NUDOCS

RESPONSE TO FREEDOM OF INFORMATION ACT (FOIA) REQUEST

FOIA – 96-466

RESPONSE TYPE

[ ] FINAL [X] PARTIAL 2nd

DATE MAR 27 1997

DOCKET NUMBER(S) *(If applicable)*

REQUESTER Ms. Ophelia Williams

PART I.–AGENCY RECORDS RELEASED OR NOT LOCATED *(See checked boxes)*

- [ ] No agency records subject to the request have been located.
- [ ] No additional agency records subject to the request have been located.
- [ ] Requested records are available through another public distribution program. See Comments section.
- [ ] Agency records subject to the request that are identified in Appendix(es) _____ are already available for public inspection and copying at the NRC Public Document Room, 2120 L Street, N.W., Washington, DC.
- [X] Agency records subject to the request that are identified in Appendix(es) 0 are being made available for public inspection and copying at the NRC Public Document Room, 2120 L Street, N.W., Washington, DC, in a folder under this FOIA number.
- [ ] The nonproprietary version of the proposal(s) that you agreed to accept in a telephone conversation with a member of my staff is now being made available for public inspection and copying at the NRC Public Document Room, 2120 L Street, N.W., Washington, DC, in a folder under this FOIA number.
- [ ] Agency records subject to the request that are identified in Appendix(es) _____ may be inspected and copied at the NRC Local Public Document Room identified in the Comments section.
- [ ] Enclosed is information on how you may obtain access to and the charges for copying records located at the NRC Public Document Room, 2120 L Street, N.W., Washington, DC.
- [X] Agency records subject to the request are enclosed.
- [ ] Records subject to the request have been referred to another Federal agency(ies) for review and direct response to you.
- [ ] Fees
  - [ ] You will be billed by the NRC for fees totaling $ _____.
  - [ ] You will receive a refund from the NRC in the amount of $ _____.
- [ ] In view of NRC's response to this request, no further action is being taken on appeal letter dated _____, No. _____

PART II. A–INFORMATION WITHHELD FROM PUBLIC DISCLOSURE

- [X] Certain information in the requested records is being withheld from public disclosure pursuant to the exemptions described in and for the reasons stated in Part II, B, C, and D. Any released portions of the documents for which only part of the record is being withheld are being made available for public inspection and copying in the NRC Public Document Room, 2120 L Street, N.W. Washington, DC in a folder under this FOIA number.

COMMENTS

FIA1 2/

SIGNATURE, DIRECTOR, DIVISION OF FREEDOM OF INFORMATION AND PUBLICATIONS SERVICES

Russell C. Burke

RESPONSE TO FREEDOM OF INFORMATION ACT (FOIA) REQUEST
(CONTINUATION)

FOIA NUMBER(S)	DATE
FOIA – 96-466	[redacted] 2 7 1997

PART II.B – APPLICABLE EXEMPTIONS

Records subject to the request that are described in the enclosed Appendix(es) E are being withheld in their entirety or in part under the Exemption No.(s) and for the reason(s) given below pursuant to 5 U.S.C. 552(b) and 10 CFR 9.17(a) of NRC regulations.

	1.	The withheld information is properly classified pursuant to Executive Order. (Exemption 1)
	2.	The withheld information relates solely to the internal personnel rules and procedures of NRC. (Exemption 2)
	3.	The withheld information is specifically exempted from public disclosure by statute indicated. (Exemption 3)
[redacted]		Sections 141-145 of the Atomic Energy Act, which prohibits the disclosure of Restricted Data or Formerly Restricted Data (42 U.S.C. 2161-2165).
[redacted]		Section 147 of the Atomic Energy Act, which prohibits the disclosure of Unclassified Safeguards information (42 U.S.C. 2167).
	4.	The withheld information is a trade secret or commercial or financial information that is being withheld for the reason(s) indicated. (Exemption 4)
[redacted]		The information is considered to be confidential business (proprietary) information.
[redacted]		The information is considered to be proprietary information pursuant to 10 CFR 2.790(d)(1).
[redacted]		The information was submitted and received in confidence pursuant to 10 CFR 2.790(d)(2).
X	5.	The withheld information consists of interagency or intraagency records that are not available through discovery during litigation. (Exemption 5). Applicable Privilege:
[redacted]		Deliberative Process. Disclosure of predecisional information would tend to inhibit the open and frank exchange of ideas essential to the deliberative process. Where records are withheld in their entirety, the facts are inextricably intertwined with the predecisional information. There also are no reasonably segregable factual portions because the release of the facts would permit an indirect inquiry into the predecisional process of the agency.
[redacted]		Attorney work product privilege. (Documents prepared by an attorney in contemplation of litigation.)
[redacted]	X	Attorney-client privilege. (Confidential communications between an attorney and his/her client.)
	6.	The withheld information is exempted from public disclosure because its disclosure would result in a clearly unwarranted invasion of personal privacy. (Exemption 6)
	7.	The withheld information consists of records compiled for law enforcement purposes and is being withheld for the reason(s) indicated. (Exemption 7)
[redacted]		Disclosure could reasonably be expected to interfere with an enforcement proceeding because it could reveal the scope, direction, and focus of enforcement efforts, and thus could possibly allow recipients to take action to shield potential wrongdoing or a violation of NRC requirements from investigators. (Exemption 7 (A))
[redacted]		Disclosure would constitute an unwarranted invasion of personal privacy. (Exemption 7(C))
[redacted]		The information consists of names of individuals and other information the disclosure of which could reasonably be expected to reveal identities of confidential sources. (Exemption 7 (D))
	OTHER	

PART II. C – DENYING OFFICIALS

Pursuant to 10 CFR 9.25(b) and/or 9.25(c) of the U.S. Nuclear Regulatory Commission regulations, it has been determined that the information withheld is exempt from production or disclosure, and that its production or disclosure is contrary to the public interest. The persons responsible for the denial are those officials identified below as denying officials and the Director, Division of Freedom of Information and Publications Services, Office of Administration, for any denials that may be appealed to the Executive Director for Operations (EDO).

DENYING OFFICIAL	TITLE/OFFICE	RECORDS DENIED	APPELLATE OFFICIAL		
			EDO	SECRETARY	IG
S. Foster	Executive Assist., Secy	E/1		X	

PART II. D – APPEAL RIGHTS

The denial by each denying official identified in Part II.C may be appealed to the Appellate Official identified there. Any such appeal must be made in writing within 30 days of receipt of this response. Appeals must be addressed, as appropriate, to the Executive Director for Operations, to the Secretary of the Commission, or to the Inspector General, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and should clearly state on the envelope and in the letter that it is an "Appeal from an Initial FOIA Decision."

Re: FOIA-96-466

APPENDIX D
RECORDS BEING RELEASED IN THEIR ENTIRETY

NO.	DATE	DESCRIPTION/(PAGE COUNT)
1.	Undated	Routing slip with handwritten notes (Action 9/26) (1 page)
2.	Undated	Routing slip with handwritten notes (Action 10/2) (1 page)
3.	Undated	Routing slip with handwritten notes (Action 9/5) (1 page)
4.	Undated	Printout of SECY-96-189 tracking sheet (1 page)
5.	Undated	Memorandum from Commissioner Edward McGaffigan to John Hoyle, Subject: Issuance of 10 CFR letters, with comment and attached concurrence page (2 pages)
6.	Undated	Draft (Version 1) of Commission Paper on Design Bases (7 pages)
7.	Undated	Draft (Version 1) of 50.54(f) Letter on Design Bases (7 pages)
8.	Undated	Draft (Version 1) of Attachment to 50.54(f) Letter on Design Bases (3 pages)
9.	Undated	Draft (Version 2) of proposed 50.54(f) Letter on Design Bases (7 pages)
10.	Undated	Draft (Version 2) of Attachment to 50.54(f) Letter on Design Bases (3 pages)
11.	Undated	Draft (Version 2) of Commission Paper on Design Bases (7 pages)
12.	Undated	Mark-up from Meeting No. 290 of Draft (Version 2) of 50.54(f) Letter on Design Bases, including Attachment (10 pages)
13.	Undated	Marked-up copy of Draft (Version 2) of Commission Paper on Design Bases (7 pages)
14.	Undated	Draft (Version 3) of 50.54(f) Letter on Design Bases reflecting incorporation of CRGR comments from Meeting No. 290 (6 pages)

APPENDIX D
(continued)
RECORDS BEING RELEASED IN THEIR ENTIRETY

NO.	DATE	DESCRIPTION/(PAGE COUNT)
15.	Undated	Draft (Version 3) of Attachment to 50.54(f) Letter on Design Bases, "Background Inform- ation on Recently Identified Problems", reflecting incorporation of CRGR comments from Meeting No. 290 (2 pages)
16.	Undated	Draft (Version 3) of Commission Paper on Design Bases reflecting incorporation of CRGR comments from Meeting No. 290 (7 pages)
17.	Undated	WordPerfect 5.1 "COMPARE" of Draft Versions 2 and 3 of 50/54(f) Letter on Design Bases, and Attachment (17 pages)
18.	06/25/96	Memo to Office Directors from J. M. Taylor, Subject: Small Business Regulatory Enforcement Fairness Act with attachments, annotated by J. Conran (17 pages)
19.	08/21/96	Note from B. Grimes to CRGR Members, Subject: Documents for Exigent CRGR Meeting (1 page)
20.	08/22/96	E-mail message from F. Akstulewicz to J. Conran, Subject: Revised Documents (1 page)
21.	08/23/96	E-mail message from J. Conran to CRGR members, Subject: Draft Versions 3 of the 50.54f Letter and Commission Paper on Design Bases Information; Replies 1, 2, 3, and 4 same date (F. Miraglia/J. Conran); and Reply 5 from J. Murphy on 8/26/96 (5 pages)
22.	08/27/96	"Record Copy" of final Minutes of CRGR Meeting No. 290 (contains corrected and uncorrected versions of page 5 to Enclosure 2B) (29 pages)
23.	08/27/96	E-mail message from F. Miraglia to J. Conran, Subject: Minutes Mtg 290, wrong Attachment 2B in draft Minutes of CRGR Meeting No. 290 (1 page)
24.	08/29/96	E-mail from Terence Chan to William Dean, Subject: Refueling practices survey (1 page)

APPENDIX D
(continued)
RECORDS BEING RELEASED IN THEIR ENTIRETY

NO.	DATE	DESCRIPTION/(PAGE COUNT)
25.	08/30/96	Note from M. Malloy to "Jim" (J. Conran transmitting corrected page 5 of Attachment 2B (2 pages)
26.	08/30/96	E-mail message from M. Malloy to J. Conran (including embedded message from E. McKenna to M. Malloy), retransmitting documents (2 pages)
27.	09/05/96	E-mail message from M. Malloy to J. Conran, Subject: Minutes of Meeting #290, inquiring about status of proposed corrections to draft Minutes of Meeting No. 290 (1 page)
28.	09/09/96	E-mail message from M. Malloy to F. Miraglia, Subject: Minutes of CRGR Meeting #290, regarding continued disparity in the draft Minutes of Meeting No. 290 (1 page)
29.	09/23/96	E-mail message from D. Pulley to J. Conran, andReplies 1 and 2 same date (3 pages)
30.	09/24/96	Commissioner Nils Diaz's vote sheet on SECY-96-189 (4 pages)
31.	09/26/96	Draft, Proposed Issue Outline, Current Licensing Basis-Millstone Lessons Learned, annotated by J. Conran (2 pages)
32.	09/30/96	E-mail from Maria Lopez-Otin to Ken Hart, SUBJECT: Draft SRM SECY-96-189 (2 pages)
33.	10/01/96	E-mail reply from Joe Gray to Ken Hart and multiple addressees, Subject: Approval of proposed SRM on SECY-96-189 (1 page)
34.	10/02/96	E-mail from Joe Gray to Ken Hart and multiple addressees, Subject: Approval of proposed SRM on SECY-96-189 (1 page)
35.	10/02/96	E-mail from Maria Lopez-Otin to Ken Hart, Subject: SRM on SECY 96-189 (2 pages)
36.	10/02/96	E-mail reply from Maria L-Otin to Ken Hart, Subject: SRM on SECY-96-189 (1 page)

APPENDIX D
(continued)
RECORDS BEING RELEASED IN THEIR ENTIRETY

NO.	DATE	DESCRIPTION/(PAGE COUNT)
37.	10/09/96	Final (merge) version of 50.54(f) Letter on.. Design Bases Information w/o Attachments 1, 3, and 4) (10 pages)
38.	10/09/96	E-mail message from M. Malloy to J. Conran, Subject: 50.54(f) letter, transmitting a document (1 page)
39.	10/23/96	E-mail from J. Conran to S. Burns, Subject: Excerpt from Minutes of CRGR Meeting No. 290-Reply-Reply (1 page)
40.	10/28/96	E-mail message from S. Crockett to J. Conran, regarding "..phone call..", and response from J.Conran (Reply 1) same date (2 pages)
41.	11/18/96	Memo to E. Jordan from F. Miraglia, Subject: Closure of CRGR Review of Proposed 10 CFR 50.54(f) Letter Regarding Adequacy and Availability of Design Bases Information (CRGR Meeting No. 290) (2 pages)
42.	11/18/96	E-mail message from S. Crockett to J. Conran, regarding preferred time (for presentation of briefing on Small Business...Fairness Act at CRGR Meeting No. 296) (1 page)
43	11/19/96	E-mail message (Reply 1) from J. Goldberg to J. Conran, Subject: CRGR Meeting No. 296, responding to email message (1 page)
44.	11/27/96	NRC-Mail Tracking System (1 page)

Re: FOIA-96-466

APPENDIX E
RECORDS BEING WITHHELD IN THEIR ENTIRETY

NO.	DATE	DESCRIPTION/(PAGE COUNT)/EXEMPTIONS
1.	07/31/96	Memo to Chairman Jackson, et al., from K. Cyr, Subject: Regulatory Significance of the Final Safety Analysis Report, annotated by J. Conran (9 pages) **EX. 5**

J/R/A ASSOCIATES
Regulatory Information & Support Systems
P.O. Box 4604
Capitol Heights, MD 20791-4604

(301) 249-9672

October 25, 1996
OGW-96-193

FOIA/PA REQUEST
Case No: 96-466
Date Rec'd: 11-12-96
Action Off: Reed
Related Case:

Mr. Russell A. Powell, Chief
Freedom of Information/Local Public Document
Room Branch
M/S T6D8
U.S. NUCLEAR REGULATORY COMMISSION
Washington, DC 20555

SUBJECT: FREEDOM OF INFORMATION ACT REQUEST

Dear Mr. Powell:

Pursuant to the Freedom of Information Act (5 USC Paragraph 552), I hereby request copies of any and all documents related to the issuance of the October 9, 1996 letter from Mr. James Taylor, NRC Executive Director for Operations, to licensee Chief Executive Officers. The letter requested information pursuant to 10 CFR 50.54(f) regarding the adequacy and availability of Design Bases information in order to provide the NRC added confidence and assurance that nuclear power plants are operated and maintained within the Design Bases and that any deviations are reconciled in a timely manner.

I herein request all information referred to in the above paragraph, in whatever form, written or otherwise, including, but not limited to, interoffice memoranda, records of reviews performed by the NRC Staff and the Commission, statements, notes, summaries, drafts, correspondence, interview reports, files, records, and any other data compilation, regardless of origination.

For each and any requested item, or portion thereof, that you withhold pursuant to a Freedom of Information Act exemption, please provide an index itemizing and describing the items withheld and individually disclosing the specific basis for the withholding. Whatever expenses may be associated with this request will be acceptable, up to a maximum of $500.00 and for any fees or expenses incurred pursuant to this request, please forward the charges, along with the requested records and information, to my attention at the address above.

Please call if you have questions.

Thank you for your services.

Sincerely,

Ophelia G. Williams

NRC FORM 17A (4-81) NRCM 0240

U.S. NUCLEAR REGULATORY COMMISSION

ROUTING SLIP

ORGANIZATION

TO ("X" as appropriate)	NAME	MAIL STOP	TO	NAME	MAIL STOP
	Chairman			Scott	
	~~Marylee~~	NLS		Gerry	
	Annette	AR		Evelyn	
	Karla			Judy 9/25	
	Jim			Leslie	
	Regis			Pat	
	Bob			See Changes	
	Janice			Pen on Page	
	Jackie				
	Brian				
	Chris			Action 9/26	

Comments to SECY M per CB 9/26

REMARKS

Draft SRM - pre-circulation review

Ken Please make changes and return to me for final review prior to circulation. —Annette

I yellow tabbed one minor correction, that is still needed. Ken and I made other minor admin corrections to make it read right. Looks like it will work for me — good job.

	AS REQUESTED		FILE	PER CONVERSATION
	APPROVAL/SIGNATURE	96-189	INFORMATION	SEE ME
	COMMENT/CONCURRENCE		NECESSARY ACTION	SIGNATURE OF
	CORRECTION		NOTE AND DESTROY	
	ANSWER/ACKNOWLEDGE FOR		NOTE AND RETURN TO	I'd to

FROM (Name) | OFFICE | PHONE | DATE

DAS 9/26

011

NRC FORM 17A (4-81) NRCM 0240

U.S. NUCLEAR REGULATORY COMMISSION

ROUTING SLIP

ORGANIZATION

TO ("X" as appropriate)	NAME	MAIL STOP	TO	NAME	MAIL STOP
	Chairman			Scott	
3	Marylee	MR		Gerry	
2	Annette	AD		Evelyn	
	Karla			Judy	
	Jim			Leslie	10/2
	Regis			Pat	
	Bob				
	Janice				
	Jackie				
	Brian				
1	Chris	41		Action 3:00 10/3	

REMARKS

Revised Draft SECY
Annette
Looks fine —
the "inspection + enforcement
added back in, and the footnote 4
was split into 4 and 5

TO K. Nau
OK
PLEASE ISSUE
TODAY

	AS REQUESTED		FILE		PER CONVERSATION
	APPROVAL/SIGNATURE		INFORMATION		SEE ME
	COMMENT/CONCURRENCE		NECESSARY ACTION		SIGNATURE OF
	CORRECTION		NOTE AND DESTROY		
	ANSWER/ACKNOWLEDGE FOR		NOTE AND RETURN TO ✓		

FROM (Name) SECY-96-189 OFFICE PHONE DATE

DR

NRC FORM 17A (4-81) NRCM 0240

U.S. NUCLEAR REGULATORY COMMISSION

ROUTING SLIP

ORGANIZATION

	TO (Check as appropriate) NAME	MAIL STOP		TO NAME	MAIL STOP
	Chairman			Scott	
	Marylee			Gerry	
	Annette			Evelyn	
	Karla			Judy	
	Jim			Leslie	
	Regis			Pat	
	Bob				
	Janice				
	Jackie				
	Brian				
	Chris				

REMARKS

SECY-96-184

	AS REQUESTED		FILE		PER CONVERSATION
	APPROVAL/SIGNATURE		INFORMATION		SEE ME
	COMMENT/CONCURRENCE		NECESSARY ACTION		SIGNATURE OF
	CORRECTION		NOTE AND DESTROY		
	ANSWER/ACKNOWLEDGE FOR		NOTE AND RETURN TO		

FROM (Name) | OFFICE | PHONE | DATE

D13

Time: 11 01 am NRC - SECY Tracking - Edit Record #: 23

Paper No: SECY-96-189 Paper Type: NV Approved: Y
Remarks:
Classification:
Subject:
Title: ISSUANCE OF 10 CFR 50.54(F) LETTERS ON THE AVAILABILITY AND ADEQUACY OF DESIGN BASIS INFORMATION

Facility:
Assigned To: JRG /
File Location: SECY PAPERS
Comments: N
Other: AKSTULEWICZ & MCKENNA,NRR

Document Date: 08/30/96
Received: 09/03/96
Due: 09/16/96
Completed: 10/02/96
Destroyed: / /
Print on Staff Report?: N

APPROVED SAJ: APP W/C 091896 KCR: APP W/C 092496
GJD: APP W/C 092096 NJD: APP W/C 092496 EXM: APP W/C 091296

T:Top N:Next G:Goto F:Find D:Delete E:Edit A:Add
B:Bottom P:Prev C:Copy L:Locate U:Undelete Q:Quit R:bRowse

D/4

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

OFFICE OF THE
COMMISSIONER

Not sent - this was reflected in vote on SECY-96-189

MEMORANDUM TO: John C. Hoyle
Secretary of the Commission

FROM: Edward McGaffigan, Jr. EMG

SUBJECT: ISSUANCE OF 10 CFR 50.54(f), LETTERS ON AVAILABILITY AND ADEQUACY OF DESIGN BASIS INFORMATION

I approve the staff's proposed 50.54(f) letter with minor editorial comments noted on the attached marked-up pages. I suggest that the letter be modified to include a reference to the change in the Enforcement Policy with regard to the exercise of enforcement discretion for "old design issues" that is proposed in SECY-96-154, provided that a majority of the Commission approves that Enforcement Policy change.

cc: Chairman Jackson
Commissioner Rogers
Commissioner Dicus
Commissioner Diaz
EDO

D15

MEMORANDUM TO: John C. Hoyle
Secretary of the Commission

FROM: Edward McGaffigan, Jr.

