steel framing members failed in earthquake. Determine if same construction used in other plants.
M93707	GL	JWShapaker	6/28/96 T	GL: Plant Shutdown Criteria Following an Earthquake	Announce NRC approval of OBE exceedance criteria and associated plant shutdown guidelines proposed by EPRI as acceptable alternative to NRC interim guidelines for recommending plant shutdown following an earthquake.
M94293	GL	JLBirmingham		GL: NRC Preliminary Findings Related To The Use Of Reduced Seimic Criteria For Temporary Conditions.	
* LTB = Electrical Engineering Branch					
M91622	IN	TKoshy	1/23/96 T	IN: Inadequate Control of Molded-Case Circuit Breakers	Inappropriate pre-conditioning of breakers before surveillance.
* LTB = Materials and Chemical Engineering Branch					
M67462	LT	EJBenner	7/28/96 T	Augmented Reactor Vessel Inspection	Provide answers to questions as licensees implement 10 CFR 50.55(g)(6)(ii)(4) requiring augmented reactor vessel inspections.

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Open Generic Communication and Compliance Activities
Sorted by Lead Technical Division and Branch

TAC	Type	Contact	LA Comp	Title	Description
M93024	LT	CVHodge	3/14/96 T	Evaluate Impact of RCP Support Column Tilt on Leak Before Break Analyses	To avoid interference with crossover leg, RCP support placed closer to vessel.
M93227	IN	EJBenner	2/23/96 T	IN: Fish Mouth Burst and Bowing of Previously-Plugged Steam Generator Tubes	Discusses recommendations made by Westinghouse in response to Haddam Neck event where previously-plugged steam generator tubes were found to have burst and bowed, potentially impacting other tubes.
M93641	IN	ENFields	1/15/96 T	IN: Control Rod Drive Mechanism Penetration Cracking	Potential for CRDM penetration cracking due to resin ingress. A generic letter (TAC number M91535) is on hold and may be issued later.
M93643	IN	EJBenner	1/19/96 T	IN: Augmented Examination of Reactor Vessel	Discusses rule 10 CFR 50.55a(g)(6)(ii)(A) on augmented vessel exams
M94254	IN	EJBenner	2/2/96 T	IN: Damage in Foreign Steam Generator Internals	

* LTB - Mechanical Engineering Branch

M82072	GL	JWShapaker	1/26/96 T	GL 89-10, Supp 7: Consideration of Position Changeable Valves	PART OF A TASK ACTION PLAN -- Remove requirement to consider mispositioning of MOVs in PWRs (similar to GL 89-10, S4 for BWRs).

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Open Generic Communication and Compliance Activities
Sorted by Lead Technical Division and Branch

TAC	Type	Contact	LA Comp	Title	Description
M93400	IN	EJBenner	1/5/96 L	IN: PORV Inoperability Masked by Downstream Indications During Testing	Discusses PORV acoustic monitors which gave false indication of an open condition when PORV leaked.
M93706	GL	JWShapaker	6/28/96 T	GL: Periodic Verification of Design-Basis Capability of Safety-Related Motor-Operated Valves	LINKED TO A TASK ACTION PLAN
M93841	LT	EMMcKenna	4/30/96 T	Implications of Target Rock 2-Stage SRV Pilot Leakage	Evaluate safety inplications of leakage on valve operability and adequacy of leak detection.
M94004	IN	JRTappert	1/15/96 T	IN: Environmental Effects on Main Steam Safety Valve Set Point	
M94189	IN	TJCarter	1/15/96 T	IN: Da[illegible] to Valve Internals Caused by Thermally - Induced Pressure Locking	
M94371	IN	TJCarter		IN: Valve Stem Coupling of Gimpel Auxiliary Feedwater Turbine Trip Throttle Valves	

PUBLIC JANUARY 1996 DIRECTOR'S MONTHLY STATUS REPORT
Open Generic Communication and Compliance Activities
Sorted by Lead Technical Division and Branch