SUBJECT: ISSUANCE OF 10 CFR 50.54(f), LETTERS ON AVAILABILITY AND ADEQUACY OF DESIGN BASIS INFORMATION

I approve the staff's proposed 50.54(f) letter with minor editorial comments noted on the attached marked-up pages. I suggest that the letter be modified to include a reference to the change in the Enforcement Policy with regard to the exercise of enforcement discretion for "old design issues" that is proposed in SECY-96-154, provided that a majority of the Commission approves that Enforcement Policy change.

cc: Chairman Jackson
Commissioner Rogers
Commissioner Dicus
Commissioner Diaz
EDO

DOCUMENT NAME: G:50_54(f).mem
To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	OCM/RDM		OCM/EM							
NAME	JGPa		EMcGaffigan							
DATE	09/4/96		09/12/96		09/ /96		09/ /96		09/ /96	
OFFICE										
NAME										
DATE	09/ /96		09/ /96		09/ /96		09/ /96		09/ /96	

OFFICIAL RECORD COPY

Draft (Version 1)

FOR: The Commissioners

FROM: James M. Taylor
Executive Director for Operations

SUBJECT: ISSUANCE OF 10 CFR 50.54(f) LETTERS ON THE AVAILABILITY AND ADEQUACY OF DESIGN BASES INFORMATION

PURPOSE:

To request Commission approval of the staff's proposal to send 10 CFR 50.54(f) letters to utility chief executive officers (CEOs). These letters will require information to gain added confidence and assurance that plants are operated and maintained within the design basis of the plant and any deviations are reconciled in a timely manner.

SUMMARY:

Recent inspection findings have indicated that design bases information has not been appropriately maintained and implemented at certain plants and that this may have a potential public health and safety impact. The staff is proposing to require information from licensees regarding the availability and adequacy of design bases information in sufficient detail to identify how engineering design and configuration control processes are examined, how design bases requirements are translated into operating procedures, maintenance, and testing, how system performance is verified to be within the design bases, and how problem identification and implementation of corrective actions are handled.

CONTACTS:
Frank M. Akstulewicz, NRR
(301) 415-1136

Eileen M. McKenna, NRR
(301) 415-2189

the supporting design documents, as necessary, may not provide a sufficient level of information for future modifications or current plant operation or to quickly respond to operating events; minor changes to the design should be tracked to support the conclusion that the changes in aggregate do not affect the validity of existing calculations and the ability of a system to perform its design functions. Some common weaknesses of licensee programs identified during the survey included: design reconstitution programs had not identified in advance the documents that are necessary to demonstrate that a structure, system, or component will function properly; the process for regeneration of missing design documentation was not always proceduralized so that it could be handled in a systematic manner; validation of the content of specific output documentation was not always thoroughly carried out.

In late 1991, the Commission requested the staff to consider whether rulemaking, regulatory guidance, or a policy statement was needed to outline the NRC's expectations concerning accurate design bases documentation. In SECY-92-193, "Design Bases Reconstitution," dated May 26, 1992, the staff concluded that additional regulations were not needed because existing regulatory requirements for design control were sufficient. However, the staff proposed issuance of a policy statement and issuance, for public comment, of a generic letter requesting licensees to describe their programs. Additionally, SECY-92-193 documented the staff's intention to continue performing design-related inspections. Also, the staff expected that planned revisions to the enforcement policy guidance by not issuing civil penalties for violations up to Severity Level III, if the issues were identified as a result of systematic voluntary initiatives, would encourage licensees to identify past design, engineering, and installation issues. The Commission responded in a Staff Requirements Memorandum (SRM) which approved the staff's approach.

In August 1992, the Commission issued the policy statement, "Availability and Adequacy of Design Bases Information at Nuclear Power Plants." (57 FR 35455) The policy statement stressed the importance of maintaining current and accessible design documentation to ensure that (1) plant physical and functional characteristics are maintained and consistent with design bases, (2) systems, structures, and components can perform their intended functions, and (3) the plant is operated in a manner consistent with the design bases. In the policy statement, the Commission stated that all power reactor licensees should assess the accessibility and adequacy of their design bases documentation and licensees should be able to show that there is sufficient documentation to conclude that the current facility configuration is consistent with the design bases. The policy statement outlined further actions the staff would perform to keep apprised of industry's activities.

Following review by the Committee to Review Generic Requirements (CRGR) and the Commission, a draft generic letter was issued for public comment on March 24, 1993. The proposed generic letter requested licensees, on a voluntary basis, to submit information and schedules for any design bases programs completed, planned, or being conducted or a rationale for not implementing such a program. All but one of the commenters concluded that the generic letter was unnecessary and unwarranted.

NUMARC responded that it believed the NRC request for descriptions, schedules, and dates would have a negative impact on on-going design efforts and that NRC's focus on schedules would undermine the licensees' ability to manage the activities.

In SECY-93-292, "Generic Letter on the Availability and Adequacy of Design Bases Information," the staff recommended the generic letter not be issued. The staff stated that publication of the policy statement and the proposed generic letter conveyed to the industry the Commission's concern and that publication of the generic letter would not further licensees' awareness of the importance of the activities. The staff proposed to continue performing design-related inspections and to gather information and insights as to how well the licensee design-related programs were being implemented. The Commission issued an SRM which agreed with the staff's proposal.

Subsequently, however, the NRC later reduced its effort on resource intensive design-related team inspections and shifted the balance to focus more on operational safety in the following years, based on the issuance of the NUMARC guideline, ongoing industry efforts to improve and maintain design bases information, and the regulatory burden of team inspections reported in the 1991 Regulatory Impact Survey.

DISCUSSION:

Beginning in late 1995, NRC identified information during a number of inspections at different sites which indicated design bases were not always being appropriately maintained or adhered to by some licensees. Contrary to earlier indications, the staff now believes there are situations where licensees have not critically examined their design control and configuration measures. For example, inspection teams identified a number of engineering calculations and analyses for key safety systems that were incorrect and did not confirm that safety system functional requirements would be met (resulting in inoperable safety systems on some occasions). Numerous instances were identified where design basis information was not adequately translated into procedures, practices and drawings; where original design basis was inadequate and the original installation was incorrect; where modifications were not installed in accordance with the design; and where modifications were based on incorrect design assumptions. Additionally, cases were identified where quality assurance requirements and corrective action requirements had not been properly implemented to appropriately maintain design basis information. Details of the findings are outlined further in the attachment to the proposed letter.

By letter dated August 2, 1996, NEI informed the staff that an initiative had been approved by the Nuclear Strategic Issues Advisory Committee (consisting of chief nuclear officers) to provide additional assurance and confidence that existing programs are adequate to ensure: (1) plants are operated in conformance with their licensing basis, (2) the licensing basis is adequately maintained, (3) differences between the operating practices and licensing basis could not result in a significant public health and safety concern, and (4) degraded or non-conforming conditions are captured on tracking systems and resolved in a timely manner. The letter stated that each licensee would conduct an

assessment of the program in place to reaffirm that plants are operated in conformance with their licensing basis. In a letter dated August 14, 1996, the NRC stated its concern that the proposed initiative may not be of sufficient scope and depth and that an in-depth vertical slice review of actual design basis documentation and comparison of "as-built" and "as operated" safety systems is more appropriate. The NRC confirmed its position that it is the responsibility of individual licensees to know their licensing basis, to have appropriate documentation that defines their design basis and to have procedures for performing the necessary assessment of plant or procedure changes required by NRC regulations.

The magnitude and scope of the design and configuration deficiencies currently being identified at some plants indicate failures to comply with the terms and conditions of licenses, NRC regulations, and Updated Final Safety Analysis Reports. These findings raise questions whether licensees possess or have access to appropriate design bases information and adequate technical bases to demonstrate that plant physical and functional characteristics are consistent with the design bases; whether systems, structures, and components can perform their intended functions; and whether operating plants are being maintained in accordance with their design basis. The staff believes that reliance on the industry's voluntary efforts on improving design bases information may not be sufficient to maintain configuration control at some number of plants. These problems are of concern because of their potential impact on public health and safety.

Therefore, the staff proposes to send 10 CFR 50.54(f) letters (Attachment 1) signed by the EDO to utility CEOs that require licensees to (1) submit a description of any programs already completed, planned, or being conducted to ensure correctness and accessibility of the design bases information, or (2) submit a rationale for not implementing such a program and a description of the extent of design information already obtained from suppliers and vendors, and (3) submit a schedule for the completion date of any planned design reconstitution program. The program description must be sufficiently detailed to identify how engineering design and configuration control processes are examined, how design bases requirements are translated into operating procedures, maintenance, and testing, how system performance is verified to be within the design bases, and how problem identification and implementation of corrective actions are handled. The staff will use the information in preparation for the revitalization of design-related inspections such as SSFIs and SSOMIs to verify compliance with the terms and conditions of licenses, NRC regulations, and Updated Final Safety Analysis Reports. Such inspections address the process and products of design bases information programs and, therefore, provide insights as to the effectiveness of licensee programs without reviewing the programs themselves.

draft fg "No need for more plant specific
Bottom line how is staff enough for review/processing use of
info by staff

COORDINATION:

In view of the need for timely information regarding this matter, comments or concurrence from the Advisory Committee for Reactor Safety (ACRS) and CRGR were not sought. The Office of the General Counsel has reviewed this paper and the enclosed sample letter and has no legal objection.

RECOMMENDATION:

That the Commission approve issuance of the letters.

James M. Taylor
Executive Director
for Operations

Attachment: Sample letter to CEO

Y Concurrence

PROPOSED 50.54(f) LETTER TO LICENSEES

Attachment 1

JTK Revised
Draft (Version 1)

1.b

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

[date]

[Name of Utility CEO]
[Title]
[Utility Name]
[Utility Address]

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION PURSUANT TO 10 CFR 50.54(f) REGARDING ADEQUACY AND AVAILABILITY OF DESIGN BASES INFORMATION

Dear Mr. [Name]:

Background:

In the mid- to late 1980's, NRC safety system functional inspections (SSFIs) and safety system outage modification inspections (SSOMIs) raised concerns about design bases information not being properly maintained and plant modifications being made without the licensee having an understanding of the plant design bases. The NRC findings heightened the industry's awareness of the need to improve the adequacy and availability of design documents, and many licensees voluntarily initiated extensive efforts to improve the design bases information for their plants.

To assist the industry in performing design basis improvement programs, the Nuclear Management and Resources Council (NUMARC)[1] developed a guidance document, NUMARC 90-12, "Design Basis Program Guidelines." These guidelines were intended to provide a standard framework for licensee programs to improve plant design bases information.[2] The NRC staff reviewed the guidelines and provided comments to NUMARC in November 1990. In emphasizing the importance of validating the facility against current design information, the staff stated that the goal of any program should be to establish confidence that the existing facility is in accordance with the current design documents and that any deviations be reconciled. The staff concluded that the NUMARC guidelines

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[1]NUMARC was consolidated into the Nuclear Energy Institute (NEI) on March 23, 1994.

[2]As discussed in NUMARC 90-12, these programs or efforts would emphasize collation of design basis information and the supporting design information, not the identification or recreation of the licensing basis for a plant or the regeneration of missing analyses and calculations.

9/7

would provide worthwhile insights to utilities undertaking design reconstitution programs and the guidelines appeared to provide sufficient flexibility for licensees to structure their programs to respond most efficiently to any unique needs and circumstances of a particular licensee. The staff requested NUMARC to consider making design reconstitution a formal NUMARC initiative, and commented that design documents that support technical specification values and design documents necessary to support operations or respond to events should be regenerated if missing. NUMARC subsequently concluded that a formal initiative was not necessary because most of its members were already conducting or evaluating the need to conduct design reconstitution programs. However, NUMARC forwarded the guidelines with the NRC's comments to its members for use on a voluntary basis.

To provide more information to the industry on this topic and to provide an independent view of the design control issue, the staff conducted a survey of six utilities and one nuclear steam supply system vendor to determine the status of design control problems and the strengths and weaknesses of the sample utility programs. The results were published in February 1991, in NUREG-1397, "An Assessment of Design Control Practices and Design Reconstitution Programs in the Nuclear Industry." The survey observations were: the need for a design documentation reconstitution program was directly proportional to the age of the plant; the general intent of the program should be to provide a central location for design bases information, with emphasis on the design intent (the why of the design); the design bases documents should be a top level directory that define the current plant configuration; reestablishment of design bases without reconstitution of the supporting design documents, as necessary, may not provide a sufficient level of information for future modifications or current plant operation or to quickly respond to operating events; minor changes to the design should be tracked to support the conclusion that the changes in aggregate do not affect the validity of existing calculations and the ability of a system to perform its design functions. Some common weaknesses of licensee programs identified during the survey included: design reconstitution programs had not identified in advance the documents that are necessary to demonstrate that a structure, system, or component will function properly; the process for regeneration of missing design documentation was not always proceduralized so that it could be handled in a systematic manner; validation of the content of specific output documentation was not always thoroughly carried out.

In late 1991, the NRC staff evaluated whether rulemaking, guidance, or a policy statement was needed to address the issue of licensees retaining accurate design bases information. It concluded that the existing regulatory requirements for design control were adequate, however, it determined that the publication of a policy statement addressing design bases information and publication of a generic letter requesting licensees to describe their design reconstitution programs would be beneficial. Additionally, the staff stated its intention to

continue to evaluate design control adequacy during its performance-based inspection such as SSFIs and SSOMIs. The staff also expected that revisions to the enforcement policy guidance to provide greater opportunities for enforcement discretion[3] would encourage voluntary identification of past design, engineering, and installation issues by licensees. With the Commission's approval, the staff proceeded with this approach.

In August 1992, the NRC issued the policy statement, "Availability and Adequacy of Design Bases Information at Nuclear Power Plants" (57 FR 35455). The policy statement stressed the importance of maintaining current and accessible design documentation to ensure that (1) plant physical and functional characteristics are maintained and consistent with design bases, (2) systems, structures, and components can perform their intended functions, and (3) the plant is operated in a manner consistent with the design bases. In the policy statement, the Commission recommended that all power reactor licensees assess the accessibility and adequacy of their design bases information and that they be able to show that there is sufficient documentation to conclude the current facility configuration is consistent with the design bases. The policy statement outlined the additional actions the NRC would take to keep apprised of industry's design reconstitution activities (discussed above).

Following review by the Committee to Review Generic Requirements (CRGR) and the Commission, a draft generic letter was issued for public comment on March 24, 1993. The proposed generic letter requested licensees, on a voluntary basis, to submit information and schedules for any design bases programs completed, planned, or being conducted or a rationale for not implementing such a program. All but one of the commenters concluded that the generic letter was unnecessary and unwarranted. NUMARC responded that it believed the NRC request for descriptions, schedules and dates would have a negative impact on on-going design efforts and that NRC's focus on schedules would undermine the licensees' ability to manage the activities.

In SECY-93-292, "Generic Letter on the Availability and Adequacy of Design Bases Information," the staff recommended the generic letter not be issued. The staff stated that publication of the policy statement and the proposed generic letter conveyed to the industry the Commission's concern and that publication of the generic letter would not further licensees' awareness of the importance of the activities. The staff proposed to continue performing design-related inspections and to gather information and insights as to how well the licensee design-related programs were being implemented. The Commission issued an SRM which agreed with the staff's proposal.

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[3]NRC would refrain from imposing civil penalties for violations up to Severity Level III if the violations were identified as a result of systemmatic voluntary initiatives.

Subsequently, however, the NRC later reduced its effort on resource intensive design-related team inspections and shifted the balance to focus more on operational safety in the following years, based on the issuance of the NUMARC guideline, ongoing industry efforts to improve and maintain design bases information, and the regulatory burden of team inspections reported in the 1991 Regulatory Impact Survey.

Current Problem:

Over the past several months, NRC findings during inspections and reviews have identified broad programmatic weaknesses that have resulted in design and configuration deficiencies at a number of plants which could impact the operability of required equipment, raise unreviewed safety questions, or indicate discrepancies between the plant's updated final safety analysis report (UFSAR) and the as-built or as-modified plant or plant operating procedures. These inspections and reviews have also highlighted numerous instances where timely and complete implementation of corrective action for known degraded and nonconforming conditions and for past violations of NRC requirements has not been evident. Overall, the NRC has found failures of some licensees to appropriately maintain or adhere to plant licensing and design bases information, and to comply with the terms and conditions of licenses, NRC regulations, and plant UFSARs. Attachment 1 provides examples of some of the deficiencies recently identified by the staff. As a consequence of this new information, the NRC believes that the industry's voluntary efforts to improve and maintain design bases information for their plants have not been effective.

The magnitude and scope of the problems that the NRC has identified raise concerns about the presence of similar design and operability problems and the effectiveness of quality assurance programs industry-wide. Of particular concern is whether licensees are properly maintaining configuration control at their plants such that: plant physical and functional characteristics are consistent with the licensing and design bases; systems, structures, and components can perform their intended functions; and plants are being operated and maintained in a manner consistent with the licensing and design bases. The extent of licensee failures to maintain control and to identify and correct the failures in a timely manner is of concern because of the potential impact on public health and safety should safety systems not respond to challenges from off-normal and accident conditions. Attachments 2 and 3 are a recent exchange of correspondence between J. Colvin, NEI, and S. Jackson, NRC, regarding these subjects.

Action:

The NRC has concluded that it requires information that can be used to verify compliance with the terms and conditions of your license(s), NRC regulations, and the plant UFSAR(s), and which may be used to decide whether to modify, suspend, or revoke the operating

license(s) for your facility or facilities, or whether other enforcement action should be taken. Therefore, you are required, pursuant to Section 182(a) of the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f), to submit a response to this letter within 90 days from receipt of this letter. Your response must be written and signed under oath or affirmation.

Please submit your response to the Director, Office of Nuclear Reactor Regulation, with a copy to the appropriate Regional Administrator and the NRC Document Control Desk. The following information is required for each licensed unit:

(1) a description of any design review or reconstitution programs, including identification of the systems and plant-level design attributes (e.g., seismic, high-energy line break, moderate-energy line break), which have already been completed, are planned, or are being conducted to ensure the correctness and accessibility of the design bases information for your plant and to ensure that it is maintained current. If the program is planned or being conducted but has not been completed, provide an implementation schedule for systems and plant-level design attribute reviews and expected completion date.

(2) if no design review or reconstitution program has been implemented, a rationale for not implementing such a program and a description of the extent of the design information you have obtained from the nuclear steam supply system (NSSS) vendor and architect-engineer (A/E) or which is accessible at the NSSS vendor or A/E offices.

The program description provided pursuant to paragraph (1) above must include details relative to the extent to which the following have been or will be included in design reconstitution programs or is otherwise assured:

(a) examination of engineering design and configuration control processes, including 10 CFR 50.59, 10 CFR 50.71(e), and Appendix B to 10 CFR Part 50;

(b) selection and prioritization of systems for review;

(c) verification that design bases requirements are translated into operating procedures, maintenance, and testing;

(d) verification that system performance is within the design bases;

(e) handling of problem identification and implementation of corrective actions, including actions to determine the extent of problems, action to prevent recurrence, and reporting to NRC;

(f) determination of the overall effectiveness of the program in adequately maintaining the licensing and design bases; and

(g) verification that the plant is operating within the terms and conditions of the license.

I wish to emphasize that the NRC position has been, and continues to be, that it is the responsibility of individual licensees to know their licensing basis, to have appropriate documentation that defines their design bases, and to have procedures for performing the necessary assessments of plant or procedure changes required by NRC regulations.

This request is covered by the Office of Management and Budget (OMB) clearance number 3150-0011, which expires July 31, 1997. The reporting burden for this collection of information is estimated to average 400 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Information and Records Management Branch (T-6F33), U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0011), Office of Management and Budget, Washington, D.C. 20503. The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and your response will be placed in the NRC Public Document Room (PDR), the Gelman Building, 2120 L Street, N.W., Washington, DC, and in the local public document room(s) for your facility or facilities.

If you have any questions about this matter, please contact the staff members listed below, or the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.

James M. Taylor
Executive Director
for Operations

Attachments:
1. Background on Design Bases Reconstitution Efforts and Recent Problems
2. Letter from J. Colvin (NEI) to S. Jackson (NRC) dated 8/2/96
3. Letter from S. Jackson (NRC) to J. Colvin (NEI) dated 8/14/96

Contacts: Frank M. Akstulewicz, NRR
(301) 415-1136
Internet: fma@nrc.gov

Eileen M. McKenna, NRR
(310) 415-2189
Internet: emm@nrc.gov

Docket No(s). 50-xxx and 50-xxx

cc: See next page [applicable plant service list]

DOCUMENT NAME: g:\mxm\50-54F.BG

(1.b.i)

Draft (Version 1)
Attachment

BACKGROUND INFORMATION ON RECENTLY IDENTIFIED PROBLEMS

Over the past several months, design and engineering information has been obtained which indicates that design bases at certain plants have not been appropriately maintained or adhered to. Some specific examples include:

- Millstone Units 1, 2, and 3

  Since November 1995, licensee submissions and NRC inspections have indicated that design control deficiencies, and degraded and nonconforming conditions have been identified at Northeast Utilities' (NU's) Millstone Units 1, 2, and 3. These deficiencies include errors in licensing bases and design bases documentation, and translation of design bases to procedures and hardware, as well as inadequate plant modifications; modifications not installed in accordance with the approved design; modifications based on incorrect design assumptions; and identification of inoperable systems. The following are some examples.

  NRC inspections at Millstone Unit 2 identified a potential design deficiency that could block or reduce safety injection flow during the recirculation phase of an accident, as well as inadequate containment sump screen mesh and a flawed post-accident containment hydrogen monitor design. On February 20, 1996, NU shut down Millstone Unit 2 when both trains of the high pressure safety injection (HPSI) system were declared inoperable due to the potential to clog the HPSI discharge throttle valves during the recirculation phase following a loss-of-coolant (LOCA) accident.