TAC	Type	Contact	LA Comp	Title	Description
** LTD = Division of Inspection and Support Programs					
* LTB = Special Inspections Branch					
M92594	IN	TKoshy	2/8/96 T	IN: Fires in Emergency Diesel Generator Excitors	Fuse failures in EDG start-event that could remain undetected.
M93979	IN	JRTappert	2/1/96 T	IN 92-68, Supp: Potentially Substandard Slip-On, Welding Neck, and Blind Flanges	
** LTD = Division of Reactor Controls and Human Factors					
* LTB = Human Factors Branch					
M92294	LT	NKHunemuller	12/31/96 T	Develop Regulatory Guide For Part 26 to Describe Acceptable Methods For FFD Programs to Address Fati	Develop guidance for the nuclear industry that will describe acceptable methods for licensees to address fatigue as a FFD issue in light of Commission Policy and 10 CFR 26 requirements.
M94370	LT	EMMcKenna		Exceeding Technical Specifications Limit for Maximum Fuel Design Limiting Ratio for Centerline Melt	

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Open Generic Communication and Compliance Activities
Sorted by Lead Technical Division and Branch

TAC	Type	Contact	LA Comp	Title	Description
* LTB = Instrumentation and Controls Branch					
M90863	GL	JWShapaker	1/26/96 T	GL: Inadequate Testing of Safety Related Logic Circuits	Repeated events in which safety-related logic circuits were not fully tested.
M93653	LT		6/30/97 T	EPRI TR-104965, "Calibration Through On-Line Performance Monitoring ..."	Review of EPRI topical report by Instrumentation and Controls Branch.
M93654	LT		6/30/97 T	EPRI TR-103335, "Guidelines for Instrument Calibration ... "	Review of EPRI topical report by Instrumentation and Controls Branch.
M94127	LT			EPRI TR-(later), "Guideline for Digital Commercial-Grade Dedication"	Review of EPRI topic report by Instrumentation and Controls Branch
* LTB = Operator Licensing Branch					
M93336	GL	JWShapaker	6/28/96 T	GL: Exemption For Applicants For the Senior Reactor Operator License Limited to Fuel Handling (LSRO)	Applicants for a LSRO may request an exemption from the requirements in 10 CFR 55.31(a)(5) since literal compliance is inappropriate.
* LTB = Quality Assurance and Maintenance Branch					
M91542	IN	EYWang	4/30/96 T	IN: ANSYS and GTSTRUDL Computer Program Error Notifications	Part 21 notifications regarding ANSYS and GTSTRUDL computer program errors. Some of these errors cause erroneousd calculations resulting in wrong answers which may not be detected by the user.

PUBLIC JANUARY 1996 DIRECTOR'S MONTHLY STATUS REPORT
Open Generic Communication and Compliance Activities
Sorted by Lead Technical Division and Branch

TAC	Type	Contact	LA Comp	Title	Description
** LTD = Division of Reactor Program Management					
* LTB = Emergency Preparedness and Radiation Protection Branch					
M91620	GL	JWShapaker	10/30/96 T	GL: Revision to Augmentation Staffing Levels For Nuclear Power Plant Emergencies	Ensuring adequate staffing for emergencies.
* LTB = Events Assessment and Generic Communications Branch					
M91544	GL	JWShapaker	3/15/96 T	GL: Defining Info in Monthly Operating Report Required by Tech Specs	Reducing reporting requirements to the minimum needed by the staff (part of RRG).
M94044	IN	NKHunemuller	3/14/96 T	IN: Inadvertent Draining of Reactor Vessel and Isolation of Shutdown Cooling System	IN to highlight both the speed of the draindown at Hatch and plant configuration control for tests involving the remote shutdown panel.
* LTB = Safeguards Branch					
M86951	LT	JRTappert	2/28/98 T	Protection of Safety Equipment Against Vehicle Bombs	Rule has been issued. A TI will be drafted to verify licensee implementation. TAC will remain open to support TI inspections.
M91896	GL	JWShapaker	1/26/96 T	GL: Reconsideration of Plant Security Requirements	Reconsideration of requirements associated with an internal threat, relaxation associated with SECY-93-326.

PUBLIC JANUARY 1996 DIRECTOR'S MONTHLY STATUS REPORT
Open Generic Communication and Compliance Activities
Sorted by Lead Technical Division and Branch

TAC	Type	Contact	LA Comp	Title	Description
** LTD = Division of Systems Safety and Analysis					
* LTB = Containment Systems and Severe Accident Branch					
M86925	BL	JWShapaker	3/29/96 T	BL 93-02 Supp: Generic/BWR Strainer Clogging	PART OF A TASK ACTION PLAN -- Final resolution of this issue, requesting licensee action.
M93360	IN	EJBenner	1/26/96 T	IN: Blockage of Untested ECCS Piping	Discusses foreign event in which blockage was found in ECCS piping from conctruction debris.
M93753	IN	JRTappert	1/16/96 T	IN: Potential Containment Leak Path Through Hydrogen Analyzer	Describes containment bypass events at Braidwood and Catawba.
* LTB = Plant Systems Branch					
M80296	LT	TAGreene	9/30/96 T	Generic Communications - Assessment of Turbine Failure at Vandellos 1	Development of staff NUREG or other publication to document turbine building fire issues for U.S. plants in light of Vandellos fire.
M91323	LT	NKHunemuller	3/31/96 T	Reactor Water Cleanup (RWCU) Study in Response to ACRS Concern	Review of the effects of an unisolated RWCU break at several BWR's. Result of ACRS concerns during the review of the ABWR

PUBLIC JANUARY 1996 DIRECTOR'S MONTHLY STATUS REPORT
Open Generic Communication and Compliance Activities
Sorted by Lead Technical Division and Branch

TAC	Type	Contact	LA Comp	Title	Description
M92636	LT	TJCarter	4/1/96 T	Terry Turbine Dependability	Opened 6/28/95 to address a broadened look at Terry turbine dependability based on concerns from related TAC M92407, which has been closed. (TAC M92407 only addressed overspeeding due to governor valve stem binding.)
M93335	LT	WFBurton	10/31/96 T	Main Control Room Envelope Unfiltered Inleakage	Use improved methodology to verify the effects of potential inleakage rates on compliance with radiation and toxic gas exposure limits inside the main control room.
M93754	IN	TKoshy	1/26/96 T	IN: Inadequate Testing and Design of Tornado Dampers	
M94045	IN	WFBurton	3/29/96 T	IN: Recent Problems with Overhead Cranes	Trojan experienced failure of overhead crane rail and Prairie Island experienced premature actuation of load limit device.
M94088	IN	EYWang	8/30/96 T	Removing Refueling Floor Shielding Plugs Prior to And Soon After Shutdown	

* LTB = Reactor Systems Branch

M80326	LT	SSKoenick	4/13/96 T	Accumulation of Volume Control Tank Cover Gass in ECCS Piping Connected to the Charging System.	Not a new issue, there have been several generic communications already issued. SRXB would like to close this out by memo.

PUBLIC JANUARY 1996 DIRECTOR'S MONTHLY STATUS REPORT
Open Generic Communication and Compliance Activities
Sorted by Lead Technical Division and Branch

TAC	Type	Contact	LA Comp	Title	Description
M87297	LT	EJBenner	6/30/96 T	Generic Model For Probability of Operation With a Mis-Oriented Fuel Bundle	Model for non-detection of a mis-positioned fuel bundle during operation.
M91256	GL	JWShapaker	7/1/96 T	High Burnup Fuel Action Plan	PART OF A TASK ACTION PLAN -- GL and approvals of fuel burnup increases, taking into account results of European tests.
M91447	GL	JWShapaker	3/22/96 T	GL: Boraflex Degradation in Spent Fuel Pool Storage Racks	Problems with previously unidentified high rate of Boraflex degradation, criticality concern.
M91599	GL	JWShapaker	9/30/96 T	GL 83-11 Supp: Licensee Qualification For Performing Safety Analyses in Support of Licensing Actions	PART OF A TASK ACTION PLAN -- Provides alternative means of licnesee qualification for performing sanalyses using generically approved methods.
M92601	IN	TJCarter	12/27/95 L	IN: BWR Stability With Flow Slightly Less Than Natural Circulation Flow	Two plants have seen flow less than the natural circulation line on the flow/power pump. Potential concern about lack of guidance for dealing with instability in the region.
M92635	GL	JWShapaker	3/15/96 T	GL: Reactor Coolant Inventory Loss and Potential Loss of Emergency Mitigation Functions While Shutdo	Loss of ECCS function due to steam voiding in RWST line to suction of ECCS pumps due to loss of RCS inventory in Mode 4 (Wolf Creek).

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Open Generic Communication and Compliance Activities
Sorted by Lead Technical Division and Branch

TAC	Type	Contact	LA Comp	Title	Description
M93568	IN	ENFields	1/30/96 T	IN 95-03, Supp: Loss of RC Inventory and Potential Loss of Emer Mitigation Functions While in a Shut	PART OF A TASK ACTION PLAN -- This is one of the tasks identified in the Task Action Plan being developed under TAC number M91621.
M93751	IN	RABenedict	2/15/96 T	IN: Closed Head Vent Causes Inaccurate Level Indication During Reduced Inventory	Improper venting of reactor coolant system permitted water level changes in reactor vessel to go undetected during reduced inventory operations.
M93752	IN	CVHodge	1/12/96 T	IN: Shutdown Cooling Flow Bypassing Core Results in Temperature and Pressure Increases	Unmonitored mode changes because part of shutdown cooling flow was diverted from core through open recirculation loop.
M93842	LT	EJBenner	1/5/96 L	Assessment of Corrosion of B&W Fuel Used in 2 Year Fuel Cycles	Assess safety significance of corrosion found on TMI fuel after 2-year cycle.