  An NRC special inspection team at Millstone Unit 3 found instances where NU did not adequately translate design bases information into procedures, practices and drawings. In one instance, a modification that installed the Unit 3 service water intake structure sump pump called for specific periodic testing, but such testing was never performed. In another case, prelubrication of the auxiliary feedwater pump was not performed every 40 days as required by the vendor.

  The NRC has also identified a number of instances where the original design bases was inadequate or the original installation was incorrect. For example, the licensee failed to remove plastic shipping plugs from Rosemount transmitters prior to installation, notwithstanding the vendor's instructions which required those plugs' replacement with stainless steel plugs.

- Haddam Neck

  On March 11-29 and April 15-26, 1996, a special inspection team from the NRC assessed the engineering and licensing activities at NU's Haddam Neck Station. The special inspection team focused on the licensee's processes used to identify, evaluate, and resolve technical issues. The team identified programmatic

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weaknesses and potential violations of NRC's regulatory requirements (10 CFR 50.59, 50.71(e), and Criteria III and XVI of Appendix B to 10 CFR Part 50) in design calculations and analyses, and design bases documentation.

The team identified a number of significant deficiencies in the engineering calculations and analyses which were relied upon to ensure the adequacy of the design of key safety systems at Haddam Neck. Deficiencies were identified in the calculations and analyses supporting the station batteries, emergency diesel generators, containment air recirculation (CAR) system, service water (SW) system, and the systems and components needed to support the emergency core cooling system transfer from the injection phase to sump recirculation. The types of deficiencies noted by the team included technical errors, nonconservative methods and assumptions, as well as the failure to consider all applicable design bases information. The team concluded that weaknesses in engineering programmatic requirements and a lack of technical rigor, thoroughness, and attention to detail in the design process, either contributed to or directly caused the identified errors. In addition, design control measures such as independent reviews, supervisory reviews, and reviews by oversight committees did not identify these deficiencies.

In addition, the team identified significant operability concerns that require further staff evaluation and which have led to the recent shutdown of Haddam Neck. These concerns include: (1) the potential for water hammer in the SW piping and in the tubes of the containment fan coolers, (2) the potential for two-phase flow in the SW system in the tubes of the containment fan coolers, (3) the licensee crediting post-LOCA accident pressure in containment for residual heat removal pump net positive suction head (NPSH), and (4) the potential that the feedwater regulating valves may not close during a main steamline break event.

- Crystal River

The NRC conducted an Integrated Plant Assessment Process (IPAP) inspection at Florida Power Corporation's Crystal River plant from July 8-12 and July 18-26, 1996. The inspection team identified concerns related to weaknesses in the original plant design, weaknesses in recent engineering work, and a lack of awareness and understanding of the plant's design bases and NRC regulations.

Examples of weaknesses in the original plant design and in understanding the plant's design bases include: (1) the failure to ensure the availability of a passive and an active means of preventing boron precipitation following design basis LOCAs, (2) the potential inability to cool down following a small break LOCA assuming a single failure in the decay heat drop line due to minimum flow limitations on low pressure injection pumps, (3) potentially unacceptable minimum NPSH for the 1B building spray pump, (4) diesel generator loads in excess of the manufacturer's rating for a 5-second period, (5) use of the 500 Kv backfeed as an offsite power source during outages without calculations to support the acceptability of its use (recent calculations have shown this is not an acceptable source), (6) potential common-mode failures due to routing of cooling water pipes

through switchgear and relay rooms (a condition that the licensee identified but did not understand the significance of), and (7) the licensee's position that they do not need to account for a single failure in the decay heat drop line.

- Maine Yankee

On January 10, 1996, the NRC issued a Confirmatory Order Suspending Authority for and Limiting Power Operation and Containment Pressure; and Demand for Information to the Maine Yankee Atomic Power Company. The order was based, in part, on the NRC's determination that Maine Yankee did not apply a computer code, proposed to demonstrate compliance with the emergency core cooling system (ECCS) requirements of 10 CFR 50 46, in a manner conforming to the requirements of 10 CFR Part 50, Appendix K, nor in conformance to the conditions specified in the staff's Safety Evaluation (SE) dated January 30, 1989. Specifically, the licensee did not demonstrate that the RELAP5YA code will reliably calculate the peak cladding temperature for all break sizes in the small-break LOCA spectrum for Maine Yankee, nor has the licensee submitted the justification for the code options selected and other justifications and sensitivity studies to satisfy conditions in the SE.

In addition, the licensee assumed an initial containment pressure of 2.0 psig for calculating peak design-basis accident pressure even though the plant technical specifications allow a maximum operating pressure in containment of 3.0 psig. Assuming an initial containment pressure of 3.0 psig results in a calculated peak accident pressure in excess of the containment design pressure described in the updated final safety analysis report (UFSAR).

- Refueling Practices Survey

In response to recent problems encountered at Millstone Unit 1 regarding compliance with the UFSAR, during the spring of 1996, the NRC conducted a survey of licensee refueling practices. During the course of this survey, the NRC determined that nine sites (15 units) needed to modify their licensing basis or plant practices to ensure that their reload practices were in compliance with their licensing basis.

Deficiencies in the management of design bases assumptions were also noted in the survey. Many plants were found to have aspects of their design and licensing bases that were only loosely proceduralized or not proceduralized at all. Typical of this kind of discrepancy was the identification of a lack of procedures for controlling the assumptions regarding hold-up time before beginning fuel transfer. The NRC found a number of instances in which other design bases assumptions were not captured in procedures. In addition, licensees at 12 other sites (23 units) upgraded procedures to directly implement the design bases assumption. In other cases, the licensee performed engineering analyses, documented pursuant to 10 CFR 50.59, as necessary, to ensure that the planned activities would not exceed design bases assumptions.

Draft (Version 2) (2.b)

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

[date]

[Name of Utility CEO]
[Title]
[Utility Name]
[Utility Address]

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION PURSUANT TO 10 CFR 50.54(f) REGARDING ADEQUACY AND AVAILABILITY OF DESIGN BASES INFORMATION

Dear Mr. [Name]:

Background:

In the mid- to late 1980's, NRC safety system functional inspections (SSFIs) and safety system outage modification inspections (SSOMIs) identified concerns that design bases information was not being properly maintained and plant modifications were being made without the licensee having an understanding of the plant design bases. The NRC findings heightened the industry's awareness of the need to improve the adequacy and availability of design documents, and many licensees voluntarily initiated extensive efforts to improve the design bases information for their plants.

To assist the industry in performing design basis improvement programs, the Nuclear Management and Resources Council (NUMARC)[1] developed a guidance document, NUMARC 90-12, "Design Basis Program Guidelines." These guidelines were intended to provide a standard framework for licensee programs to improve plant design bases information.[2] The NRC staff reviewed the guidelines and provided comments to NUMARC in November 1990. In emphasizing the importance of validating the facility against current design information, the staff stated that the goal of any program should be to establish confidence that the existing facility is in accordance with the current design documents and that any deviations be reconciled. The staff concluded that the NUMARC guidelines would provide worthwhile insights to utilities undertaking design reconstitution programs

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[1]NUMARC was consolidated into the Nuclear Energy Institute (NEI) on March 23, 1994.

[2]As discussed in NUMARC 90-12, these programs or efforts would emphasize collation of design basis information and the supporting design information, not the identification or recreation of the licensing basis for a plant or the regeneration of missing analyses and calculations.

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and the guidelines appeared to provide sufficient flexibility for licensees to structure their programs to respond most efficiently to any unique needs and circumstances of a particular licensee. The staff requested NUMARC to consider making design reconstitution a formal NUMARC initiative, and commented that design documents that support technical specification values and design documents necessary to support operations or respond to events should be regenerated if missing. NUMARC subsequently concluded that a formal initiative was not necessary because most of its members were already conducting or evaluating the need to conduct design reconstitution programs. However, NUMARC forwarded the guidelines with the NRC's comments to its members for use on a voluntary basis.

To provide more information to the industry on this topic and to provide an independent view of the design control issue, the staff conducted a survey of six utilities and one nuclear steam supply system vendor to determine the status of design control problems and the strengths and weaknesses of the sample utility programs. The results were published in February 1991, in NUREG-1397, "An Assessment of Design Control Practices and Design Reconstitution Programs in the Nuclear Industry." The survey observations were: the need for a design documentation reconstitution program was directly proportional to the age of the plant; the general intent of the program should be to provide a central location for design bases information, with emphasis on the design intent (the why of the design); the design bases documents should be a top level directory that define the current plant configuration; reestablishment of design bases without reconstitution of the supporting design documents, as necessary, may not provide a sufficient level of information for future modifications or current plant operation or to quickly respond to operating events; minor changes to the design should be tracked to support the conclusion that the changes in aggregate do not affect the validity of existing calculations and the ability of a system to perform its design functions. Some common weaknesses of licensee programs identified during the survey included: design reconstitution programs had not identified in advance the documents that are necessary to demonstrate that a structure, system, or component will function properly; the process for regeneration of missing design documentation was not always proceduralized so that it could be handled in a systematic manner; validation of the content of specific output documentation was not always thoroughly carried out.

In late 1991, the NRC staff evaluated whether rulemaking, guidance, or a policy statement was needed to address the issue of licensees retaining accurate design bases information. It concluded that the existing regulatory requirements for design control were adequate; however, it determined that the publication of a policy statement addressing design bases information and publication of a generic letter requesting licensees to describe their design reconstitution programs would be beneficial. Additionally, the staff stated its intention to

continue to evaluate design control adequacy during its performance-based inspection such as SSFIs and SSOMIs. The staff also expected that revisions to the enforcement policy guidance to provide greater opportunities for enforcement discretion[3] would encourage voluntary identification of past design, engineering, and installation issues by licensees. With the Commission's approval, the staff proceeded with this approach.

In August 1992, the NRC issued the policy statement, "Availability and Adequacy of Design Bases Information at Nuclear Power Plants" (57 FR 35455). The policy statement stressed the importance of maintaining current and accessible design documentation to ensure that (1) plant physical and functional characteristics are maintained and consistent with design bases, (2) systems, structures, and components can perform their intended functions, and (3) the plant is operated in a manner consistent with the design bases. In the policy statement, the Commission recommended that all power reactor licensees assess the accessibility and adequacy of their design bases information and that they be able to show that there is sufficient documentation to conclude the current facility configuration is consistent with the design bases. The policy statement outlined the additional actions the NRC would take to keep apprised of industry's design reconstitution activities (discussed above).

Following review by the Committee to Review Generic Requirements (CRGR) and the Commission, a draft generic letter was issued for public comment on March 24, 1993. The proposed generic letter requested licensees, on a voluntary basis, to submit information and schedules for any design bases programs completed, planned, or being conducted or a rationale for not implementing such a program. All but one of the commenters concluded that the generic letter was unnecessary and unwarranted. NUMARC responded that it believed the NRC request for descriptions, schedules and dates would have a negative impact on ongoing design efforts and that NRC's focus on schedules would undermine the licensees' ability to manage the activities.

In SECY-93-292, "Generic Letter on the Availability and Adequacy of Design Bases Information," the staff recommended the generic letter not be issued. The staff stated that publication of the policy statement and the proposed generic letter conveyed to the industry the Commission's concern and that publication of the generic letter would not further licensees' awareness of the importance of the activities. The staff proposed to continue performing design-related inspections and to gather information and insights as to how well the licensee design-related programs were being implemented. The Commission issued an SRM which agreed with the staff's proposal.

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[3]NRC would refrain from imposing civil penalties for violations up to Severity Level III if the violations were identified and corrected as a result of systematic voluntary initiatives.

In response to the findings relating to the regulatory burden of team inspections identified in the 1991 Regulatory Impact Survey, during the past several years, the staff has reduced its effort on specific, resource-intensive, design-related team inspections, and followed the issue of accurate and accessible design documentation at plants principally as an element of inspection and followup of operations-related activities. The issuance of the NUMARC guideline and ongoing industry efforts to improve and maintain design bases information also contributed to this decision.

Current Problem:

Over the past several months, NRC findings during inspections and reviews have identified broad programmatic weaknesses that have resulted in design and configuration deficiencies at a number of plants which could impact the operability of required equipment, raise unreviewed safety questions, or indicate discrepancies between the plant's updated final safety analysis report (UFSAR) and the as-built or as-modified plant or plant operating procedures. These inspections and reviews have also highlighted numerous instances where timely and complete implementation of corrective action for known degraded and nonconforming conditions and for past violations of NRC requirements has not been evident. Overall, the NRC has found failures of some licensees (1) to appropriately maintain or adhere to plant licensing and design bases information, (2) to comply with the terms and conditions of licenses and NRC regulations, and (3) to assure that UFSARs properly reflect the facilities. Attachment 1 provides examples of some of the deficiencies recently identified by the staff. As a consequence of this new information, the NRC believes that the industry's voluntary efforts to improve and maintain design bases information for their plants have not in all cases been effective.

The magnitude and scope of the problems that the NRC has identified raise concerns about the presence of similar design, configuration, and operability problems and the effectiveness of quality assurance programs industry-wide. Of particular concern is whether licensee programs to maintain configuration control are sufficient to demonstrate that plant physical and functional characteristics are consistent with the design bases and whether operating plants are being maintained in accordance with their design basis. The extent of licensee failures to maintain control and to identify and correct the failures in a timely manner is of concern because of the potential impact on public health and safety should safety systems not respond to challenges from off-normal and accident conditions. Attachments 2 and 3 are a recent exchange of correspondence between J. Colvin, NEI, and S. Jackson, NRC, regarding these subjects.

Action:

The NRC has concluded that it requires information that can be used to verify compliance with the terms and conditions of your license(s), NRC regulations, and the plant UFSAR(s), and which may be used to decide whether to modify, suspend, or revoke the operating

license(s) for your facility or facilities, or whether other enforcement action should be taken. Therefore, you are required, pursuant to Section 182(a) of the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f), to submit a response to this letter within 120 days from receipt of this letter. Your response must be written and signed under oath or affirmation.

Please submit your response to the Director, Office of Nuclear Reactor Regulation, with a copy to the appropriate Regional Administrator and the NRC Document Control Desk. The following information is required for each licensed unit:

(1) a description of any design review or reconstitution programs, including identification of the systems and plant-level design attributes (e.g., seismic, high-energy line break, moderate-energy line break), which have already been completed, are planned, or are being conducted to ensure the correctness and accessibility of the design bases information for your plant and to ensure that it is maintained current. If the program is planned or being conducted but has not been completed, provide an implementation schedule for systems and plant-level design attribute reviews and expected completion date.

(2) if no design review or reconstitution program has been implemented, a rationale for not implementing such a program and a description of the extent of the design information you have obtained from the nuclear steam supply system (NSSS) vendor and architect-engineer (A/E) or which is accessible at the NSSS vendor or A/E offices.

The responses provided pursuant to paragraphs (1) and (2) above should address the following areas of particular interest, as previously expressed in the Commission policy statement and other NRC documents:

(a) examination of engineering design and configuration control processes, including 10 CFR 50.59, 10 CFR 50.71(e), and Appendix B to 10 CFR Part 50;

(b) selection and prioritization of systems for review;

(c) verification that design bases requirements are translated into operating, maintenance, and testing procedures;

(d) verification that system performance is within the design bases;

(e) handling of problem identification and implementation of corrective actions, including actions to determine the extent of problems, action to prevent recurrence, and reporting to NRC;

(f) determination of the overall effectiveness of the program in adequately maintaining the licensing and design bases, and

I wish to emphasize that the NRC position has been, and continues to be, that it is the responsibility of individual licensees to know their licensing basis, to have appropriate documentation that defines their design bases, and to have procedures for performing the necessary assessments of plant or procedure changes required by NRC regulations.

This request is covered by the Office of Management and Budget (OMB) clearance number 3150-0011, which expires July 31, 1997. The reporting burden for this collection of information is estimated to average 400 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Information and Records Management Branch (T-6F33), U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0011), Office of Management and Budget, Washington, D.C. 20503. The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and your response will be placed in the NRC Public Document Room (PDR), the Gelman Building, 2120 L Street, N.W., Washington, DC, and in the local public document room(s) for your facility or facilities.

If you have any questions about this matter, please contact the staff members listed below, or the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.

[Signature]

Attachments:
1. Background on Recently Identified Problems
2. Letter from J. Colvin (NEI) to S. Jackson (NRC) dated 8/2/96
3. Letter from S. Jackson (NRC) to J. Colvin (NEI) dated 8/14/96

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Docket No(s). 50-xxx and 50-xxx

cc: See next page [applicable plant service list]

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Draft (Version 2)

BACKGROUND INFORMATION ON RECENTLY IDENTIFIED PROBLEMS

Over the past several months, design and engineering information has been obtained which indicates that design bases at certain plants have not been appropriately maintained or adhered to. Some specific examples include:

Millstone Units 1, 2, and 3

Since November 1995, licensee submissions and NRC inspections have indicated that design control deficiencies, and degraded and nonconforming conditions have been identified at Northeast Utilities' (NU's) Millstone Units 1, 2, and 3. These deficiencies include errors in licensing bases and design bases documentation, and translation of design bases to procedures and hardware, as well as inadequate plant modifications; modifications not installed in accordance with the approved design; modifications based on incorrect design assumptions; and identification of inoperable systems. The following are some examples.

NRC inspections at Millstone Unit 2 identified a potential design deficiency that could block or reduce safety injection flow during the recirculation phase of an accident, as well as inadequate containment sump screen mesh and a flawed post-accident containment hydrogen monitor design. On February 20, 1996, NU shut down Millstone Unit 2 when both trains of the high pressure safety injection (HPSI) system were declared inoperable due to the potential to clog the HPSI discharge throttle valves during the recirculation phase following a loss-of-coolant (LOCA) accident.

An NRC special inspection team at Millstone Unit 3 found instances where NU did not adequately translate design bases information into procedures, practices and drawings. In one instance, a modification that installed the Unit 3 service water intake structure sump pump called for specific periodic testing, but such testing was never performed. In another case, prelubrication of the auxiliary feedwater pump was not performed every 40 days as required by the vendor.

The NRC has also identified a number of instances where the original design bases was inadequate or the original installation was incorrect. For example, the licensee failed to remove plastic shipping plugs from Rosemount transmitters prior to installation, notwithstanding the vendor's instructions which required those plugs' replacement with stainless steel plugs.

Haddam Neck

On March 11-29 and April 15-26, 1996, a special inspection team from the NRC assessed the engineering and licensing activities at NU's Haddam Neck Station. The special inspection team focused on the licensee's processes used to identify, evaluate, and resolve technical issues. The team identified programmatic weaknesses and potential violations of NRC's regulatory requirements (10 CFR 50.59, 50.71(e), and Criteria III and XVI of Appendix B to 10 CFR Part 50) in design calculations and analyses, and design bases documentation.

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The team identified a number of deficiencies in the engineering calculations and analyses which were relied upon to ensure the adequacy of the design of key safety systems at Haddam Neck. Deficiencies were identified in the calculations and analyses supporting the station batteries, emergency diesel generators, containment air recirculation (CAR) system, service water (SW) system, and the systems and components needed to support the emergency core cooling system transfer from the injection phase to sump recirculation. The types of deficiencies noted by the team included technical errors, nonconservative methods and assumptions, as well as the failure to consider all applicable design bases information. The team concluded that weaknesses in engineering programmatic requirements and a lack of technical rigor, thoroughness, and attention to detail in the design process, either contributed to or directly caused the identified errors. In addition, design control measures such as independent reviews, supervisory reviews, and reviews by oversight committees did not identify these deficiencies.

In addition, the team identified operability concerns that require further staff evaluation and which have led to the recent shutdown of Haddam Neck. These concerns include: (1) the potential for water hammer in the SW piping and in the tubes of the containment fan coolers, (2) the potential for two-phase flow in the SW system in the tubes of the containment fan coolers, (3) the licensee crediting post-LOCA accident pressure in containment for residual heat removal pump net positive suction head (NPSH), and (4) the potential that the feedwater regulating valves may not close during a main steamline break event.

Maine Yankee

On January 10, 1996, the NRC issued a Confirmatory Order Suspending Authority for and Limiting Power Operation and Containment Pressure; and Demand for Information to the Maine Yankee Atomic Power Company. The order was based, in part, on the NRC's determination that Maine Yankee did not apply a computer code, proposed to demonstrate compliance with the emergency core cooling system (ECCS) requirements of 10 CFR 50.46, in a manner conforming to the requirements of 10 CFR Part 50, Appendix K, nor in conformance to the conditions specified in the staff's Safety Evaluation (SE) dated January 30, 1989. Specifically, the licensee did not demonstrate that the RELAP5YA code will reliably calculate the peak cladding temperature for all break sizes in the small-break LOCA spectrum for Maine Yankee, nor has the licensee submitted the justification for the code options selected and other justifications and sensitivity studies to satisfy conditions in the SE.

In addition, the licensee assumed an initial containment pressure of 2.0 psig for calculating peak design-basis accident pressure even though the plant technical specifications allow a maximum operating pressure in containment of 3.0 psig. Assuming an initial containment pressure of 3.0 psig results in a calculated peak accident pressure in excess of the containment design pressure described in the updated final safety analysis report (UFSAR).

Refueling Practices Survey

In response to recent problems encountered at Millstone Unit 1 regarding compliance with the UFSAR, during the spring of 1996, the NRC conducted a survey of licensee refueling practices. During the course of this survey, the NRC determined that nine sites (15 units) needed to modify their licensing basis or plant practices to ensure that their reload practices were in compliance with their licensing basis.

Deficiencies in the management of design bases assumptions were also noted in the survey. Many plants were found to have aspects of their design and licensing bases that were only loosely proceduralized or not proceduralized at all. Typical of this kind of discrepancy was the identification of a lack of procedures for controlling the assumptions regarding hold-up time before beginning fuel transfer. The NRC found a number of instances in which other design bases assumptions were not captured in procedures. In addition, licensees at 12 other sites (23 units) upgraded procedures to directly implement the design bases assumption. In other cases, the licensee performed engineering analyses, documented pursuant to 10 CFR 50.59, as necessary, to ensure that the planned activities would not exceed design bases assumptions.

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Sec'd to OI 8-22-96 @ 1120 a

Draft (Version 2) (2.c)

FOR: The Commissioners

FROM: James M. Taylor
Executive Director for Operations

SUBJECT: ISSUANCE OF 10 CFR 50.54(f) LETTERS ON THE AVAILABILITY AND ADEQUACY OF DESIGN BASES INFORMATION

PURPOSE:

To request Commission approval of the staff's proposal to send 10 CFR 50.54(f) letters to utility chief executive officers (CEOs), including only Seabrook Unit 1 of Northeast Utilities' plants. These letters will require information to gain added confidence and assurance that plants are operated and maintained within the design basis of the plant and any deviations are reconciled in a timely manner.

SUMMARY:

Recent inspection findings have indicated that design bases information has not been appropriately maintained and implemented at certain plants and that this may have a potential public health and safety impact. The staff is proposing to require information from licensees regarding the availability and adequacy of design bases information to identify how engineering design and configuration control processes are examined; design bases requirements are translated into operating, maintenance, and testing procedures; system performance is verified to be within the design bases; and problem identification and implementation of corrective actions are handled.

CONTACTS:

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BACKGROUND:

In the mid- to late 1980's, U.S. Nuclear Regulatory Commission (NRC) safety system functional inspections (SSFIs) at power reactor licensees and safety system outage modification inspections (SSOMIs) raised concerns about design bases information not being properly maintained and plant modifications being made without the licensee having an understanding of the plant design bases. The NRC's findings heightened the industry's awareness of the need to improve the adequacy and availability of design documentation and many licensees voluntarily initiated extensive efforts to improve their design bases information.

To assist the industry in performing these activities, the Nuclear Management and Resources Council (NUMARC), now the Nuclear Energy Institute (NEI), developed the guidance document, NUMARC 90-12, "Design Basis Program Guidelines." The document outlined a standard framework for developing a design basis program that collates design basis information and supporting design information, but does not identify or recreate the licensing basis of the plant. In a letter dated November 9, 1990, the staff concluded that the guideline would provide worthwhile insights to those utilities undertaking design bases programs and appeared to provide sufficient flexibility for licensees to structure their programs to respond most efficiently to any unique needs and circumstances of a particular license. In emphasizing the importance of validation of the facility against current design information, the staff stated that the goal of any program should be to establish confidence that the existing facility conforms to the current design bases documents and that any identified deviations are reconciled. The staff also emphasized that design documents that support technical specification values and design documents necessary to support operations or respond to events should be regenerated if missing. The staff requested that NUMARC consider making the design bases effort a NUMARC initiative. In SECY-91-364, "Design Basis Reconstitution" dated November 12, 1991, the staff reported NUMARC's conclusion that an initiative was not necessary because most of their members were already conducting or evaluating the need to conduct such programs. Although NUMARC decided not to pursue a formal initiative, it forwarded the guidelines and NRC comments to their members for use on a voluntary basis.

To provide more information to the industry on this topic and to provide an independent view of the design control issue, the staff conducted a survey of six utilities and one nuclear steam supply system vendor to determine the status of design control problems and the strengths and weaknesses of the sample utility programs. The results were published in February 1991, in NUREG-1397, "An Assessment of Design Control Practices and Design Reconstitution Programs in the Nuclear Industry." The survey observations were: the need for a design documentation reconstitution program was directly proportional to the age of the plant; the general intent of the program should be to provide

a central location for design bases information, with emphasis on the design intent (the why of the design); the design bases documents should be a top level directory which define the current plant configuration; reestablishment of design bases without reconstitution of the supporting design documents, as necessary, may not provide a sufficient level of information for future modifications or current plant operation or to quickly respond to operating events; and minor changes to the design should be tracked to support the conclusion that the changes in the aggregate do not affect the validity of existing calculations and the ability of a system to perform its design functions. Some common weaknesses of licensee programs identified during the survey included: design reconstitution programs had not identified in advance the documents that are necessary to demonstrate that a structure, system, or component will function properly; the process for regeneration of missing design documentation was not always proceduralized so that it could be handled in a systematic manner; validation of the content of specific output documentation was not always thoroughly carried out.

In late 1991, the Commission requested the staff to consider whether rulemaking, regulatory guidance, or a policy statement was needed to outline the NRC's expectations concerning accurate design bases documentation. In SECY-92-193, "Design Bases Reconstitution" dated May 26, 1992, the staff concluded that additional regulations were not needed because existing regulatory requirements for design control were sufficient. However, the staff proposed issuance of a policy statement and issuance, for public comment, of a generic letter requesting licensees to describe their programs. Additionally, SECY-92-193 documented the staff's intention to continue performing design-related inspections. Also, the staff expected that planned revisions to the enforcement policy guidance (to refrain from issuing civil penalties for violations up to Severity Level III if the issues were identified and corrected as a result of systematic voluntary initiatives) would encourage licensees to identify past design, engineering, and installation issues. The Commission responded in a Staff Requirements Memorandum (SRM) on SECY-92-193 which approved the staff's approach.

In August 1992, the Commission issued the policy statement, "Availability and Adequacy of Design Bases Information at Nuclear Power Plants" (57 FR 35455). The policy statement stressed the importance of maintaining current and accessible design documentation to ensure that (1) plant physical and functional characteristics are maintained and consistent with design bases, (2) systems, structures, and components can perform their intended functions, and (3) the plant is operated in a manner consistent with the design bases. In the policy statement, the Commission stated that all power reactor licensees should assess the accessibility and adequacy of their design bases documentation and be able to show that there is sufficient documentation to conclude that the current facility configuration is consistent with the design bases. The policy statement outlined further actions the staff would perform to keep apprised of industry's activities.

Following review by the Committee to Review Generic Requirements (CRGR) and the Commission, a draft generic letter was issued for public comment on March 24, 1993. The proposed generic letter requested licensees, on a voluntary basis, to submit information and schedules for any design bases programs completed, planned, or being conducted, or a rationale for not implementing such a program. All but one of the commenters concluded that the generic letter was unnecessary and unwarranted. NUMARC responded that it believed the NRC request for descriptions, schedules, and dates would have a negative impact on ongoing design efforts and that NRC's focus on schedules would undermine the licensees' ability to manage the activities.

In SECY-93-292, "Generic Letter on the Availability and Adequacy of Design Bases Information" dated October 21, 1993, the staff recommended the generic letter not be issued. The staff stated that publication of the policy statement and the proposed generic letter conveyed to the industry the Commission's concern and that publication of the generic letter would not further licensees' awareness of the importance of the activities. The staff proposed to continue performing design-related inspections and to gather information and insights as to how well the licensee design-related programs were being implemented. The Commission issued an SRM which agreed with the staff's proposal.

In response to the findings relating to the regulatory burden of team inspections identified in the 1991 Regulatory Impact Survey, during the past several years, the staff has reduced its effort on specific, resource-intensive, design-related team inspections, and followed the issue of accurate and accessible design documentation at plants principally as an element of inspection and followup of operations-related activities. The issuance of the NUMARC guideline and ongoing industry efforts to improve and maintain design bases information also contributed to this decision.

DISCUSSION:

Beginning in late 1995, NRC identified information during a number of inspections at different sites which indicated that design bases were not in some cases being appropriately maintained or adhered to by some licensees. Contrary to earlier indications and expectations, the staff now believes there are situations where licensees have not critically examined their design control and configuration measures. For example, inspection teams identified a number of engineering calculations and analyses for key safety systems that were incorrect and did not confirm that safety system functional requirements would be met (resulting in inoperable safety systems on some occasions). Numerous instances were identified where design basis information was not adequately translated into procedures, practices and drawings; the original design basis was inadequate and the original installation was incorrect; modifications were not installed in accordance with the design; and modifications were based on incorrect design assumptions. Additionally, cases were identified where quality assurance requirements and corrective action requirements had not been properly implemented to appropriately maintain design basis information. Details of the findings are outlined further in the attachment to the proposed letter.

By letter dated August 2, 1996, NEI informed the staff that an initiative had been approved by the Nuclear Strategic Issues Advisory Committee (consisting of chief nuclear officers) to provide additional assurance and confidence that existing programs are adequate to ensure: (1) plants are operated in conformance with their licensing basis, (2) the licensing basis is adequately maintained, (3) differences between the operating practices and licensing basis could not result in a significant public health and safety concern, and (4) degraded or nonconforming conditions are captured on tracking systems and resolved in a timely manner. The letter stated that each licensee would conduct an assessment of the program in place to reaffirm that plants are operated in conformance with their licensing basis. In a letter dated August 14, 1996, the NRC stated its concern that the proposed initiative may not be of sufficient scope and depth and that an in-depth vertical slice review of actual design basis documentation and comparison of "as-built" and "as operated" safety systems would be more appropriate. The NRC confirmed its position that it is the responsibility of individual licensees to know their licensing basis, to have appropriate documentation that defines their design basis and to have procedures for performing the necessary assessment of plant or procedure changes required by NRC regulations.

Design and configuration deficiencies currently being identified at some plants indicate failures (1) to comply with the terms and conditions of licenses and NRC regulations and (2) to assure that Updated Final Safety Analysis Reports properly reflect the facilities. These findings raise questions whether licensee programs to maintain configuration control are sufficient to demonstrate that plant physical and functional characteristics are consistent with the design bases and whether operating plants are being maintained in accordance with their design basis. The staff believes that reliance on the industry's voluntary efforts on improving design bases information may not be sufficient to maintain configuration control at some number of plants. These problems are of concern because of their potential impact on public health and safety.

Therefore, the staff proposes to send 10 CFR 50.54(f) letters (Attachment) to utility CEOs, including only Seabrook Unit 1 of Northeast Utilities' plants, which require licensees to (1) submit a description of any programs already completed, planned, or being conducted to ensure correctness and accessibility of the design bases information, or (2) submit a rationale for not implementing such a program and a description of the extent of design information already obtained from suppliers and vendors, and (3) submit a schedule for the completion date of any planned design reconstitution program. The program description must identify how engineering design and configuration control processes are examined; design bases requirements are translated into operating, maintenance, and testing procedures; system performance is verified to be within the design bases; and problem identification and implementation of corrective actions are handled. The staff will use the information to prioritize and to better focus design-related inspections such as SSFIs and SSOMIs to verify compliance with the terms and conditions of licenses, NRC regulations, and Updated Final Safety Analysis Reports. Such inspections sample the process and products of design bases information programs and, therefore, provide insights as to the effectiveness of licensee programs without reviewing the programs themselves.

COORDINATION:

In view of the need for timely information regarding this matter, comments or concurrence from the Advisory Committee for Reactor Safety (ACRS) were not sought. The CRGR was briefed on this action at an emergency meeting held on August 22, 1996. The Office of the General Counsel has reviewed this paper and the enclosed sample letter and has no legal objection.

RECOMMENDATION:

That the Commission approve issuance of the letters under the signature of either the Chairman, the EDO, or the Director, Nuclear Reactor Regulation.

James M. Taylor
Executive Director
for Operations

Attachment: Sample letter to CEO

COORDINATION:

In view of the need for timely information regarding this matter, comments or concurrence from the Advisory Committee for Reactor Safety (ACRS) and CRGR were not sought. The Office of the General Counsel has reviewed this paper and the enclosed sample letter and has no legal objection.

RECOMMENDATION:

That the Commission approve issuance of the letters.

James M. Taylor
Executive Director
for Operations

Attachment: Sample letter to CEO

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DATE	8/ /96	8/ /96	8/ /96

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

[date]

[Name of Utility CEO]
[Title]
[Utility Name]
[Utility Address]

SUBJECT: REQUEST FOR ~~ADDITIONAL~~ INFORMATION PURSUANT TO 10 CFR 50.54(f) REGARDING ADEQUACY AND AVAILABILITY OF DESIGN BASES INFORMATION

Dear Mr. [Name]:

Background:

In the mid- to late 1980's, NRC safety system functional inspections (SSFIs) and safety system outage modification inspections (SSOMIs) identified concerns that design bases information was not being properly maintained and plant modifications were being made without the licensee having an understanding of the plant design bases. The NRC findings heightened the industry's awareness of the need to improve the adequacy and availability of design documents, and many licensees voluntarily initiated extensive efforts to improve the design bases information for their plants.

To assist the industry in performing design basis improvement programs, the Nuclear Management and Resources Council (NUMARC)[1] developed a guidance document, NUMARC 90-12, "Design Basis Program Guidelines." These guidelines were intended to provide a standard framework for licensee programs to improve plant design bases information.[2] The NRC staff reviewed the guidelines and provided comments to NUMARC in November 1990. In emphasizing the importance of validating the facility against current design information, the staff stated that the goal of any program should be to establish confidence that the existing facility is in accordance with the current design documents and that any deviations be reconciled. The staff concluded that the NUMARC guidelines would provide worthwhile insights to utilities undertaking design reconstitution programs

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[1]NUMARC was consolidated into the Nuclear Energy Institute (NEI) on March 23, 1994.

[2]As discussed in NUMARC 90-12, these programs or efforts would emphasize collation of design basis information and the supporting design information, not the identification or recreation of the licensing basis for a plant or the regeneration of missing analyses and calculations.

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and the guidelines appeared to provide sufficient flexibility for licensees to structure their programs to respond most efficiently to any unique needs and circumstances of a particular licensee. The staff requested NUMARC to consider making design reconstitution a formal NUMARC initiative, and commented that design documents that support technical specification values and design documents necessary to support operations or respond to events should be regenerated if missing. NUMARC subsequently concluded that a formal initiative was not necessary because most of its members were already conducting or evaluating the need to conduct design reconstitution programs. However, NUMARC agreed to forward the guidelines with the NRC's comments to its members for use on a voluntary basis.

To provide more information to the industry on this topic and to provide an independent view of the design control issue, the staff conducted a survey of six utilities and one nuclear steam supply system vendor to determine the status of design control problems and the strengths and weaknesses of the sample utility programs. The results were published in February 1991, in NUREG-1397, "An Assessment of Design Control Practices and Design Reconstitution Programs in the Nuclear Industry." The survey observations were: the need for a design documentation reconstitution program was directly proportional to the age of the plant; the general intent of the program should be to provide a central location for design bases information, with emphasis on the design intent (the why of the design); the design bases documents should be a top level directory that define the current plant configuration; reestablishment of design bases without reconstitution of the supporting design documents, as necessary, may not provide a sufficient level of information for future modifications or current plant operation or to quickly respond to operating events; minor changes to the design should be tracked to support the conclusion that the changes in aggregate do not affect the validity of existing calculations and the ability of a system to perform its design functions. Some common weaknesses of licensee programs identified during the survey included: design reconstitution programs had not identified in advance the documents that are necessary to demonstrate that a structure, system, or component will function properly; the process for regeneration of missing design documentation was not always proceduralized so that it could be handled in a systematic manner; validation of the content of specific output documentation was not always thoroughly carried out.

In late 1991, the NRC staff evaluated whether rulemaking, guidance, or a policy statement was needed to address the issue of licensees retaining accurate design bases information. It concluded that the existing regulatory requirements for design control were adequate; however, it determined that the publication of a policy statement addressing design bases information and publication of a generic letter requesting licensees to describe their design reconstitution programs would be beneficial. Additionally, the staff stated its intention to

continue to evaluate design control adequacy during its performance-based inspection such as SSFIs and SSOMIs. The staff also expected that revisions to the enforcement policy guidance to provide greater opportunities for enforcement discretion[3] would encourage voluntary identification of past design, engineering, and installation issues by licensees. With the Commission's approval, the staff proceeded with this approach.

In August 1992, the NRC issued the policy statement, "Availability and Adequacy of Design Bases Information at Nuclear Power Plants" (57 FR 35455). The policy statement stressed the importance of maintaining current and accessible design documentation to ensure that (1) plant physical and functional characteristics are maintained and consistent with design bases, (2) systems, structures, and components can perform their intended functions, and (3) the plant is operated in a manner consistent with the design bases. In the policy statement, the Commission recommended that all power reactor licensees assess the accessibility and adequacy of their design bases information and that they be able to show that there is sufficient documentation to conclude the current facility configuration is consistent with the design bases. The policy statement outlined the additional actions the NRC would take to keep apprised of industry's design reconstitution activities (discussed above).

Following review by the Committee to Review Generic Requirements (CRGR) and the Commission, a draft generic letter was issued for public comment on March 24, 1993. The proposed generic letter requested licensees, on a voluntary basis, to submit information and schedules for any design bases programs completed, planned, or being conducted or a rationale for not implementing such a program. All but one of the commenters concluded that the generic letter was unnecessary and unwarranted. NUMARC responded that it believed the NRC request for descriptions, schedules and dates would have a negative impact on ongoing design efforts and that NRC's focus on schedules would undermine the licensees' ability to manage the activities.

In SECY-93-292, "Generic Letter on the Availability and Adequacy of Design Bases Information," the staff recommended the generic letter not be issued. The staff stated that publication of the policy statement and the proposed generic letter conveyed to the industry the Commission's concern and that publication of the generic letter would not further licensees' awareness of the importance of the activities. The staff proposed to continue performing design-related inspections and to gather information and insights as to how well the licensee design-related programs were being implemented. The Commission issued an SRM which agreed with the staff's proposal.

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[3]NRC would refrain from imposing civil penalties for violations up to Severity Level III if the violations were identified and corrected as a result of systematic voluntary initiatives.

In response to the findings relating to the regulatory burden of team inspections identified in the 1991 Regulatory Impact Survey, during the past several years, the staff has reduced its effort on specific, resource-intensive, design-related team inspections, and followed the issue of accurate and accessible design documentation at plants principally as an element of inspection and followup of operations-related activities. The issuance of the NUMARC guideline and ongoing industry efforts to improve and maintain design bases information also contributed to this decision.

Current Problem:

Over the past several months, NRC findings during inspections and reviews have identified broad programmatic weaknesses that have resulted in design and configuration deficiencies at a number of plants which could impact the operability of required equipment, raise unreviewed safety questions, or indicate discrepancies between the plant's updated final safety analysis report (UFSAR) and the as-built or as-modified plant or plant operating procedures. These inspections and reviews have also highlighted numerous instances where timely and complete implementation of corrective action for known degraded and nonconforming conditions and for past violations of NRC requirements has not been evident. Overall, the NRC has found failures of some licensees (1) to appropriately maintain or adhere to plant licensing and design bases information, (2) to comply with the terms and conditions of licenses and NRC regulations, and (3) to assure that UFSARs properly reflect the facilities. Attachment 1 provides examples of some of the deficiencies recently identified by the staff. As a consequence of this new information, the NRC believes that the industry's voluntary efforts to improve and maintain design bases information for their plants have not in all cases been effective.

The magnitude and scope of the problems that the NRC has identified raise concerns about the presence of similar design, configuration, and operability problems and the effectiveness of quality assurance programs industry-wide. Of particular concern is whether licensee programs to maintain configuration control are sufficient to demonstrate that plant physical and functional characteristics are consistent with the design bases and whether operating plants are being maintained in accordance with their design basis. The extent of licensee failures to maintain control and to identify and correct the failures in a timely manner is of concern because of the potential impact on public health and safety should safety systems not respond to challenges from off-normal and accident conditions. Attachments 2 and 3 are a recent exchange of correspondence between J. Colvin, NEI, and S. Jackson, NRC, regarding these subjects.

Action:

The NRC has concluded that it requires information that can be used to verify compliance with the terms and conditions of your license(s), NRC regulations, and the plant UFSAR(s), and which may be used to decide whether to modify, suspend, or revoke the operating

license(s) for your facility or facilities, or whether other enforcement action should be taken. Therefore, you are required, pursuant to Section 182(a) of the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f), to submit a response to this letter within 120 days from receipt of this letter. Your response must be written and signed under oath or affirmation.

Please submit your response to the Director, Office of Nuclear Reactor Regulation, with a copy to the appropriate Regional Administrator and the NRC Document Control Desk. The following information is required for each licensed unit:

(1) a description of any design review or reconstitution programs, including identification of the systems and plant-level design attributes (e.g., seismic, high-energy line break, moderate-energy line break), which have already been completed, are planned, or are being conducted to ensure the correctness and accessibility of the design bases information for your plant and to ensure that it is maintained current. If the program is planned or being conducted but has not been completed, provide an implementation schedule for systems and plant-level design attribute reviews and expected completion date.

(2) if no design review or reconstitution program has been implemented, a rationale for not implementing such a program and a description of the extent of the design information you have obtained from the nuclear steam supply system (NSSS) vendor and architect-engineer (A/E) or which is accessible at the NSSS vendor or A/E offices.

The responses provided pursuant to paragraphs (1) and (2) above should address the following areas of particular interest, as previously expressed in the Commission policy statement and other NRC documents:

(a) examination of engineering design and configuration control processes, including 10 CFR 50.59, 10 CFR 50.71(e), and Appendix B to 10 CFR Part 50;

(b) selection and prioritization of systems for review;

(c) verification that design bases requirements are translated into operating, maintenance, and testing procedures;

(d) verification that system performance is within the design bases;

(e) handling of problem identification and implementation of corrective actions, including actions to determine the extent of problems, action to prevent recurrence, and reporting to NRC;

(f) determination of the overall effectiveness of the program in adequately maintaining the licensing and design bases; and

I wish to emphasize that the NRC position has been, and continues to be, that it is the responsibility of individual licensees to know their licensing basis, to have appropriate documentation that defines their design bases, and to have procedures for performing the necessary assessments of plant or procedure changes required by NRC regulations.