PUBLIC JANUARY 1996 DIRECTOR'S MONTHLY STATUS REPORT
Open Long Term Followup Type
Generic Communication and Compliance Activities
Sorted by Lead Technical Division and Branch

TAC	Contact	LA Comp	Title	Description
** LTD = Division of Engineering				
* LTB = Civil Engineering and Geosciences Branch				
M85236	TAGreene	9/30/96 T	Problem of Grease Leakage in Prestressed Concrete Containment	Petroleum-based grease leaks could reduce concrete strength. 40 plants have greased unbonded tendons in their containment.
M92553	RABenedict	9/1/96 T	Investigate Impact of Failure of SMRFs (During Northridge EQ) to NPP Steel Structures	Certain steel framing members failed in earthquake. Determine if same construction used in other plants.
* LTB = Materials and Chemical Engineering Branch				
M67462	EJBenner	7/28/96 T	Augmented Reactor Vessel Inspection	Provide answers to questions as licensees implement 10 CFR 50.55(g)(6)(ii)(4) requiring augmented reactor vessel inspections.
M93024	CVHodge	3/14/96 T	Evaluate Impact of RCP Support Column Tilt on Leak Before Break Analyses	To avoid interference with crossover leg, RCP support placed closer to vessel.
* LTB = Mechanical Engineering Branch				
M93841	EMMcKenna	4/30/96 T	Implications of Target Rock 2-Stage SRV Pilot Leakage	Evaluate safety inplications of leakage on valve operability and adequacy of leak detection.

PUBLIC JANUARY 1996 DIRECTOR'S MONTHLY STATUS REPORT
Open Long Term Followup Type
Generic Communication and Compliance Activities
Sorted by Lead Technical Division and Branch

TAC	Contact	LA Comp	Title	Description
** LTD = Division of Reactor Controls and Human Factors				
* LTB = Human Factors Branch				
M92294	NKHunemuller	12/31/96 T	Develop Regulatory Guide For Part 26 to Describe Acceptable Methods For FFD Programs to Address Fati	Develop guidance for the nuclear industry that will describe acceptable methods for licensees to address fatigue as a FFD issue in light of Commission Policy and 10 CFR 26 requirements.
M94370	EMMcKenna		Exceeding Technical Specifications Limit for Maximum Fuel Design Limiting Ratio for Centerline Melt	
* LTB = Instrumentation and Controls Branch				
M93653		6/30/97 T	EPRI TR-104965, "Calibration Through On-Line Performance Monitoring ..."	Review of EPRI topical report by Instrumentation and Controls Branch.
M93654		6/30/97 T	EPRI TR-103335, "Guidelines for Instrument Calibration ... "	Review of EPRI topical report by Instrumentation and Controls Branch.
M94127			EPRI TR-(later), "Guideline for Digital Commercial-Grade Dedication"	Review of EPRI topic report by Instrumentation and Controls Branch

PUBLIC JANUARY 1996 DIRECTOR'S MONTHLY STATUS REPORT
Open Long Term Followup Type
Generic Communication and Compliance Activities
Sorted by Lead Technical Division and Branch

TAC	Contact	LA Comp	Title	Description
** LTD = Division of Reactor Program Management				
* LTB = Safeguards Branch				
M86951	JKTappert	2/28/98 T	Protection of Safety Equipment Against Vehicle Bombs	Rule has been issued. A TI will be drafted to verify licensee implementation. TAC will remain open to support TI inspections.
** LTD = Division of Systems Safety and Analysis				
* LTC = Plant Systems Branch				
M80296	TAGreene	9/30/96 T	Generic Communications - Assessment of Turbine Failure at Vandellos 1	Development of staff NUREG or other publication to document turbine building fire issues for U.S. plants in light of Vandellos fire.
M91323	NKHunemuller	3/31/96 T	Reactor Water Cleanup (RWCU) Study in Response to ACRS Concern	Review of the effects of an unisolated RWCU break at several BWR's. Result of ACRS concerns during the review of the ABWR
M92636	TJCarter	4/1/96 T	Terry Turbine Dependability	Opened 6/28/95 to address a broadened look at Terry turbine dependability based on concerns from related TAC M92407, which has been closed. (TAC M92407 only addressed overspeeding due to governor valve stem binding.)