This request is covered by the Office of Management and Budget (OMB) clearance number 3150-0011, which expires July 31, 1997. The reporting burden for this collection of information is estimated to average 400 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Information and Records Management Branch (T-6F33), U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0011), Office of Management and Budget, Washington, D.C. 20503. The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and your response will be placed in the NRC Public Document Room (PDR), the Gelman Building, 2120 L Street, N.W., Washington, DC, and in the local public document room(s) for your facility or facilities.

If you have any questions about this matter, please contact the staff members listed below, or the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.

[Signature]

Attachments:
1. Background on Recently Identified Problems
2. Letter from J. Colvin (NEI) to S. Jackson (NRC) dated 8/2/96
3. Letter from S. Jackson (NRC) to J. Colvin (NEI) dated 8/14/96

Contacts: Frank M. Akstulewicz, NRR
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Docket No(s). 50-xxx and 50-xxx

cc: See next page [applicable plant service list]

BACKGROUND INFORMATION ON RECENTLY IDENTIFIED PROBLEMS

Over the past several months, design and engineering information has been obtained which indicates that design bases at certain plants have not been appropriately maintained or adhered to. Some specific examples include:

Millstone Units 1, 2, and 3

Since November 1995, licensee submissions and NRC inspections have indicated that design control deficiencies, and degraded and nonconforming conditions have been identified at Northeast Utilities' (NU's) Millstone Units 1, 2, and 3. These deficiencies include errors in licensing bases and design bases documentation, and translation of design bases to procedures and hardware, as well as inadequate plant modifications; modifications not installed in accordance with the approved design; modifications based on incorrect design assumptions; and identification of inoperable systems. The following are some examples.

NRC inspections at Millstone Unit 2 identified a potential design deficiency that could block or reduce safety injection flow during the recirculation phase of an accident, as well as inadequate containment sump screen mesh and a flawed post-accident containment hydrogen monitor design. On February 20, 1996, NU shut down Millstone Unit 2 when both trains of the high pressure safety injection (HPSI) system were declared inoperable due to the potential to clog the HPSI discharge throttle valves during the recirculation phase following a loss-of-coolant (LOCA) accident.

An NRC special inspection team at Millstone Unit 3 found instances where NU did not adequately translate design bases information into procedures, practices and drawings. In one instance, a modification that installed the Unit 3 service water intake structure sump pump called for specific periodic testing, but such testing was never performed. In another case, prelubrication of the auxiliary feedwater pump was not performed every 40 days as required by the vendor.

The NRC has also identified a number of instances where the original design bases was inadequate or the original installation was incorrect. For example, the licensee failed to remove plastic shipping plugs from Rosemount transmitters prior to installation, notwithstanding the vendor's instructions which required those plugs' replacement with stainless steel plugs.

Haddam Neck

On March 11-29 and April 15-26, 1996, a special inspection team from the NRC assessed the engineering and licensing activities at NU's Haddam Neck Station. The special inspection team focused on the licensee's processes used to identify, evaluate, and resolve technical issues. The team identified programmatic weaknesses and potential violations of NRC's regulatory requirements (10 CFR 50.59, 50.71(e), and Criteria III and XVI of Appendix B to 10 CFR Part 50) in design calculations and analyses, and design bases documentation.

The team identified a number of deficiencies in the engineering calculations and analyses which were relied upon to ensure the adequacy of the design of key safety systems at Haddam Neck. Deficiencies were identified in the calculations and analyses supporting the station batteries, emergency diesel generators, containment air recirculation (CAR) system, service water (SW) system, and the systems and components needed to support the emergency core cooling system transfer from the injection phase to sump recirculation. The types of deficiencies noted by the team included technical errors, nonconservative methods and assumptions, as well as the failure to consider all applicable design bases information. The team concluded that weaknesses in engineering programmatic requirements and a lack of technical rigor, thoroughness, and attention to detail in the design process, either contributed to or directly caused the identified errors. In addition, design control measures such as independent reviews, supervisory reviews, and reviews by oversight committees did not identify these deficiencies.

In addition, the team identified operability concerns that require further staff evaluation and which have led to the recent shutdown of Haddam Neck. These concerns include: (1) the potential for water hammer in the SW piping and in the tubes of the containment fan coolers, (2) the potential for two-phase flow in the SW system in the tubes of the containment fan coolers, (3) the licensee crediting post-LOCA accident pressure in containment for residual heat removal pump net positive suction head (NPSH), and (4) the potential that the feedwater regulating valves may not close during a main steamline break event.

Maine Yankee

On January 10, 1996, the NRC issued a Confirmatory Order Suspending Authority for and Limiting Power Operation and Containment Pressure, and Demand for Information to the Maine Yankee Atomic Power Company. The order was based, in part, on the NRC's determination that Maine Yankee did not apply a computer code, proposed to demonstrate compliance with the emergency core cooling system (ECCS) requirements of 10 CFR 50.46, in a manner conforming to the requirements of 10 CFR Part 50, Appendix K, nor in conformance to the conditions specified in the staff's Safety Evaluation (SE) dated January 30, 1989. Specifically, the licensee did not demonstrate that the RELAP5YA code will reliably calculate the peak cladding temperature for all break sizes in the small-break LOCA spectrum for Maine Yankee, nor has the licensee submitted the justification for the code options selected and other justifications and sensitivity studies to satisfy conditions in the SE.

In addition, the licensee assumed an initial containment pressure of 2.0 psig for calculating peak design-basis accident pressure even though the plant technical specifications allow a maximum operating pressure in containment of 3.0 psig. Assuming an initial containment pressure of 3.0 psig results in a calculated peak accident pressure in excess of the containment design pressure described in the updated final safety analysis report (UFSAR).

Refueling Practices Survey

In response to recent problems encountered at Millstone Unit 1 regarding compliance with the UFSAR, during the spring of 1996, the NRC conducted a survey of licensee refueling practices. During the course of this survey, the NRC determined that nine sites (15 units) needed to modify their licensing basis or plant practices to ensure that their reload practices were in compliance with their licensing basis.

Deficiencies in the management of design bases assumptions were also noted in the survey. Many plants were found to have aspects of their design and licensing bases that were only loosely proceduralized or not proceduralized at all. Typical of this kind of discrepancy was the identification of a lack of procedures for controlling the assumptions regarding hold-up time before beginning fuel transfer. The NRC found a number of instances in which other design bases assumptions were not captured in procedures. In addition, licensees at 12 other sites (23 units) upgraded procedures to directly implement the design bases assumption. In other cases, the licensee performed engineering analyses, documented pursuant to 10 CFR 50.59, as necessary, to ensure that the planned activities would not exceed design bases assumptions.

Draft (Version 2) - Mark Up

Faxed Version (8/21/96 @ 5:37 p.m.) ANNOTATED

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FOR: The Commissioners

FROM: James M. Taylor
Executive Director for Operations

SUBJECT: ISSUANCE OF 10 CFR 50.54(f) LETTERS ON THE AVAILABILITY AND ADEQUACY OF DESIGN BASES INFORMATION

PURPOSE:

To request Commission approval of the staff's proposal to send 10 CFR 50.54(f) letters to utility chief executive officers (CEOs), including only Seabrook Unit 1 of Northeast Utilities' plants. These letters will require information to gain added confidence and assurance that plants are operated and maintained within the design basis of the plant and any deviations are reconciled in a timely manner.

SUMMARY:

Recent inspection findings have indicated that design bases information has not been appropriately maintained and implemented at certain plants and that this may have a potential public health and safety impact. The staff is proposing to require information from licensees regarding the availability and adequacy of design bases information to identify how engineering design and configuration control processes are examined; design bases requirements are translated into operating, maintenance, and testing procedures; system performance is verified to be within the design bases; and problem identification and implementation of corrective actions are handled.

CONTACTS:

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DFT 13

BACKGROUND:

In the mid- to late 1980's, U.S. Nuclear Regulatory Commission (NRC) safety system functional inspections (SSFIs) at power reactor licensees and safety system outage modification inspections (SSOMIs) raised concerns about design bases information not being properly maintained and plant modifications being made without the licensee having an understanding of the plant design bases. The NRC's findings heightened the industry's awareness of the need to improve the adequacy and availability of design documentation and many licensees voluntarily initiated extensive efforts to improve their design bases information.

To assist the industry in performing these activities, the Nuclear Management and Resources Council (NUMARC), now the Nuclear Energy Institute (NEI), developed the guidance document, NUMARC 90-12, "Design Basis Program Guidelines." The document outlined a standard framework for developing a design basis program that collates design basis information and supporting design information, but does not identify or recreate the licensing basis of the plant. In a letter dated November 9, 1990, the staff concluded that the guideline would provide worthwhile insights to those utilities undertaking design bases programs and appeared to provide sufficient flexibility for licensees to structure their programs to respond most efficiently to any unique needs and circumstances of a particular license. In emphasizing the importance of validation of the facility against current design information, the staff stated that the goal of any program should be to establish confidence that the existing facility conforms to the current design bases documents and that any identified deviations are reconciled. The staff also emphasized that design documents that support technical specification values and design documents necessary to support operations or respond to events should be regenerated if missing. The staff requested that NUMARC consider making the design bases effort a NUMARC initiative. In SECY-91-364, "Design Basis Reconstitution" dated November 12, 1991, the staff reported NUMARC's conclusion that an initiative was not necessary because most of their members were already conducting or evaluating the need to conduct such programs. Although NUMARC decided not to pursue a formal initiative, it forwarded the guidelines and NRC comments to their members for use on a voluntary basis.

To provide more information to the industry on this topic and to provide an independent view of the design control issue, the staff conducted a survey of six utilities and one nuclear steam supply system vendor to determine the status of design control problems and the strengths and weaknesses of the sample utility programs. The results were published in February 1991, in NUREG-1397, "An Assessment of Design Control Practices and Design Reconstitution Programs in the Nuclear Industry." The survey observations were: the need for a design documentation reconstitution program was directly proportional to the age of the plant; the general intent of the program should be to provide

a central location for design bases information, with emphasis on the design intent (the why of the design); the design bases documents should be a top level directory which define the current plant configuration; reestablishment of design bases without reconstitution of the supporting design documents, as necessary, may not provide a sufficient level of information for future modifications or current plant operation or to quickly respond to operating events; and minor changes to the design should be tracked to support the conclusion that the changes in the aggregate do not affect the validity of existing calculations and the ability of a system to perform its design functions. Some common weaknesses of licensee programs identified during the survey included: design reconstitution programs had not identified in advance the documents that are necessary to demonstrate that a structure, system, or component will function properly; the process for regeneration of missing design documentation was not always proceduralized so that it could be handled in a systematic manner; validation of the content of specific output documentation was not always thoroughly carried out.

In late 1991, the Commission requested the staff to consider whether rulemaking, regulatory guidance, or a policy statement was needed to outline the NRC's expectations concerning accurate design bases documentation. In SECY-92-193, "Design Bases Reconstitution" dated May 26, 1992, the staff concluded that additional regulations were not needed because existing regulatory requirements for design control were sufficient. However, the staff proposed issuance of a policy statement and issuance, for public comment, of a generic letter requesting licensees to describe their programs. Additionally, SECY-92-193 documented the staff's intention to continue performing design-related inspections. Also, the staff expected that planned revisions to the enforcement policy guidance (to refrain from issuing civil penalties for violations up to Severity Level III if the issues were identified and corrected as a result of systematic voluntary initiatives) would encourage licensees to identify past design, engineering, and installation issues. The Commission responded in a Staff Requirements Memorandum (SRM) on SECY-92-193 which approved the staff's approach.

In August 1992, the Commission issued the policy statement, "Availability and Adequacy of Design Bases Information at Nuclear Power Plants" (57 FR 35455). The policy statement stressed the importance of maintaining current and accessible design documentation to ensure that (1) plant physical and functional characteristics are maintained and consistent with design bases, (2) systems, structures, and components can perform their intended functions, and (3) the plant is operated in a manner consistent with the design bases. In the policy statement, the Commission stated that all power reactor licensees should assess the accessibility and adequacy of their design bases documentation and be able to show that there is sufficient documentation to conclude that the current facility configuration is consistent with the design bases. The policy statement outlined further actions the staff would perform to keep apprised of industry's activities.

Following review by the Committee to Review Generic Requirements (CRGR) and the Commission, a draft generic letter was issued for public comment on March 24, 1993. The proposed generic letter requested licensees, on a voluntary basis, to submit information and schedules for any design bases programs completed, planned, or being conducted, or a rationale for not implementing such a program. All but one of the commenters concluded that the generic letter was unnecessary and unwarranted. NUMARC responded that it believed the NRC request for descriptions, schedules, and dates would have a negative impact on ongoing design efforts and that NRC's focus on schedules would undermine the licensees' ability to manage the activities.

In SECY-93-292, "Generic Letter on the Availability and Adequacy of Design Bases Information" dated October 21, 1993, the staff recommended the generic letter not be issued. The staff stated that publication of the policy statement and the proposed generic letter conveyed to the industry the Commission's concern and that publication of the generic letter would not further licensees' awareness of the importance of the activities. The staff proposed to continue performing design-related inspections and to gather information and insights as to how well the licensee design-related programs were being implemented. The Commission issued an SRM which agreed with the staff's proposal.

In response to the findings relating to the regulatory burden of team inspections identified in the 1991 Regulatory Impact Survey, during the past several years, the staff has reduced its effort on specific, resource-intensive, design-related team inspections, and followed the issue of accurate and accessible design documentation at plants principally as an element of inspection and followup of operations-related activities. The issuance of the NUMARC guideline and ongoing industry efforts to improve and maintain design bases information also contributed to this decision.

DISCUSSION:

Beginning in late 1995, NRC identified information during a number of inspections at different sites which indicated that design bases were not in some cases being appropriately maintained or adhered to by some licensees. Contrary to earlier indications and expectations, the staff now believes there are situations where licensees have not critically examined their design control and configuration measures. For example, inspection teams identified a number of engineering calculations and analyses for key safety systems that were incorrect and did not confirm that safety system functional requirements would be met (resulting in inoperable safety systems on some occasions). Numerous instances were identified where design basis information was not adequately translated into procedures, practices and drawings; the original design basis was inadequate and the original installation was incorrect; modifications were not installed in accordance with the design; and modifications were based on incorrect design assumptions. Additionally, cases were identified where quality assurance requirements and corrective action requirements had not been properly implemented to appropriately maintain design basis information. Details of the findings are outlined further in the attachment to the proposed letter.

By letter dated August 2, 1996, NEI informed the staff that an initiative had been approved by the Nuclear Strategic Issues Advisory Committee (consisting of chief nuclear officers) to provide additional assurance and confidence that existing programs are adequate to ensure: (1) plants are operated in conformance with their licensing basis, (2) the licensing basis is adequately maintained, (3) differences between the operating practices and licensing basis could not result in a significant public health and safety concern, and (4) degraded or nonconforming conditions are captured on tracking systems and resolved in a timely manner. The letter stated that each licensee would conduct an assessment of the program in place to reaffirm that plants are operated in conformance with their licensing basis. In a letter dated August 14, 1996, the NRC stated its concern that the proposed initiative may not be of sufficient scope and depth and that an in-depth vertical slice review of actual design basis documentation and comparison of "as-built" and "as operated" safety systems would be more appropriate. The NRC confirmed its position that it is the responsibility of individual licensees to know their licensing basis, to have appropriate documentation that defines their design basis and to have procedures for performing the necessary assessment of plant or procedure changes required by NRC regulations.

Design and configuration deficiencies currently being identified at some plants indicate failures (1) to comply with the terms and conditions of licenses and NRC regulations and (2) to assure that Updated Final Safety Analysis Reports properly reflect the facilities. These findings raise questions whether licensee programs to maintain configuration control are sufficient to demonstrate that plant physical and functional characteristics are consistent with the design bases and whether operating plants are being maintained in accordance with their design basis. The staff believes that reliance on the industry's voluntary efforts on improving design bases information may not be sufficient to maintain configuration control at some number of plants. These problems are of concern because of their potential impact on public health and safety.

Therefore, the staff proposes to send 10 CFR 50.54(f) letters (Attachment) to utility CEOs, including only Seabrook Unit 1 of Northeast Utilities' plants, which require licensees to (1) submit a description of any programs already completed, planned, or being conducted to ensure correctness and accessibility of the design bases information, or (2) submit a rationale for not implementing such a program and a description of the extent of design information already obtained from suppliers and vendors, and (3) submit a schedule for the completion date of any planned design reconstitution program. The program description must identify how engineering design and configuration control processes are examined; design bases requirements are translated into operating, maintenance, and testing procedures; system performance is verified to be within the design bases; and problem identification and implementation of corrective actions are handled. The staff will use the information to prioritize and to better focus design-related inspections such as SSFIs and SSOMIs to verify compliance with the terms and conditions of licenses, NRC regulations, and Updated Final Safety Analysis Reports. Such inspections sample the process and products of design bases information programs and, therefore, provide insights as to the effectiveness of licensee programs without reviewing the programs themselves.

COORDINATION:

In view of the need for timely information regarding this matter, comments or concurrence from the Advisory Committee for Reactor Safety (ACRS) were not sought. The CRGR was briefed on this action at an emergency meeting held on August 22, 1996. The Office of the General Counsel has reviewed this paper and the enclosed sample letter and has no legal objection.

RECOMMENDATION:

That the Commission approve issuance of the letters under the signature of either the Chairman, the EDO, or the Director, Nuclear Reactor Regulation.

James M. Taylor
Executive Director
for Operations

Attachment: Sample letter to CEO

COORDINATION:

In view of the need for timely information regarding this matter, comments or concurrence from the Advisory Committee for Reactor Safety (ACRS) and CRGR were not sought. The Office of the General Counsel has reviewed this paper and the enclosed sample letter and has no legal objection.

RECOMMENDATION:

That the Commission approve issuance of the letters.

James M. Taylor
Executive Director
for Operations

Attachment: Sample letter to CEO

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Draft (Version 3) (4.9)

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

[date]

[Name of Utility CEO]
[Title]
[Utility Name]
[Utility Address]

SUBJECT: REQUEST FOR INFORMATION PURSUANT TO 10 CFR 50.54(f) REGARDING ADEQUACY AND AVAILABILITY OF DESIGN BASES INFORMATION

Dear Mr. [Name]:

Background:

In the mid- to late 1980's, NRC safety system functional inspections (SSFIs) and safety system outage modification inspections (SSOMIs) identified concerns that design bases information was not being properly maintained and plant modifications were being made without the licensee having an understanding of the plant design bases. The NRC findings heightened the industry's awareness of the need to improve the adequacy and availability of design documents, and many licensees voluntarily initiated extensive efforts to improve the design bases information for their plants.

To assist the industry in performing design basis improvement programs, the Nuclear Management and Resources Council (NUMARC)[1] developed a guidance document, NUMARC 90-12, "Design Basis Program Guidelines." These guidelines were intended to provide a standard framework for licensee programs to improve plant design bases information.[2] The NRC staff reviewed the guidelines and provided comments to NUMARC in November 1990. In emphasizing the importance of validating the facility against current design information, the staff stated that the goal of any program should be to establish confidence that the existing facility is in accordance with the current design documents and that any deviations be reconciled. The staff concluded that the NUMARC guidelines would provide worthwhile insights to utilities undertaking design reconstitution programs and the guidelines appeared to provide sufficient flexibility for licensees to structure their programs to respond most efficiently to any unique needs and circumstances of a

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[1]NUMARC was consolidated into the Nuclear Energy Institute (NEI) on March 23, 1994.

[2]As discussed in NUMARC 90-12, these programs or efforts would emphasize collation of design basis information and the supporting design information, not the identification or recreation of the licensing basis for a plant or the regeneration of missing analyses and calculations.

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particular licensee. The staff requested NUMARC to consider making design reconstitution a formal NUMARC initiative, and commented that design documents that support technical specification values and design documents necessary to support operations or respond to events should be regenerated if missing. NUMARC subsequently concluded that a formal initiative was not necessary because most of its members were already conducting or evaluating the need to conduct design reconstitution programs, and agreed to forward the guidelines with the NRC's comments to its members for use on a voluntary basis.

To provide more information to the industry on this topic and to provide an independent view of the design control issue, the staff conducted a survey of six utilities and one nuclear steam supply system vendor to determine the status of design control problems and the strengths and weaknesses of the sample utility programs. The results were published in February 1991, in NUREG-1397, "An Assessment of Design Control Practices and Design Reconstitution Programs in the Nuclear Industry." The survey observations were: the need for a design documentation reconstitution program was directly proportional to the age of the plant; the general intent of the program should be to provide a central location for design bases information, with emphasis on the design intent (the why of the design); the design bases documents should be a top level directory that define the current plant configuration; reestablishment of design bases without reconstitution of the supporting design documents, as necessary, may not provide a sufficient level of information for future modifications or current plant operation or to quickly respond to operating events; minor changes to the design should be tracked to support the conclusion that the changes in aggregate do not affect the validity of existing calculations and the ability of a system to perform its design functions. Some common weaknesses of licensee programs identified during the survey included: design reconstitution programs had not identified in advance the documents that are necessary to demonstrate that a structure, system, or component will function properly; the process for regeneration of missing design documentation was not always proceduralized so that it could be handled in a systematic manner; validation of the content of specific output documentation was not always thoroughly carried out.

In late 1991, the NRC staff evaluated whether rulemaking, guidance, or a policy statement was needed to address the issue of licensees retaining accurate design bases information. It concluded that the existing regulatory requirements for design control were adequate; however, it determined that the publication of a policy statement addressing design bases information and publication of a generic letter requesting licensees to describe their design reconstitution programs would be beneficial. Additionally, the staff stated its intention to continue to evaluate design control adequacy during its performance-based inspection such as SSFIs and SSOMIs. The staff also expected that revisions to the enforcement policy guidance to provide greater opportunities for enforcement discretion[3] would encourage voluntary identification of past design, engineering, and installation issues by licensees. With the Commission's approval, the staff proceeded with this approach.

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[3]NRC would refrain from imposing civil penalties for violations up to Severity Level III if the violations were identified and corrected as a result of systematic voluntary initiatives.

In August 1992, the NRC issued the policy statement, "Availability and Adequacy of Design Bases Information at Nuclear Power Plants" (57 FR 35455) (Attachment 1). The policy statement stressed the importance of maintaining current and accessible design documentation to ensure that (1) plant physical and functional characteristics are maintained and consistent with design bases, (2) systems, structures, and components can perform their intended functions, and (3) the plant is operated in a manner consistent with the design bases. In the policy statement, the Commission recommended that all power reactor licensees assess the accessibility and adequacy of their design bases information and that they be able to show that there is sufficient documentation to conclude the current facility configuration is consistent with the design bases. The policy statement outlined the additional actions the NRC would take to keep apprised of industry's design reconstitution activities (discussed above).

Following review by the Committee to Review Generic Requirements (CRGR) and the Commission, a draft generic letter was issued for public comment on March 24, 1993. The proposed generic letter requested licensees, on a voluntary basis, to submit information and schedules for any design bases programs completed, planned, or being conducted or a rationale for not implementing such a program. All but one of the commenters concluded that the generic letter was unnecessary and unwarranted. NUMARC responded that it believed the NRC request for descriptions, schedules, and dates would have a negative impact on ongoing design efforts and that NRC's focus on schedules would undermine the licensees' ability to manage the activities.

In SECY-93-292, "Generic Letter on the Availability and Adequacy of Design Bases Information," the staff recommended the generic letter not be issued. The staff stated that publication of the policy statement and the proposed generic letter conveyed to the industry the Commission's concern and that publication of the generic letter would not further licensees' awareness of the importance of the activities. The staff proposed to continue performing design-related inspections and to gather information and insights as to how well the licensee design-related programs were being implemented. The Commission issued a staff requirements memorandum that agreed with the staff's proposal.

In response to the findings relating to the regulatory burden of team inspections identified in the 1991 Regulatory Impact Survey, during the past several years, the staff has reduced its effort on specific, resource-intensive, design-related team inspections, and followed the issue of accurate and accessible design documentation at plants principally as an element of inspection and followup of operations-related activities. The issuance of the NUMARC guidelines and ongoing industry efforts to improve and maintain design bases information also contributed to this decision.

Current Problem:

Over the past several months, NRC findings during inspections and reviews have identified broad programmatic weaknesses that have resulted in design and configuration deficiencies at a number of plants which could impact the operability of required equipment, raise unreviewed safety questions, or indicate discrepancies between the plant's updated final

safety analysis report (UFSAR) and the as-built or as-modified plant or plant operating procedures. These inspections and reviews have also highlighted numerous instances where timely and complete implementation of corrective action for known degraded and nonconforming conditions and for past violations of NRC requirements has not been evident. Overall, the NRC has found failures of some licensees (1) to appropriately maintain or adhere to plant licensing and design bases information, (2) to comply with the terms and conditions of licenses and NRC regulations, and (3) to assure that UFSARs properly reflect the facilities. Attachment 2 provides examples of some of the deficiencies recently identified by the staff. As a consequence of this new information, the NRC believes that the industry's voluntary efforts to improve and maintain design bases information for their plants, consistent with NUMARC 90-12, the staff's comments on the industry guidelines, and the Commission policy statement, have not been effective in all cases.

The magnitude and scope of the problems that the NRC has identified raise concerns about the presence of similar design, configuration, and operability problems and the effectiveness of quality assurance programs industry-wide. Of particular concern is whether licensee programs to maintain configuration control are sufficient to demonstrate that plant physical and functional characteristics are consistent with the design bases and whether operating plants are being maintained in accordance with their design basis. The extent of licensee failures to maintain control and to identify and correct the failures in a timely manner is of concern because of the potential impact on public health and safety should safety systems not respond to challenges from off-normal and accident conditions. It is emphasized that the NRC position has been, and continues to be, that it is the responsibility of individual licensees to know their licensing basis, to have appropriate documentation that defines their design bases, and to have procedures for performing the necessary assessments of plant or procedure changes required by NRC regulations. Attachments 3 and 4 are a recent exchange of correspondence between J. Colvin, NEI, and S. Jackson, NRC, regarding these subjects.

Action:

The NRC has concluded that it requires information that can be used to verify compliance with the terms and conditions of your license(s), NRC regulations, and the plant UFSAR(s), and which may be used to decide whether to modify, suspend, or revoke the operating license(s) for your facility or facilities, or whether other inspection activities or enforcement action should be taken. Therefore, you are required, pursuant to Section 182(a) of the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f), to submit a response to this letter within 120 days from receipt of this letter. Your response must be written and signed under oath or affirmation.

Please submit your response to the Director, Office of Nuclear Reactor Regulation, with a copy to the appropriate Regional Administrator and the NRC Document Control Desk. The following information is required for each licensed unit:

(1) a description of any design review or reconstitution programs, including identification of the systems, structures, and components, and plant-level design attributes (e.g., seismic, high-energy line break, moderate-energy line break), which have already been completed, are planned, or are being conducted to ensure the correctness and accessibility of the design bases information for your plant and to ensure that it is maintained current. If the program is planned or being conducted but has not been completed, provide an implementation schedule for systems, structures, and components, and plant-level design attribute reviews and expected completion date.

(2) a rationale for not implementing such a program, if no design review or reconstitution program has been implemented or planned.

The responses provided pursuant to paragraphs (1) and (2) above should address how current or planned plant processes or programs address the following areas of particular interest, as expressed in NUMARC 90-12, the staff's comments on the industry guidelines, and the Commission policy statement:

(a) description of engineering design and configuration control processes, including those that implement 10 CFR 50.59, 10 CFR 50.71(e), and Appendix B to 10 CFR Part 50;

(b) selection and prioritization of systems, structures, and components for review (item (1) only);

(c) rationale for concluding that design bases requirements are translated into operating, maintenance, and testing procedures;

(d) rationale for concluding that system, structure, and component configuration and performance are consistent with the design bases;

(e) processes for problem identification and implementation of corrective actions, including actions to determine the extent of problems, action to prevent recurrence, and reporting to NRC;

(f) the overall effectiveness of your current processes and programs in concluding that the configuration of your plant(s) is consistent with the design bases; and

(g) actions already taken or to be taken (including documentation) to assure that the plant is being operated in a manner consistent with its design bases.

This request is covered by the Office of Management and Budget (OMB) clearance number 3150-0011, which expires July 31, 1997. The reporting burden for this collection of information is estimated to average 400 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Information and Records Management Branch (T-6F33), U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0011), Office of Management and Budget, Washington, D.C. 20503. The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and your response will be placed in the NRC Public Document Room (PDR), the Gelman Building, 2120 L Street, N.W., Washington, DC, and in the local public document room(s) for your facility or facilities.

If you have any questions about this matter, please contact the staff members listed below, or the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.

[Signature]

Attachments:
1. Policy Statement on Availability and Adequacy of Design Bases Information at Nuclear Power Plants
2. Background on Recently Identified Problems
3. Letter from J. Colvin (NEI) to S. Jackson (NRC) dated 8/2/96
4. Letter from S. Jackson (NRC) to J. Colvin (NEI) dated 8/14/96

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(301) 415-1136
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Docket No(s). 50-xxx and 50-xxx

cc: See next page [applicable plant service list]

Draft (Version 3)

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BACKGROUND INFORMATION ON RECENTLY IDENTIFIED PROBLEMS

Over the past several months, design and engineering information has been obtained which indicates that design bases at certain plants have not been appropriately maintained or adhered to. Some specific examples include:

Millstone Units 1, 2, and 3

The recent NRC inspection team found examples where the FSAR and design bases information did not agree with the as-built plant, operational procedures, and maintenance practices which were resolved by correcting the documentation. The team found other more significant inconsistencies that required analyses, procedure changes, and design changes to resolve. For example, the Millstone Unit 3 operating procedures required isolation for the turbine driven auxiliary feedwater pump during certain plant conditions, in conflict with technical specification requirements for operability. The team found that certain protective relays at Millstone Unit 3 were not set in accordance with the design bases information. This required re-analyses and resetting of certain relays. Based on the team's findings, the licensee initiated design changes to correct nonconforming conditions between the FSAR and the as-built plant, including changes to the design of the Millstone Unit 2 reactor protection system to meet the design bases with respect to physical separation of redundant channels and changes to the design of the Millstone Unit 2 (post-loss-of-coolant accident (LOCA)) hydrogen monitors to meet the design bases for single failure vulnerabilities.

Haddam Neck

The team found examples where the FSAR and design bases information did not agree with the as-built plant, operational procedures, and maintenance practices which were resolved by correcting the documentation. The team identified a number of deficiencies in engineering calculations and analyses that were relied upon to ensure the adequacy of the design of key safety systems. The team found examples of inconsistencies between the as-built plant, vendor-supplied information, and the assumptions used in engineering calculations and analyses. Deficiencies were identified in the calculations and analyses supporting the station batteries, emergency diesel generators, containment cooling system, and other key safety systems. In some cases, the inspection findings were resolved by revising the calculations and analyses. In other cases, procedure and design changes were required to resolve the issues. For example, the team identified that the design bases calculations supporting the size of the station batteries were inconsistent with the design bases stated in the FSAR. Field measurements and design modifications were required to resolve this issue. Additional examples are documented in the special team inspection report for Haddam Neck, 50-213/96-201. Other issues were identified by the NRC and the licensee following the issuance of this inspection report that lead the licensee to enter a refueling outage earlier than originally scheduled. These issues include discrepancies between the as-built plant and the design bases for the service water system pressure, containment sump screens, feedwater isolation valves, and containment penetrations.

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Maine Yankee

On January 10, 1996, the NRC issued a Confirmatory Order Suspending Authority for and Limiting Power Operation and Containment Pressure; and Demand for Information to the Maine Yankee Atomic Power Company. The order was based, in part, on the NRC's determination that Maine Yankee did not apply a computer code, proposed to demonstrate compliance with the emergency core cooling system (ECCS) requirements of 10 CFR 50.46, in a manner conforming to the requirements of 10 CFR Part 50, Appendix K, nor in conformance to the conditions specified in the staff's safety evaluation dated January 30, 1989. Specifically, the licensee did not demonstrate that the RELAP5YA code will reliably calculate the peak cladding temperature for all break sizes in the small-break LOCA spectrum for Maine Yankee, nor has the licensee submitted the justification for the code options selected and other justifications and sensitivity studies to satisfy conditions in the staff's safety evaluation.

In addition, the licensee assumed an initial containment pressure of 2.0 psig for calculating peak design-basis accident pressure, even though the plant technical specifications allow a maximum operating pressure in containment of 3.0 psig. Assuming an initial containment pressure of 3.0 psig results in a calculated peak accident pressure in excess of the containment design pressure described in the updated final safety analysis report (UFSAR).

Refueling Practices Survey

In response to recent problems encountered at Millstone Unit 1 regarding compliance with the UFSAR, during the spring of 1996, the NRC conducted a survey of licensee refueling practices. During the course of this survey, the NRC determined that nine sites (15 units) needed to modify their licensing basis or plant practices to ensure that their reload practices were in compliance with their licensing basis.

Deficiencies in the management of design bases assumptions were also noted in the survey. Many plants were found to have aspects of their design and licensing bases that were only loosely proceduralized or not proceduralized at all. Typical of this kind of discrepancy was the identification of a lack of procedures for controlling the assumptions regarding hold-up time before beginning fuel transfer. The NRC found a number of instances in which other design bases assumptions were not captured in procedures. In addition, licensees at 12 other sites (23 units) upgraded procedures to directly implement the design bases assumptions. In other cases, the licensee performed engineering analyses, documented pursuant to 10 CFR 50.59, as necessary, to ensure that the planned activities would not exceed design bases assumptions.

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Draft (Version 3)

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FOR: The Commissioners

FROM: James M. Taylor
Executive Director for Operations

SUBJECT: ISSUANCE OF 10 CFR 50.54(f) LETTERS ON THE AVAILABILITY AND ADEQUACY OF DESIGN BASES INFORMATION

PURPOSE:

To request Commission approval of the staff's proposal to send 10 CFR 50.54(f) letters to utility chief executive officers (CEOs), including only Seabrook Unit 1 of Northeast Utilities' plants. These letters will require information to gain added confidence and assurance that plants are operated and maintained within the design basis of the plant and any deviations are reconciled in a timely manner.

SUMMARY:

Recent inspection findings have indicated that design bases information has not been appropriately maintained and implemented at certain plants and that this may have a potential public health and safety impact. The staff is proposing to require information from licensees regarding the availability and adequacy of design bases information to identify how engineering design and configuration control processes are examined; design bases requirements are translated into operating, maintenance, and testing procedures; performance of systems, structures, and components is verified to be within the design bases; and problem identification and implementation of corrective actions are handled.

CONTACTS:

Frank M. Akstulewicz, NRR
(301) 415-1136

Eileen M. McKenna, NRR
(301) 415-2189

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BACKGROUND:

In the mid- to late 1980's, U.S. Nuclear Regulatory Commission (NRC) safety system functional inspections (SSFIs) at power reactor licensees and safety system outage modification inspections (SSOMIs) raised concerns about design bases information not being properly maintained and plant modifications being made without the licensee having an understanding of the plant design bases. The NRC's findings heightened the industry's awareness of the need to improve the adequacy and availability of design documentation and many licensees voluntarily initiated extensive efforts to improve their design bases information.

To assist the industry in performing these activities, the Nuclear Management and Resources Council (NUMARC), now the Nuclear Energy Institute (NEI), developed the guidance document, NUMARC 90-12, "Design Basis Program Guidelines." The document outlined a standard framework for developing a program that collates design basis information and supporting design information, but does not identify or recreate the licensing basis of the plant. In a letter dated November 9, 1990, the staff concluded that the guidelines would provide worthwhile insights to those utilities undertaking design bases programs and appeared to provide sufficient flexibility for licensees to structure their programs to respond most efficiently to any unique needs and circumstances of a particular license. In emphasizing the importance of validation of the facility against current design information, the staff stated that the goal of any program should be to establish confidence that the existing facility conforms to the current design bases documents and that any identified deviations are reconciled. The staff also emphasized that design documents that support technical specification values and design documents necessary to support operations or respond to events should be regenerated if missing. The staff requested that NUMARC consider making the design bases effort a NUMARC initiative. In SECY-91-364, "Design Basis Reconstitution" dated November 12, 1991, the staff reported NUMARC's conclusion that an initiative was not necessary because most of their members were already conducting or evaluating the need to conduct such programs. Although NUMARC decided not to pursue a formal initiative, it agreed to forward the guidelines to its members for use on a voluntary basis.

To provide more information to the industry on this topic and to provide an independent view of the design control issue, the staff conducted a survey of six utilities and one nuclear steam supply system vendor to determine the status of design control problems and the strengths and weaknesses of the sample utility programs. The results were published in February 1991, in NUREG-1397, "An Assessment of Design Control Practices and Design Reconstitution Programs in the Nuclear Industry." The survey observations were: the need for a design documentation reconstitution program was directly proportional to the age of the plant; the general intent of the program should be to provide

a central location for design bases information, with emphasis on the design intent (the why of the design); the design bases documents should be a top level directory which define the current plant configuration; reestablishment of design bases without reconstitution of the supporting design documents, as necessary, may not provide a sufficient level of information for future modifications or current plant operation or to quickly respond to operating events; and minor changes to the design should be tracked to support the conclusion that the changes in the aggregate do not affect the validity of existing calculations and the ability of a system to perform its design functions. Some common weaknesses of licensee programs identified during the survey included: design reconstitution programs had not identified in advance the documents that are necessary to demonstrate that a structure, system, or component will function properly; the process for regeneration of missing design documentation was not always proceduralized so that it could be handled in a systematic manner; and validation of the content of specific output documentation was not always thoroughly carried out.

In late 1991, the Commission requested the staff to consider whether rulemaking, regulatory guidance, or a policy statement was needed to outline the NRC's expectations concerning accurate design bases documentation. In SECY-92-193, "Design Bases Reconstitution" dated May 26, 1992, the staff concluded that additional regulations were not needed because existing regulatory requirements for design control were sufficient. However, the staff proposed issuance of a policy statement and issuance, for public comment, of a generic letter requesting licensees to describe their programs. Additionally, SECY-92-193 documented the staff's intention to continue performing design-related inspections. Also, the staff expected that planned revisions to the enforcement policy guidance (to refrain from issuing civil penalties for violations up to Severity Level III if the issues were identified and corrected as a result of systematic voluntary initiatives) would encourage licensees to identify past design, engineering, and installation issues. The Commission responded in a Staff Requirements Memorandum (SRM) on SECY-92-193 which approved the staff's approach.

In August 1992, the Commission issued the policy statement, "Availability and Adequacy of Design Bases Information at Nuclear Power Plants" (57 FR 35455). The policy statement stressed the importance of maintaining current and accessible design documentation to ensure that (1) plant physical and functional characteristics are maintained and consistent with design bases, (2) systems, structures, and components can perform their intended functions, and (3) the plant is operated in a manner consistent with the design bases. In the policy statement, the Commission stated that all power reactor licensees should assess the accessibility and adequacy of their design bases documentation and be able to show that there is sufficient documentation to conclude that the current facility configuration is consistent with the design bases. The policy statement outlined further actions the staff would perform to keep apprised of industry's activities.

Following review by the Committee to Review Generic Requirements (CRGR) and the Commission, a draft generic letter was issued for public comment on March 24, 1993. The proposed generic letter requested licensees, on a voluntary basis, to submit information and schedules for any design bases programs completed, planned, or being conducted, or a rationale for not implementing such a program. All but one of the commenters concluded that the generic letter was unnecessary and unwarranted. NUMARC responded that it believed the NRC request for descriptions, schedules, and dates would have a negative impact on ongoing design efforts and that NRC's focus on schedules would undermine the licensees' ability to manage the activities.

In SECY-93-292, "Generic Letter on the Availability and Adequacy of Design Bases Information" dated October 21, 1993, the staff recommended the generic letter not be issued. The staff stated that publication of the policy statement and the proposed generic letter conveyed to the industry the Commission's concern, and that publication of the generic letter would not further licensees' awareness of the importance of the activities. The staff proposed to continue performing design-related inspections and to gather information and insights as to how well the licensee design-related programs were being implemented. The Commission issued an SRM which agreed with the staff's proposal.

In response to the findings relating to the regulatory burden of team inspections identified in the 1991 Regulatory Impact Survey, during the past several years, the staff has reduced its effort on specific, resource-intensive, design-related team inspections, and followed the issue of accurate and accessible design documentation at plants principally as an element of inspection and followup of operations-related activities. The issuance of the NUMARC guidelines and ongoing industry efforts to improve and maintain design bases information also contributed to this decision.

DISCUSSION:

Beginning in late 1995, NRC identified information during a number of inspections at different sites which indicated that design bases were not in some cases being appropriately maintained or adhered to by some licensees. Contrary to earlier indications and expectations, the staff now believes there are situations where licensees have not critically examined their design control and configuration measures. For example, inspection teams identified a number of engineering calculations and analyses for key safety systems that were incorrect and did not confirm that safety system functional requirements would be met (resulting in inoperable safety systems on some occasions). Numerous instances were identified where design basis information was not adequately translated into procedures, practices and drawings; the original design basis was inadequate and the original installation was incorrect; modifications were not installed in accordance with the design; and modifications were based on incorrect design assumptions. Additionally, cases were identified where quality assurance requirements and corrective action requirements had not been properly implemented to appropriately maintain design basis information. Details of the findings are outlined further in the attachment to the proposed letter.

By letter dated August 2, 1996, NEI informed the staff that an initiative had been approved by the Nuclear Strategic Issues Advisory Committee (consisting of chief nuclear officers) to provide additional assurance and confidence that existing programs are adequate to ensure: (1) plants are operated in conformance with their licensing basis, (2) the licensing basis is adequately maintained, (3) differences between the operating practices and licensing basis could not result in a significant public health and safety concern, and (4) degraded or nonconforming conditions are captured on tracking systems and resolved in a timely manner. The letter stated that each licensee would conduct an assessment of the program in place to reaffirm that plants are operated in conformance with their licensing basis. In a letter dated August 14, 1996, the NRC stated its concern that the proposed initiative may not be of sufficient scope and depth and that an in-depth vertical slice review of actual design basis documentation and comparison of "as-built" and "as operated" safety systems would be more appropriate. The NRC confirmed its position that it is the responsibility of individual licensees to know their licensing basis, to have appropriate documentation that defines their design bases and to have procedures for performing the necessary assessment of plant or procedure changes required by NRC regulations.