PUBLIC JANUARY 1996 DIRECTOR'S MONTHLY STATUS REPORT
Open Long Term Followup Type
Generic Communication and Compliance Activities
Sorted by Lead Technical Division and Branch

TAC	Contact	LA Comp	Title	Description
M93335	WFBurton	10/31/96 T	Main Control Room Envelope Unfiltered Inleakage	Use improved methodology to verify the effects of potential inleakage rates on compliance with radiation and toxic gas exposure limits inside the main control room.

* LTB = Reactor Systems Branch

M80326	SSKoenick	4/13/96 T	Accumulation of Volume Control Tank Cover Gass in ECCS Piping Connected to the Charging System.	Not a new issue, there have been several generic communications already issued. SRXB would like to close this out by memo.
M87297	EJBenner	6/30/96 T	Generic Model For Probability of Operation With a Mis-Oriented Fuel Bundle	Model for non-detection of a mis-positioned fuel bundle during operation.
M93842	EJBenner	1/5/96 L	Assessment of Corrosion of B&W Fuel Used in 2 Year Fuel Cycles	Assess safety significance of corrosion found on TMI fuel after 2-year cycle.

PUBLIC JANUARY 1996 DIRECTOR'S MONTHLY STATUS REPORT
Generic Communication and Compliance Activities Added
Since the October 1995 Director's Monthly Status Report

TAC	Type	Contact	Tech Branch	TR Comp	Title	Reason Added
M86951	LT	JRTappert	Safeguards Branch	11/11/11	Protection of Safety Equipment Against Vehicle Bombs	Added in the Update to the November 1995 Director's Monthly Status Report. It had been inadvertently omitted from the earlier GCCA listings.
M91256	GL	JWShapaker	Reactor Systems Branch	12/15/97	High Burnup Fuel Action Plan	TAC number had been tracked as a task action plan since the issuance of NRCIN 94-64, Supp 1, on 4/6/95. Began tracking as a generic letter on 11/14/95.
M93400	IN	EJBenner	Mechanical Engineering Branch	--/--/--	IN: PORV Inoperability Masked by Downstream Indications During Testing	The Events Assessment Panel authorized development of the information notice at its 9/5/95 meeting.
M93568	IN	ENFields	Reactor Systems Branch	08/31/96	IN 95-03, Supp: Loss of RC Inventory and Potential Loss of Emer Mitigation Functions While in a Shut	Management Decision to provide separate TACs for TAP, GL, and IN.
M93641	IN	ENFields	Materials and Chemical Engineering Branch	10/31/95	IN: Control Rod Drive Mechanism Penetration Cracking	The Events Assessment Panel authorized development of the information notice at its 9/12/95 meeting.

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TAC	Type	Contact	Tech Branch	TR Comp	Title	Reason Added
M93643	IN	EJBenner	Materials and Chemical Engineering Branch	10/27/95	IN: Augmented Examination of Reactor Vessel	The Events Assessment Panel authorized development of the proposed information notice at its 9/12/95 meeting.
M93653	LT		Instrumentation and Controls Branch	06/30/97	EPRI TR-104965, "Calibration Through On-Line Performance Monitoring ..."	AEChaffee authorized issuance of the TAC number on 9/19/95.
M93654	LT		Instrumentation and Controls Branch	12/01/97	EPRI TR-103335, "Guidelines for Instrument Calibration ... "	AEChaffee authorized issuance of the TAC number on 9/19/95
M93706	GL	JWShapaker	Mechanical Engineering Branch	11/11/11	GL: Periodic Verification of Design-Basis Capability of Safety-Related Motor-Operated Valves	The Events Assessment Panel authorized development of the generic letter at its 9/26/95 meeting.
M93707	GL	JWShapaker	Civil Engineering and Geosciences Branch	--/--/--	GL: Plant Shutdown Criteria Following an Earthquake	The Events Assessment Panel authorized development of the generic letter at its 9/26/95 meeting.

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TAC	Type	Contact	Tech Branch	TR Comp	Title	Reason Added
M93751	IN	RABenedict	Reactor Systems Branch	--/--/--	IN: Closed Head Vent Causes Inaccurate Level Indication During Reduced Inventory	The Events Assessment Panel authorized development of the information notice at its 10/3/95 meeting.
M93752	IN	CVHodge	Reactor Systems Branch	--/--/--	IN: Shutdown Cooling Flow Bypassing Core Results in Temperature and Pressure Increases	The Events Assessment Panel authorized development of the information notice at its 10/3/95 meeting.
M93753	IN	JRTappert	Containment Systems and Severe Accident Branch	11/30/95	IN: Potential Containment Leak Path Through Hydrogen Analyzer	The Events Assessment Panel authorized development of the information notice at its 10/3/95 meeting.
M93754	IN	TKoshy	Plant Systems Branch	--/--/--	IN: Inadequate Testing and Design of Tornado Dampers	The Events Assessment Panel authorized development of the information notice at its 10/3/95 meeting.
M93841	LT	EMMcKenna	Mechanical Engineering Branch	11/11/11	Implications of Target Rock 2-Stage SRV Pilot Leakage	The Events Assessment Panel authorized long term followup at its 10/17/95 meeting.
M93842	LT	EJBenner	Reactor Systems Branch	--/--/--	Assessment of Corrosion of B&W Fuel Used in 2 Year Fuel Cycles	The Events Assessment Panel authorized long term followup at its 10/17/95 meeting.

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TAC	Type	Contact	Tech Branch	TR Comp	Title	Reason Added
M93911	GL	JWShapaker	ADPR Project Directorates	--/--/--	GL: ASLB/OGC Determination to Treat non-TS Changes Requiring Prior NRC Approval as License Admendments	AEChaffee authorized development of the generic letter, subject to confirmation by the Events Assessment Panel, of the generic letter on 10/20/95. EAP authorized development of generic letter at its 11/14/95 meeting.
M93979	IN	JRTappert	Special Inspections Branch	01/06/96	IN 92-68, Supp: Potentially Substandard Slip-On, Welding Neck, and Blind Flanges	The Events Assessment Panel authorized development of a supplement to NRC Information Notice 92-68 at its 10/31/95 meeting.
M94004	IN	JRTappert	Mechanical Engineering Branch	12/31/95	IN: Environmental Effects on Main Steam Safety Valve Set Point	
M94044	IN	NKHunemuller	Events Assessment and Generic Communications Branch	02/14/96	IN: Inadvertent Draining of Reactor Vessel and Isolation of Shutdown Cooling System	Events Assessment Panel authorized development of information notice at it's 11/14/95 meeting
M94045	IN	WFBurton	Plant Systems Branch	02/29/96	IN: Recent Problems with Overhead Cranes	Events Assessment Panel authorized Development of IN at it's 11/14/95 meeting

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TAC	Type	Contact	Tech Branch	TR Comp	Title	Reason Added
M94088	IN	EYWang	Plant Systems Branch	11/24/97	Removing Refueling Floor Shielding Plugs Prior to And Soon After Shutdown	Events Assessment Panel authorized long-term followup of the issue at the 11/21/95 meeting. On 12/28/95, management determined that an information notice would be issued.
M94127	LT		Instrumentation and Controls Branch	--/--/--	EPRI TR-(later), "Guideline for Digital Commercial-Grade Dedication"	AE Chaffee authorized of the non-task managed TAC number on 11/29/95.
M94189	IN	TJCarter	Mechanical Engineering Branch	--/--/--	IN: Damage to Valve Internals Caused by Thermally - Induced Pressure Locking	Event Assessment Panel authorized development of the information notice at its 12/5/95 meeting.
M94254	IN	EJBenner	Materials and Chemical Engineering Branch	--/--/--	IN: Damage in Foreign Steam Generator Internals	Event Assessment Panel authorized development of information notice at its 12/12/95 meeting.
M94293	GL	JLBirmingham	Civil Engineering and Geosciences Branch	--/--/--	GL: NRC Preliminary Findings Related To The Use Of Reduced Seimic Criteria For Temporary Conditions.	Event Assessment Panel authorized development of the generic letter at its 12/19/95 meeting.

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TAC	Type	Contact	Tech Branch	TR Comp	Title	Reason Added
M94370	LT	EMMcKenna	Human Factors Branch	--/--/--	Exceeding Technical Specifications Limit for Maximum Fuel Design Limiting Ratio for Centerline Melt	Event Assessment Panel authorized this to be a long-term follow up item at its 1/2/96 meeting.
M94371	IN	TJCarter	Mechanical Engineering Branch	--/--/--	IN: Valve Stem Coupling of Gimpel Auxiliary Feedwater Turbine Trip Throttle Valves	Event Assessment Panel authorized this to be a long-term follow up item at its 1/2/96 meeting.