Design and configuration deficiencies currently being identified at some plants indicate failures (1) to comply with the terms and conditions of licenses and NRC regulations and (2) to assure that Updated Final Safety Analysis Reports properly reflect the facilities. These findings raise questions whether licensee programs to maintain configuration control are sufficient to demonstrate that plant physical and functional characteristics are consistent with the design bases and whether operating plants are being maintained in accordance with their design basis. The staff believes that reliance on the industry's voluntary efforts on improving design bases information, consistent with NUMARC 90-12, the staff's comments on the industry guidelines, and the Commission policy statement, may have not been sufficient to maintain configuration control at some number of plants. These problems are of concern because of their potential impact on public health and safety.

Therefore, the staff proposes to send 10 CFR 50.54(f) letters (Attachment) to utility CEOs, including only Seabrook Unit 1 of Northeast Utilities' plants, which require licensees to (1) submit a description of any programs already completed, planned, or being conducted to ensure correctness and accessibility of the design bases information, or (2) submit a rationale for not implementing such a program and a description of the extent of design information already obtained from suppliers and vendors, and (3) submit a schedule for the completion date of any planned design reconstitution program. The program description must identify how engineering design and configuration control processes are examined; design bases requirements are translated into operating, maintenance, and testing procedures; performance of structures, systems, and components is verified to be within the design bases; and problem identification and implementation of corrective actions are handled. The staff will use the information to prioritize and to better focus design-related inspections such as SSFIs and SSOMIs to verify compliance with the terms and conditions of licenses, NRC regulations, and Updated Final Safety Analysis Reports. Such inspections sample the process and products of design bases information programs and, therefore,

provide insights as to the effectiveness of licensee programs without reviewing the programs themselves.

COORDINATION:

In view of the need for timely information regarding this matter, comments or concurrence from the Advisory Committee for Reactor Safety (ACRS) were not sought. The CRGR was briefed on this action at an emergency meeting held on August 22, 1996, and its comments have been incorporated. The Office of the General Counsel has reviewed this paper and the enclosed sample letter and has no legal objection.

RECOMMENDATION:

That the Commission approve issuance of the letters under the signature of either the Chairman, the EDO, or the Director, Nuclear Reactor Regulation.

James M. Taylor
Executive Director
for Operations

Attachment: Proposed 50.54(f) Letter to Licensees

provide insights as to the effectiveness of licensee programs without reviewing the programs themselves.

COORDINATION:

In view of the need for timely information regarding this matter, comments or concurrence from the Advisory Committee for Reactor Safety (ACRS) were not sought. The CRGR was briefed on this action at an emergency meeting held on August 22, 1996, and its comments have been incorporated. The Office of the General Counsel has reviewed this paper and the enclosed sample letter and has no legal objection.

RECOMMENDATION:

That the Commission approve issuance of the letters under the signature of either the Chairman, the EDO, or the Director, Nuclear Reactor Regulation.

James M. Taylor
Executive Director
for Operations

Attachment: Proposed 50.54(f) Letter to Licensees

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To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	D:NRR	OGC	EDO
NAME	WRussell		JTaylor
DATE	8/ /96	8/ /96	8/ /96

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WP51 COMPARE of 8/21/96 and 8/22/96 versions of 50.54f Letter on Design Bases (Draft Version 3 vs Draft Version 2)

(5a)

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

[date]

[Name of Utility CEO]
[Title]
[Utility Name]
[Utility Address]

SUBJECT: REQUEST FOR INFORMATION PURSUANT TO 10 CFR 50. ~~REQUEST FOR ADDITIONAL INFORMATION PURSUANT TO 10 CFR 50.~~54(f) REGARDING ADEQUACY AND AVAILABILITY OF DESIGN BASES INFORMATION

Dear Mr. [Name]:

Background:

In the mid- to late 1980's, NRC safety system functional inspections (SSFIs) and safety system outage modification inspections (SSOMIs) identified concerns that design bases information was not being properly maintained and plant modifications were being made without the licensee having an understanding of the plant design bases. The NRC findings heightened the industry's awareness of the need to improve the adequacy and availability of design documents, and many licensees voluntarily initiated extensive efforts to improve the design bases information for their plants.

To assist the industry in performing design basis improvement programs, the Nuclear Management and Resources Council (NUMARC)[1] developed a guidance document, NUMARC 90-12, "Design Basis Program Guidelines." These guidelines were intended to provide a standard framework for licensee programs to improve plant design bases

[1]NUMARC was consolidated into the Nuclear Energy Institute (NEI) on March 23, 1994.

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...tion.[2] The NRC staff reviewed the guidelines and provided comments to NUMARC in December 1990. In emphasizing the importance of validating the facility against current design information, the staff stated that the goal of any program should be to establish confidence that the existing facility is in accordance with the current design documents and that any deviations be reconciled. The staff concluded that the NUMARC guidelines would provide worthwhile insights to utilities undertaking design reconstitution programs and the guidelines appeared to provide sufficient flexibility for licensees to structure their programs to respond most efficiently to any unique needs and circumstances of a

[2]As discussed in NUMARC 90-12, these programs or efforts would emphasize collation of design basis information and the supporting design information, not the identification or recreation of the licensing basis for a plant or the regeneration of missing analyses and calculations.

particular licensee. ~~The staff concluded that the NUMARC guidelines would provide worthwhile insights to utilities undertaking design reconstitution programs~~

and the guidelines appeared to provide sufficient flexibility for licensees to structure their programs to respond most efficiently to any unique needs and circumstances of a particular licensee. The staff requested NUMARC to consider making design reconstitution a formal NUMARC initiative, and commented that design documents that support technical specification values and design documents necessary to support operations or respond to events should be regenerated if missing. NUMARC subsequently concluded that a formal initiative was not necessary because most of its members were already conducting or evaluating the need to conduct design reconstitution programs, and agreed to forward the guidelines with the NRC's comments to its members for use on a voluntary basis. NUMARC subsequently concluded that a formal initiative was not necessary because most of its members were already conducting or evaluating the need to conduct design reconstitution programs. However, NUMARC forwarded the guidelines with the NRC's comments to its members for use on a voluntary basis.

To provide more information to the industry on this topic and to provide an independent view of the design control issue, the staff conducted a survey of six utilities and one nuclear steam supply system vendor to determine the status of design control problems and the strengths and weaknesses of the sample utility programs. The results were published in February 1991, in NUREG-1397, "An Assessment of Design Control Practices and Design Reconstitution Programs in the Nuclear Industry." The survey observations were: the need for a design documentation reconstitution program was directly proportional to the age of the plant; the general intent of the program should be to provide a central location for design bases information, with emphasis on the design intent (the why of the design); the design bases documents should be a top level directory that define the current plant configuration; reestablishment of design bases without reconstitution of the supporting design documents, as necessary, may not provide a sufficient level of information for future modifications or current plant operation or to quickly respond to operating events; minor changes to the design should be tracked to support the conclusion that the changes in aggregate do not affect the validity of existing calculations and the ability of a system to perform its design functions. Some common weaknesses of licensee programs identified during the survey included: design reconstitution programs had not identified in advance the documents that are necessary to demonstrate that a structure, system, or component will function properly; the process for regeneration of missing design documentation was not always proceduralized so that it could be handled in a systematic manner; validation of the content of specific output documentation was not always thoroughly carried out.

In late 1991, the NRC staff evaluated whether rulemaking, guidance, or a policy statement was needed to address the issue of licensees retaining accurate design bases information. It concluded that the existing regulatory requirements for design control were adequate; however, it determined that the publication of a policy statement addressing design bases information and publication of a generic letter requesting licensees to describe their design reconstitution programs would be beneficial. Additionally, the staff stated its intention to continue to evaluate design control adequacy during its performance-based inspection such as SSFIs and SSOMIs. the staff stated its intention to

continue to evaluate design control adequacy during its performance based inspection such as SSFIs and SSOMIs. The staff also expected that revisions to the enforcement policy guidance to provide greater opportunities for enforcement discretion[3] would encourage voluntary identification of past design, engineering, and installation issues by licensees. With the Commission's approval, the staff proceeded with this approach.

In August 1992, the NRC issued the policy statement, "Availability and Adequacy of Design Bases Information at Nuclear Power Plants" (57 FR 35455) (Attachment 1). "Availability and Adequacy of Design Bases Information at Nuclear Power Plants" (57 FR 35455). The policy statement stressed the importance of maintaining current and accessible design documentation to ensure that (1) plant physical and functional characteristics are maintained and consistent with design bases, (2) systems, structures, and components can perform their intended functions, and (3) the plant is operated in a manner consistent with the design bases. In the policy statement, the Commission recommended that all power reactor licensees assess the accessibility and adequacy of their design bases information and that they be able to show that there is sufficient documentation to conclude the current facility configuration is consistent with the design bases. The policy statement outlined the additional actions the NRC would take to keep apprised of industry's design reconstitution activities (discussed above).

Following review by the Committee to Review Generic Requirements (CRGR) and the Commission, a draft generic letter was issued for public comment on March 24, 1993. The proposed generic letter requested licensees, on a voluntary basis, to submit information and schedules for any design bases programs completed, planned, or being conducted or a rationale for not implementing such a program. All but one of the commenters concluded that the generic letter was unnecessary and unwarranted. NUMARC responded that it believed the NRC request for descriptions, schedules, and dates would have a negative impact on ongoing design efforts and that NRC's focus on schedules would undermine the licensees' ability to manage the activities. schedules, and dates would have a negative impact on ongoing design efforts and that NRC's focus on schedules would undermine the licensees' ability to manage the activities.

In SECY-93-292, "Generic Letter on the Availability and Adequacy of Design Bases Information," the staff recommended the generic letter not be issued. The staff stated that publication of the policy statement and the proposed generic letter conveyed to the industry the Commission's concern and that publication of the generic letter would not further licensees' awareness of the importance of the activities. The staff proposed to continue performing design-related inspections and to gather information and insights as to how well the licensee design-related programs were being implemented. The Commission issued a staff requirements memorandum that agreed with the staff's proposal.

The Commission issued an SRM which agreed with the staff's proposal.

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[3]NRC would refrain from imposing civil penalties for violations up to Severity Level III if the violations were identified and corrected as a result of systematic voluntary initiatives.

In response to the findings relating to the regulatory burden of team inspections identified in the 1991 Regulatory Impact Survey, during the past several years, the staff has reduced its effort on specific, resource-intensive, design-related team inspections, and followed the issue of accurate and accessible design documentation at plants principally as an element of inspection and followup of operations-related activities. The issuance of the NUMARC guidelines and ongoing industry efforts to improve and maintain design bases information also contributed to this decision. The issuance of the NUMARC guideline and ongoing industry efforts to improve and maintain design bases information also contributed to this decision.

Current Problem:

Over the past several months, NRC findings during inspections and reviews have identified broad programmatic weaknesses that have resulted in design and configuration deficiencies at a number of plants which could impact the operability of required equipment, raise unreviewed safety questions, or indicate discrepancies between the plant's updated final safety analysis report (UFSAR) and the as-built or as-modified plant or plant operating procedures. These inspections and reviews have also highlighted numerous instances where timely and complete implementation of corrective action for known degraded and nonconforming conditions and for past violations of NRC requirements has not been evident. Overall, the NRC has found failures of some licensees (1) to appropriately maintain or adhere to plant licensing and design bases information, (2) to comply with the terms and conditions of licenses and NRC regulations, and (3) to assure that UFSARs properly reflect the facilities. Attachment 2 provides examples of some of the deficiencies recently identified by the staff. Attachment 1 provides examples of some of the deficiencies recently identified by the staff. As a consequence of this new information, the NRC believes that the industry's voluntary efforts to improve and maintain design bases information for their plants, consistent with NUMARC 90-12, the staff's comments on the industry guidelines, and the Commission policy statement, have not been effective in all cases. the NRC believes that the industry's voluntary efforts to improve and maintain design bases information for their plants have not in all cases been effective.

The magnitude and scope of the problems that the NRC has identified raise concerns about the presence of similar design, configuration, and operability problems and the effectiveness of quality assurance programs industry-wide. Of particular concern is whether licensee programs to maintain configuration control are sufficient to demonstrate that plant physical and functional characteristics are consistent with the design bases and whether operating plants are being maintained in accordance with their design basis. The extent of licensee failures to maintain control and to identify and correct the failures in a timely manner is of concern because of the potential impact on public health and safety should safety systems not respond to challenges from off-normal and accident conditions. It is emphasized that the NRC position has been, Attachments 2 and 3 are a recent exchange of correspondence between J.

THE FOLLOWING TEXT WAS MOVED

and continues to be, that it is the responsibility of individual licensees to know their licensing basis, to have appropriate documentation that defines their design bases, and to

have procedures for performing the necessary assessments of plant or procedure changes required by NRC regulations. Attachments 3 and 4 are a recent exchange of correspondence between J.
THE PRECEDING TEXT WAS MOVED
Colvin, NEI, and S. Jackson, NRC, regarding these subjects.

Action:

The NRC has concluded that it requires information that can be used to verify compliance with the terms and conditions of your license(s), NRC regulations, and the plant UFSAR(s), and which may be used to decide whether to modify, suspend, or revoke the operating license(s) for your facility or facilities, or whether other inspection activities or enforcement action should be taken. or revoke the operating

~~license(s) for your facility or facilities, or whether other enforcement action should be taken.~~ Therefore, you are required, pursuant to Section 182(a) of the Atomic Energy Act of 1954, ~~pursuant to Section 182(a) of the Atomic Energy Act of 1954~~, as amended, and 10 CFR 50.54(f), to submit a response to this letter within 120 days from receipt of this letter. ~~to submit a response to this letter within 120 days from receipt of this letter.~~ Your response must be written and signed under oath or affirmation.

Please submit your response to the Director, Office of Nuclear Reactor Regulation, with a copy to the appropriate Regional Administrator and the NRC Document Control Desk. The following information is required for each licensed unit:

(1) a description of any design review or reconstitution programs, including identification of the systems, structures, and components, and plant-level design attributes (e. including identification of the systems and plant-level design attributes (e.g., seismic, high-energy line break, moderate-energy line break), which have already been completed, are planned, or are being conducted to ensure the correctness and accessibility of the design bases information for your plant and to ensure that it is maintained current. If the program is planned or being conducted but has not been completed, provide an implementation schedule for systems, structures, and components, and plant-level design attribute reviews and expected completion date.

(2) a rationale for not implementing such a program, if no design review or reconstitution program has been implemented or planned.

The responses provided pursuant to paragraphs (1) and (2) above should address how current or planned plant processes or programs address the following areas of particular interest, as expressed in NUMARC 90-12, the staff's comments on the industry guidelines, and the Commission policy statement:

(a) description of engineering design and configuration control processes, including those that implement 10 CFR 50. provide an implementation schedule for systems and plant-level design attribute reviews and expected completion date.

(2) if no design review or reconstitution program has been implemented, a rationale for not implementing such a program and a description of the extent of the design information you have obtained from the nuclear steam supply system (NSSS) vendor and architect engineer (A/E) or which is accessible at the NSSS vendor or A/E offices.

The responses provided pursuant to paragraphs (1) and (2) above should address the following areas of particular interest, as previously expressed in the Commission policy statement and other NRC documents:

(a) examination of engineering design and configuration control processes, including 10 CFR 50.59, 10 CFR 50.71(e), and Appendix B to 10 CFR Part 50;

(b) selection and prioritization of systems, structures, and components for review (item (1) only);

(c) rationale for concluding that design bases requirements are translated into operating, and Appendix B to 10 CFR Part 50;

(b) selection and prioritization of systems for review;

(c) verification that design bases requirements are translated into operating, maintenance, and testing procedures;

(d) rationale for concluding that system, structure, and component configuration and performance are consistent with the design bases;

(e) processes for problem identification and implementation of corrective actions,

(d) verification that system performance is within the design bases;

~~(e) handling of problem identification and implementation of corrective actions,~~ including actions to determine the extent of problems, action to prevent recurrence, and reporting to NRC;

(f) the overall effectiveness of your current processes and programs in concluding that the configuration of your plant(s) is consistent with the design bases; ~~(f) determination of the overall effectiveness of the program in adequately maintaining the licensing and design bases;~~ and

(g) actions already taken or to be taken (including documentation) to assure that the plant is being operated in a manner consistent with its design bases. ~~I wish to emphasize that the NRC position has been,~~

This request is covered by the Office of Management and Budget (OMB) clearance number 3150-0011, which expires July 31, 1997. The reporting burden for this collection of information is estimated to average 400 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Information and Records Management Branch (T-6F33), U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0011), Office of Management and Budget, Washington, D.C. 20503. The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and your response will be placed in the NRC Public Document Room (PDR), the Gelman Building, 2120 L Street, N.W., Washington, DC, and in the local public document room(s) for your facility or facilities.

If you have any questions about this matter, please contact the staff members listed below, or the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.

[Signature]

Attachments:
1. Policy Statement on Availability and Adequacy of Design Bases Information at Nuclear Power Plants

~~THE FOLLOWING TEXT WAS MOVED~~
2.
~~THE PRECEDING TEXT WAS MOVED~~
Background on Recently Identified Problems

~~THE FOLLOWING TEXT WAS MOVED~~
3.
~~THE PRECEDING TEXT WAS MOVED~~
Letter from J. Colvin (NEI) to S. Jackson (NRC) dated 8/2/96
4. Letter from S. Jackson (NRC) to J. Colvin (NEI) dated 8/14/96

Contacts: Frank M. Akstulewicz, NRR
(301) 415-1136
Internet: fma@nrc.gov

Eileen M. McKenna, NRR
(310) 415-2189
Internet: emm@nrc.gov

Docket No(s). 50-xxx and 50-xxx

cc: See next page [applicable plant service list]

BACKGROUND INFORMATION ON RECENTLY IDENTIFIED PROBLEMS

Over the past several months, design and engineering information has been obtained which indicates that design bases at certain plants have not been appropriately maintained or adhered to. Some specific examples include:

Millstone Units 1, 2, and 3

The recent NRC inspection team found examples where the FSAR and design bases information did not agree with the as-built plant, operational procedures, and maintenance practices which were resolved by correcting the documentation. The team found other more significant inconsistencies that required analyses, procedure changes, and design changes to resolve. For example, the Millstone Unit 3 operating procedures required isolation for the turbine driven auxiliary feedwater pump during certain plant conditions, in conflict with technical specification requirements for operability. The team found that certain protective relays at Millstone Unit 3 were not set in accordance with the design bases information. This required re-analyses and resetting of certain relays. Based on the team's findings, the licensee initiated design changes to correct nonconforming conditions between the FSAR and the as-built plant, including changes to the design of the Millstone Unit 2 reactor protection system to meet the design bases with respect to physical separation of redundant channels and changes to the design of the Millstone Unit 2 (post-loss-of-coolant accident (LOCA)) hydrogen monitors to meet the design bases for single failure vulnerabilities. ~~Since November 1995, licensee submissions and NRC inspections have indicated that design control deficiencies, and degraded and nonconforming conditions have been identified at Northeast Utilities' (NU's) Millstone Units 1, 2, and 3. These deficiencies include errors in licensing bases and design bases documentation, and translation of design bases to procedures and hardware, as well as inadequate plant modifications; modifications not installed in accordance with the approved design; modifications based on incorrect design assumptions; and identification of inoperable systems. The following are some examples.~~

~~NRC inspections at Millstone Unit 2 identified a potential design deficiency that could block or reduce safety injection flow during the recirculation phase of an accident, as well as inadequate containment sump screen mesh and a flawed post-accident containment hydrogen monitor design. On February 20, 1996, NU shut down Millstone Unit 2 when both trains of the high pressure safety injection (HPSI) system were declared inoperable due to the potential to clog the HPSI discharge throttle valves during the recirculation phase following a loss-of-coolant (LOCA) accident.~~

~~An NRC special inspection team at Millstone Unit 3 found instances where NU did not adequately translate design bases information into procedures, practices and drawings. In one instance, a modification that installed the Unit 3 service water intake structure sump pump called for specific periodic testing, but such testing was never performed. In another case, prelubrication of the auxiliary feedwater pump was not performed every 40 days as required by the vendor.~~

~~The NRC has also identified a number of instances where the original design bases was inadequate or the original installation was incorrect. For example, the licensee failed to remove plastic shipping plugs from Rosemount transmitters prior to installation,~~

~~notwithstanding the vendor's instructions which required these plugs' replacement with stainless steel plugs.~~

Haddam Neck

The team found examples where the FSAR and design bases information did not agree with the as-built plant, operational procedures, and maintenance practices which were resolved by correcting the documentation. The team identified a number of deficiencies in engineering calculations and analyses that were relied upon to ensure the adequacy of the design of key safety systems. The team found examples of inconsistencies between the as-built plant, vendor-supplied information, and the assumptions used in engineering calculations and analyses. ~~On March 11-29 and April 15-26, 1996, a special inspection team from the NRC assessed the engineering and licensing activities at NU's Haddam Neck Station. The special inspection team focused on the licensee's processes used to identify, evaluate, and resolve technical issues. The team identified programmatic weaknesses and potential violations of NRC's regulatory requirements (10 CFR 50.59, 50.71(e), and Criteria III and XVI of Appendix B to 10 CFR Part 50) in design calculations and analyses, and design bases documentation.~~

~~THE FOLLOWING TEXT WAS MOVED~~

Deficiencies were identified in the calculations and analyses supporting the station batteries, emergency diesel generators, containment cooling system, and other key safety systems. In some cases, the inspection findings were resolved by revising the calculations and analyses. In other cases, procedure and design changes were required to resolve the issues. For example, the team identified that the design bases calculations supporting the size of the station batteries were inconsistent with the design bases stated in the FSAR. Field measurements and design modifications were required to resolve this issue. Additional examples are documented in the special team inspection report for Haddam Neck, 50-213/96-201. Other issues were identified by the NRC and the licensee following the issuance of this inspection report that lead the licensee to enter a refueling outage earlier than originally scheduled. These issues include discrepancies between the as-built plant and the design bases for the service water system pressure, containment sump screens, feedwater isolation valves, and containment penetrations.