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TAC	Type	Contact	Tech Branch	LA Comp	Title	Reason Closed
M88788	GL	JWShapaker	Safeguards Branch	10/31/95 C	GL: RRG, 50.54(p) Guidance	NRC Generic Letter 95-08, "10 CFR 50.54(p) Process For Changes to Security Plans Without Prior NRC Approval," issued 10/31/95.
M90014	GL	JWShapaker	Technical Specifications Branch	12/17/95 C	GL: Relocation of Selected TS Requirements Related to Instrumentation	
M91163	IN	NKHunemuller	Human Factors Branch	10/10/95 C	IN: Shift Staffing Issue Followup	An information notice is identified as part of the resolution of the task action plan. NRC Information Notice 95-48, "Results of Shift Staffing Study," issued 10/10/95.
M91231	LT	EJBenner	Safeguards Branch	12/12/95 C	Lessons Learned From Operational Safeguards Response Evaluations	Individual letters sent.
M91448	IN	SSKoenick	Special Inspections Branch	11/22/95 C	IN 91-29 Supp: Deficiencies Identified During Electrical Distribution System Inspections	NRC Information Notice 91-29, Supp 3, issued 11/22/95.

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TAC	Type	Contact	Tech Branch	LA Comp	Title	Reason Closed
M91531	IN	TJCarter	Civil Engineering and Geosciences Branch	10/27/95 C	IN: Seismic Adequacy of Thermo-Lag Panels	NRC Information Notice 95-49, "Seismic Adequacy of Thermo-Lag Panels," issued 10/27/95.
M91533	IN	TKoshy	Electrical Engineering Branch	9/7/95 C	IN: Capability of Offsite Power During Design Basis Events	NRC Information Notice 95-37, "Inadequate Offsite Power System Voltages During Design-Basis Events," issued 9/7/95.
M91535	GL	JWShapaker	Materials and Chemical Engineering Branch	11/8/95 C	GL: Implementation of a Program For Inspection of CRD Mechanism Penetrations	Closed at lead technical reviewer's request.
M91642	IN	CVHodge	Human Factors Branch	11/28/95 C	IN 94-13 Rev: Unanticipated and Unauthorized Movement of Fuel	NRC INformation Notice 94-13, Supplement 2, issued 11/28/95.
M91746	IN	CVHodge	Mechanical Engineering Branch	8/31/95 C	IN: Frequency of Use of Air Operated Gate Valves With Hiller Actuators	AEChaffee agreed with EMEB's recommendation to close the issue without issuing the proposed information notice on 8/31/95.
M91950	IN	TAGreene	Special Inspections Branch	10/4/95 C	IN: Falsification of ASNT Certificate by American Power Services	NRC Information Notice 95-45, "American Power Service Falsification of American Society For Nondestructive Testing (ASNT) Certificates," issued 10/4/95.

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TAC	Type	Contact	Tech Branch	LA Comp	Title	Reason Closed
M92004	IN	EJBenner	Materials and Chemical Engineering Branch	9/20/95 C	IN: Circumferential Cracking of Steam Generator Tubes	NRC Informantion Notice 95-40, "Supplemental Information to Generic Letter 95-03, 'Circumferential Cracking of Steam Generator Tubes,'" issued 9/28/95.
M92028	IN	DLSkeen	Special Inspections Branch	12/1/95 C	IN: Main Steam Isolation Valve Failure Due to Pilot Valve Malfunction	NRC Information Notice 95-53, "Failures of Main Steam Isolation Valves as a Result of Sticking Solenoid Pilot Valve," was issued on 12/1/95.
M92216	LT	JLBirmingham	Containment Systems and Severe Accident Branch	11/7/95 C	Evaluate Missiles From Mirror Insulation During High Energy Pipe Breaks	In addition to its low safety significance, it is clear that the issue is very plant and break location specific, and is therefore best addressed by the individual licensees.
M92595	IN	WFBurton	Plant Systems Branch	1/3/96 C	IN: Inadequate Capacity of CCW Leads to Freon Release to the Control Room	NRC information Notice 96-01 issued on 1/3/96.
M92876	IN	TAGreene	Emergency Preparedness and Radiation Protection Branch	12/11/95 C	IN: Spent Fuel Transfer Canal Shielding Deficiency at Boiling Water Reactor	Approved by Events Assessment Panel at its 7/11/95 meeting. NRC Information Notice 95-56 issued 12/11/95

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TAC	Type	Contact	Tech Branch	LA Comp	Title	Reason Closed
M92935	IN	CVHodge	Plant Systems Branch	10/6/95 C	IN: Unplanned, Unmonitored Release of Radioactivity From the Exhaust Ventilation System of a BWR	Development authorized by the Events Assessment Panel at its 7/18/95 meeting. NRC Information Notice 95-46, "Unplanned, Undetected Release of Radioactivity From the Exhaust Ventilation System of a Boiling Water Reactor," issued 10/6/95.
M92960	LT	TAGreene	Mechanical Engineering Branch	8/3/95 C	Susceptibility of Low Pressure Coolant and Core Spray Injection Valves to Pressure Locking	Approved by AEChaffee based on ACThadani's request that an information notice be promptly issued on the subject event. NRC Information Notice 95-30 issued 8/3/95. Any long term followup of the issue will be tracked under MPA L-507.
M93226	IN	JRTappert	Special Inspections Branch	10/5/95 C	IN 95-12, Supp: Potentially Nonconforming Fasteners Supplied by A&G Engineering II, Inc.	The Events Assessment Panel authorized continued development at its 8/8/95 meeting. NRC Information Notice 95-12, Supplement 1, "Potentially Nonconforming Fasteners Supplied by A&G Engineering II, Inc.," issued 10/5/95.
M93295	IN	TJCarter	Plant Systems Branch	11/14/95 C	IN: Current Fire Endurance Test Results For 3M Interam Raceway Fire Barrier Systems	AEChaffee authorizerd development based on prior Events Assessment Panel authorization (5/23/95) for a joint information notice. Information Notice 95-52 was issued on 11/14/95.

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TAC	Type	Contact	Tech Branch	LA Comp	Title	Reason Closed
M93359	IN	EMMcKenna	Instrumentation and Controls Branch	11/22/95 C	IN 95-13, Supp: Potential For Data Collection Equipment to Affect Protection System Performance	Events Assessment Panel authorized development of an information notice supplement at its 8/29/95 meeting. NRC Information Notice 95-13, Supplement 1, issued 11/22/95.
M93642	IN	NKHunemuller	Probabilistic Safety Assessment Branch	12/13/95 C	IN: Risk Impact of Maintenance During Low Power Operation and Shutdown	The Evenets Assessment Panel authorized development of the information notice at its 9/12/95 meeting. NRC Information Notice 95-57 issued 12/13/95.
M93668	IN	TJCarter	Plant Systems Branch	11/15/95 C	IN 94-86, Supp: Legal Actions Against Thermal Science, Inc., Manufacturer of Thermo-Lag	The Events Assessment Panel authorized development of the information notice supplement at its 9/19/95 meeting. This information notice supplement was issued on 11/15/95.
M93705	IN	TJCarter	Events Assessment and Generic Communications Branch	10/4/95 C	IN: Transient Involving Open Safety Relief Valve Followed By Complications	Never appeared on a GSSA list because the TAC number for NRC Information Notice 95-47 was issued and closed within the same month (October 1995).
M93740	BL	JWShapaker	Containment Systems and Severe Accident Branch	11/26/95 C	GL: Unexpected Clogging of RHR Pump Strainer While Operation in Suppression Pool Cooling Mode	AEChaffee authorized development of SCSB's immediately effective bulletin on 10/3/95. NRC Bulletin 95-02, "Unexpected Clogging of a Residential Heat Removal (RHR) Pump Strainer While Operating in Suppression Pool Cooling Mode," issued 10/17/95.

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TAC	Type	Contact	Tech Branch	LA Comp	Title	Reason Closed
M93840	IN	EMMcKenna	Mechanical Engineering Branch	11/30/95 C	IN 95-47, Rev: Unexpected Opening of an SRV and Complications Involving Suppression Pool Strainer Blockage	The Events Assessment Panel authorized development of the information notice supplement at its 10/17/95 meeting. NRC Information Notice 95-47, Revision 1, issued 11/30/95.
M94087	IN	DLSkeen	ADPR Project Directorates	12/1/95 C	IN: Decay Heat Management Practices During Refueling	NRC Information Notice 95-54, "Decay Heat Management Practices during Refueling Outage," was issued on 12/1/95.