~~containment air recirculation (CAR) system, service water (SW) system, and the systems and components needed to support the emergency core cooling system transfer from the injection phase to sump recirculation. The types of deficiencies noted by the team included technical errors, nonconservative methods and assumptions, as well as the failure to consider all applicable design bases information. The team concluded that weaknesses in engineering programmatic requirements and a lack of technical rigor, thoroughness, and attention to detail in the design process, either contributed to or directly caused the identified errors. In addition, design control measures such as independent reviews, supervisory reviews, and reviews by oversight committees did not identify these deficiencies.~~

~~In addition, the team identified operability concerns that require further staff evaluation and which have led to the recent shutdown of Haddam Neck. These concerns include: (1) the~~

~~potential for water hammer in the SW piping and in the tubes of the containment fan coolers, (2) the potential for two phase flow in the SW system in the tubes of the containment fan coolers, (3) the licensee crediting post-LOCA accident pressure in containment for residual heat removal pump net positive suction head (NPSH), and (4) the potential that the feedwater regulating valves may not close during a main steamline break event.~~

~~THE PRECEDING TEXT WAS MOVED~~

Attachment 1

~~The team identified a number of deficiencies in the engineering calculations and analyses which were relied upon to ensure the adequacy of the design of key safety systems at Haddam Neck.~~Maine Yankee

On January 10, 1996, the NRC issued a Confirmatory Order Suspending Authority for and Limiting Power Operation and Containment Pressure; and Demand for Information to the Maine Yankee Atomic Power Company. The order was based, in part, on the NRC's determination that Maine Yankee did not apply a computer code, proposed to demonstrate compliance with the emergency core cooling system (ECCS) requirements of 10 CFR 50.46, in a manner conforming to the requirements of 10 CFR Part 50, Appendix K, nor in conformance to the conditions specified in the staff's safety evaluation dated January 30, ~~nor in conformance to the conditions specified in the staff's Safety Evaluation (SE) dated January 30,~~ 1989. Specifically, the licensee did not demonstrate that the RELAP5YA code will reliably calculate the peak cladding temperature for all break sizes in the small-break LOCA spectrum for Maine Yankee, nor has the licensee submitted the justification for the code options selected and other justifications and sensitivity studies to satisfy conditions in the staff's safety evaluation.
~~nor has the licensee submitted the justification for the code options selected and other justifications and sensitivity studies to satisfy conditions in the SE.~~

In addition, the licensee assumed an initial containment pressure of 2.0 psig for calculating peak design-basis accident pressure, even though the plant technical specifications allow a maximum operating pressure in containment of 3.0 ~~psig for calculating peak design-basis accident pressure even though the plant technical specifications allow a maximum operating pressure in containment of 3.~~0 psig. Assuming an initial containment pressure of 3.0 psig results in a calculated peak accident pressure in excess of the containment design pressure described in the updated final safety analysis report (UFSAR).

Refueling Practices Survey

In response to recent problems encountered at Millstone Unit 1 regarding compliance with the UFSAR, during the spring of 1996, the NRC conducted a survey of licensee refueling practices. During the course of this survey, the NRC determined that nine sites (15 units) needed to modify their licensing basis or plant practices to ensure that their reload practices were in compliance with their licensing basis.

Deficiencies in the management of design bases assumptions were also noted in the survey. Many plants were found to have aspects of their design and licensing bases that were only loosely proceduralized or not proceduralized at all. Typical of this kind of discrepancy was the identification of a lack of procedures for controlling the assumptions regarding hold-up time before beginning fuel transfer. The NRC found a number of instances in which other design bases assumptions were not captured in procedures. In addition, licensees at 12 other sites (23 units) upgraded procedures to directly implement the design bases assumptions. ~~licensees at 12 other sites (23 units) upgraded procedures to directly implement the design bases assumption.~~ In other cases, the licensee performed engineering analyses, documented pursuant to 10 CFR 50.59, as necessary, to ensure that the planned activities would not exceed design bases assumptions.

(18.b)

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

June 25, 1996

MEMORANDUM TO: Office Directors

FROM: James M. Taylor
Executive Director for Operations

SUBJECT: SMALL BUSINESS REGULATORY ENFORCEMENT FAIRNESS ACT

On March 29, 1996, the President signed the Small Business Regulatory Enforcement Fairness Act (Public Law 104-121). The Act requires Federal agencies to provide Congress with an opportunity to review agency rules. (5 U.S.C. Chapter 8). The Act's definition of "rule" is broad enough to capture most of the NRC's generic actions. However, compliance with the Act should not be an onerous burden. For example, most of the agency's generic actions can become effective as soon as they are sent to Congress for review. The aim of this memorandum is to establish as simple a process as possible for assuring compliance with the Act.

For each final rule, an agency is required to submit to Congress a report containing a copy of the final rule, a concise general statement of the final rule (including a statement indicating whether the action is a "major" rule) and the effective date of the final rule. The report is to be submitted to each House of Congress and the Comptroller General before the rule takes effect. The report must be accompanied by any other relevant information required by another act or by an Executive Order. This would include any cost-benefit analyses, Regulatory Flexibility analyses, Paperwork Reduction Act statements, and any environmental assessments or impact statements.

The effective date for all "major" rules[1] may be no earlier than 60 days after the date of Congressional receipt of the required material or publication of the final rule in the Federal Register, whichever is later. The legislation also establishes special Congressional procedures for the disapproval of agency rules. The requirements concerning major rules are applicable to all major final rules promulgated after March 1, 1996.

With limited exceptions, all final agency rules, policy statements, and agency documents interpreting agency requirements are defined as "rules" for purposes of the Act. The Office of the General Counsel (OGC) has prepared a preliminary list of the type of NRC activities that meet the Act's definition of "rule" (Attachment 1). Please note that the list is not exhaustive and that judgement may be necessary when determining whether an individual action

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[1] This term is defined in Part 2 of Attachment A to the Procedures for Complying With the Small Business Regulatory Enforcement Fairness Act. (The procedures are appended to this memorandum.)

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is subject to the Act. Attachment 2, which was also prepared by OGC, lists the type of NRC activities that are not rules for purposes of the Act.

Under the Act, the Office of Management and Budget (OMB) is responsible for the determination of whether a rule is "major." The NRC will review with OMB the types of regulatory actions that may be considered major rules under this Act. For certain types of NRC actions, we anticipate obtaining generic declarations from OMB that these actions are "non-major." For such rules, no further consultation with OMB would be required before submission of the rules to the Congress and GAO.

Each office is required to take the following actions:

1. Review the types of activities identified in Attachments 1 and 2 for which you are responsible to determine if there are other types of actions that should be included on these lists. The criteria contained in the Act for determining whether a rule is covered by the Act are set forth in a footnote to Attachment 1. Provide any additional actions by July 9, 1996, to David L. Meyer, ADM, at Mail Stop T-6-D-59 (e-mail: DLM1). For any type of action that you believe should be moved from Attachment 1 to Attachment 2 or vice versa, provide an explanation.

2. Assign an individual within your office to serve as the central point of contact for all activities relating to the Act and the procedures for ensuring compliance with the Act. Provide the name of this individual by July 9, 1996, to David L. Meyer. Once the office contacts are identified, Mr. Meyer will convene a meeting of these office contacts to discuss in detail the procedures for compliance.

3. Prepare a summary description for each final action subject to the Act for which your office is responsible that you will issue within the next 90 days from the date of this memorandum. Provide this list by July 9, 1996, to David L. Meyer. Use the format presented as Attachment B to the Procedures for Complying With the Small Business Regulatory Enforcement Fairness Act for the summary description.

You may direct questions concerning potential candidates for inclusion in the list of activities or requests for clarification concerning listed items to Steven F. Crockett, Office of the General Counsel, at 415-1620 (e-mail: SFC).

The NRC has established the attached interim procedures to ensure compliance with the Act. Please review your internal office procedures that control the development of the types of actions covered by the Act that are under your purview and make any changes necessary to ensure that these actions comply with the Act. The internal procedures must include provisions for retaining the records necessary to verify the contact with OMB, the determination of whether the action is a major rule, and the transmittal of the letters to Congress and the GAO.

Your staff may direct questions concerning these procedures to David L. Meyer, Chief, Rules Review and Directives Branch.

Attachments:
1. Agency Statements that are rules for the purposes of the SBFA
2. Agency statements that are not rules under the SBFA
3. Procedures for complying with the SBFA

cc: Regional Administrators
OGC
SECY
OCA

DISTRIBUTION: (w/attachments)
EDO R/F
AO R/F
VWilson, OEDO
DAllison, AEOD
JHolloway, OC
JGray, OE
PLohaus, OSP
SCornell, NMSS
AEiss, NMSS
MCase, NRR
EGoodwin, NRR
JShapaker,NRR
JTelford, RES
WOlmstead, OGC
TRothschild, OGC
SCrocket, OGC
ABates, SECY
LGerke, OCA
DMeyer, ADM

A:\CONGREV.PRO *See previous concurrence

ADM	OEDO	OGC	AO/OEDO	EDO
DMeyer*	VWilson*	WOlmstead*	JBlaha	JTaylor
6/20/96	6/20/96	6/20/96	6/25/96	6/25/96

Your staff may direct questions concerning these procedures to David L. Meyer, Chief, Rules Review and Directives Branch, ADM (415-7165) or (e-mail: DLM1).

Attachments:
1. Agency Statements that are rules for the purposes of the SBFA
2. Agency statements that are not rules under the SBFA
3. Procedures for complying with the SBFA

cc: Chairman Jackson
Commissioner Rogers
Commissioner Dicus
Regional Administrators
OGC
SECY
OCA

DISTRIBUTION: (w/attachments)
EDO R/F
AO R/F
VWilson, OEDO
DAllison, AEOD
JHolloway, OC
JGray, OE
PLohaus, OSP
SCornell, NMSS
AEiss, NMSS
MCase, NRR
EGoodwin, NRR
JShapaker,NRR
JTelford, RES
WOlmstead, OGC
TRothschild, OGC
SCrocket, OGC
SBates, SECY
LGerke, OCA
DMeyer, ADM

A:\CONGREV.PRO

ADM	OEDO	OGC	AO/OEDO	EDO
DMeyer	VWilson	WOlmstead	JBlaha	JTaylor
6/20/96	6/24/96	6/26/96	6/ /96	6/ /96

Attachment 1

Agency Statements that are Rules for Purposes of
the Small Business Regulatory Enforcement Fairness Act (SBFA)*

Final rules that impose legal obligations on regulated parties, whether the rules are issued after notice and public procedure or not
Final rules that impose legal obligations on regulated parties but which the President has declared necessary under sec. 801 of the Act
Interpretive rules, like those in 10 CFR Part 8
NUREGs that interpret law
Regulatory guides
Small entity compliance guides required by sec. 312 of the Act
NRC endorsements of industry guidance
Policy Statements
Bulletins and generic letters that provide new interpretations of law or policy [a) like change in policy re. use of generic communications to impose requirements ??
b) Generic 50.54(f) letter on design bases effectively imposing new rqt on adequacy/current validity of info < Plan Plan design bases info ??
Guidance documents like Standard Review Plans
Agreements under Section 274b of the Atomic Energy Act
Branch technical positions/Technical positions
Topical reports
Any change to the following documents that "substantially affects" rights or obligations of non-agency parties:
NRC Enforcement Manual — "Internal" Enforcement Guidance on 50.59/Design Bases/CLB ?
NRC Inspection Manual — "Routine" Inspection Guidance on " " " ??
OI Investigators' Manual
OIG Investigators' Manual
The following Management Directives:

3.1	Freedom of Information Act
3.2	Privacy Act
3.4	Release of Information to the Public
3.5	Public Attendance at Certain Meetings Involving the NRC Staff
3.10	Processing Proprietary Information Claims
3.53	NRC Records Management Program
5.1	Intergovernmental Consultation
5.2	Memoranda of Understanding with States
5.6	Integrated Materials Performance Evaluation
5.7	Technical Assistance to Agreement States
6.3	The Rulemaking Process
7.1	Tort Claims Against the United States
7.2	Claims for Personal Property Loss or Damage
7.4	Reporting Suspected Wrongdoing and Processing OIG Referrals
8.1	Abnormal Occurrence Reporting Procedure
8.2	NRC Incident Response Program
8.3	NRC Incident Investigation Program
8.6	Systematic Assessment of Licensee Performance
8.7	NRC Diagnostic Evaluation Program
8.8	Management of Allegations
8.9	Accident Investigation
8.10	NRC Medical Event Assessment Program
8.11	Review Process for 10 CFR 2.206 Petitions
8.12	Decommissioning Financial Assurance Instrument Security Program

11.1 NRC Acquisition of Supplies and Services
11.2 Receipt and Handling of Unsolicited Proposals
11.3 NRC Review of Contractor Invoices
11.4 NRC Small and Disadvantaged Business Program
11.5 NRC Instructions for Implementing OMB Circular A-76 Performance of Commercial Activities
11.6 Financial Assistance Program
11.7 NRC Procedures for Placement and Monitoring of Work With the Department of Energy
13.6 Public Use of the NRC Two White Flint North Auditorium

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*This list is not exhaustive. Whether a given document is a "rule" under the Act depends on its substance, not its name. Therefore, the distinctions drawn in Attachments 1 and 2 are not hard and fast, and these lists must be used with judgement. Under the Act, a "rule" is the whole or a part of a final agency statement of general applicability and future effect designed to implement, interpret, or prescribe law or policy; but the term excludes rules of particular applicability (including product approvals), rules of agency management or personnel, and rules of agency organization, procedure, or practice that do not substantially affect the rights or obligations of external parties (sec. 804(4)).

[generic 50.54(f) letter on design bases (even though addressed plant-specifically)]

Attachment 2

Agency Statements that are not Rules under the SBFA*

Commission or ASLBP adjudicatory rulings
Court briefs and pleadings
Orders, including those applicable to more than one party
Enforcement orders
Directors' Decisions under 10 CFR sec. 2.206
Licenses and license amendments
Design Certifications under 10 CFR Part 52
Preliminary and Final Design Approvals
Exemptions under 10 CFR sec. 50.12 and analogous sections
Notices of Enforcement Discretion
Rules or statements of agency management and personnel, like 10 CFR Part 1
Management Directives that do not "substantially affect" rights or obligations of non-agency parties
Internal Commission Procedures
Any change to the following documents that does not "substantially affect" rights or obligations of non-agency parties:
- NRC Enforcement Manual
- NRC Inspection Manual
- OI Investigators' Manual
- OIG Investigators' Manual

CRGR Charter
Bulletins and generic letters that do not provide new interpretations of law or policy
Office Letters
Backfit analysis procedures
Purely administrative issuances, such as corrective notices or compilations of previously issued materials
Interagency MOUs
Agreements under Section 274i of the Atomic Energy Act
Management Directives not listed in Attachment 1

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*This list is not exhaustive. Whether a given document is a "rule" under the Act depends on its substance, not its name. Therefore, the distinctions drawn in Attachments 1 and 2 are not hard and fast, and these lists must be used with judgement. Under the Act, a "rule" is the whole or a part of a final agency statement of general applicability and future effect designed to implement, interpret, or prescribe law or policy; but the term excludes rules of particular applicability (including product approvals), rules of agency management or personnel, and rules of agency organization, procedure, or practice that do not substantially affect the rights or obligations of external parties (sec. 804(4)).

PROCEDURES FOR COMPLYING WITH THE SMALL BUSINESS REGULATORY ENFORCEMENT FAIRNESS ACT

Determine if a final action is subject to the Act's requirements

1. The lead office must exercise judgement in determining whether the final action is subject to the requirements of the Act. Please note that the preliminary lists of documents (Attachments 1 and 2 to the memorandum from the EDO to office directors dated June 25, 1996) are not exhaustive and that inclusion on the lists as either covered or not covered is merely presumptive, not definitive. Use Part 1 of the Record of Compliance with the Small Business Regulatory Enforcement Fairness Act (Attachment A) to aid in making this decision.

2. If you determine that a final action is covered by the Act, follow the procedures under "OMB Review" below.

3. If you determine that a final action is not covered by the Act, forward a copy of the Record of Compliance and a brief description of the action to the Rules Review and Directives Branch (RRDB), Office of Administration, Mail Stop T-6-D59.

OMB Review

1. Prepare a brief description using the format presented in Attachment B for each final action covered by the Act. Forward the description to the person in your office designated as the point of contact. The description should include your office's recommendation as to whether the action is a "major rule" as defined by the Act. The Rulemaking Plan and the draft regulatory analysis should provide sufficient information to make this determination.

2. On the first work day of each month, the office contact shall forward a compilation of final actions for that office to RRDB Mail Stop T-6-D59. The submission must include a paper copy of the compilation and a disk that presents the compilation as a WordPerfect file (Version 5.1 is preferred).

3. RRDB will provide the Associate General Counsel for Licensing and Regulation with a combined list of actions for the NRC at the same time the list is forwarded for OMB consideration.

4. RRDB will coordinate with the Office of Management and Budget the determination of whether any action is considered a "major rule."

5. RRDB will inform the office contact and the Associate General Counsel for Licensing and regulation if OMB review of an action results in a change in the determination of an action as a "major rule."

6. If a Federal Register notice is either required or routinely prepared for an action covered by the Act, the Federal Register notice must contain a statement as to whether the action is a major rule, and the notice must confirm that the NRC has verified this determination with OMB. The statement must be included whether the Federal Register notice publishes the text of the final action in its entirety or simply announces the availability of the final action.

Congressional notification letters — 50.59 letter re Design Bases ??

1. The staff shall prepare letters to the Speaker of the House, the President of the Senate, and the General Counsel of the General Accounting Office that transmit the required information for each action. Attachment C is the standard list of addressees. Attachment D is a sample letter for an action that is a "major rule." Attachment E is a sample letter for an action that is a non-major rule.

2. The letters for a major rule must be prepared for the Chairman's signature. Letters for all non-major rules must be prepared for the signature of the Director, Office of Congressional Affairs (OCA). Each Commissioner, OGC, and RRDB/ADM must be included on the distribution list for each of these letters.

3. These letters are in addition to the standard notification letters to the Subcommittee on Energy and Power, Committee on Commerce, United States House of Representatives and the Subcommittee on Clean Air, Wetlands, Private Property and Nuclear Safety, Committee on Environment and Public Works, United States Senate prepared in accordance with Section 303 of the Atomic Energy Act.

4. Copies of the proposed letters must be included in the concurrence package for the final action. Concurrence must be obtained at the appropriate level for the final action.
   - If the final action is approved at the Commission or the EDO level, proposed letters must be included as an attachment to the Commission paper or the memorandum requesting EDO action.
   - If the final action is approved at the staff level, the letters must receive concurrence at the same level at which the action is signed.
   - The final concurrence block should be prepared for the Director, OCA.

Transmitting the letters and issuing the final action.

1. Final actions that are published or noticed in the Federal Register.

- **Final Package** - When the final action is submitted for signature and publication, the submittal package must include final letters ready for signature, a copy of the concurrence page for the letters, and three copies of each of the required enclosures.
- **Commission Approval** - If the action is approved at the Commission level, RRDB will forward the Senate, House, and GAO letters to OCA for signature and transmittal to Congress and the GAO at the same time the Federal Register notice is forwarded to the Office of the Secretary for signature and transmittal for publication.
- **EDO Approval** - If the action is approved at the EDO or staff level, RRDB will forward the Senate, House, and GAO letters to OCA for signature and transmittal to Congress and the GAO at the same time the Federal Register notice is forwarded to the Office of the Federal Register for publication.
- **Concurrence page** - RRDB will forward a copy of the completed concurrence page for the letters to the issuing office. The issuing office will retain the completed concurrence page in the subject file for the action.

2. Final actions that are not published or noticed in the Federal Register.
   - The issuing official signs and dates the final action. However, the final action is not issued or distributed until the following actions are completed:
     - The issuing office forwards the Senate, House, and GAO letters to OCA for signature and transmittal to Congress and the GAO. The package must include three copies of the signed action as well as three copies of each required attachment.
     - OCA will forward a copy of the completed concurrence page for the letters to the issuing office. The issuing office will retain the completed concurrence page in the subject file for the action.
     - When the issuing office receives the completed concurrence page for the letters, the issuing office shall then issue and distribute the final action.

<u>Differences between a "major" rule and a "non-major" rule</u>

For "major" rules:

1. A Federal Register notice of final action must be prepared.
2. The Chairman shall sign the Senate, House, and GAO letters.
3. The letters will be forwarded for the Chairman's signature when the Federal Register notice for the final action is forwarded to the Office of the Secretary for signature.

4. A final action may become effective no earlier than 60 days after the date of Congressional receipt of the required material or publication of the final action in the Federal Register, whichever is later.

For "non-major" rules:

1. A Federal Register notice of the final action may not be required or routinely prepared. Follow normal agency practice concerning the preparation of a Federal Register notice.

2. The Director, OCA shall sign the Senate, House, and GAO letters.

3. The letters will be forwarded for the signature of the Director, OCA when either a Federal Register notice for the final action is forwarded for signature and publication or when issuing office signs and dates the final action.

4. The NRC chooses an appropriate effective date. This effective date must be after the required submittals to Congress and the GAO.

ATTACHMENT A - RECORD OF COMPLIANCE WITH THE SMALL BUSINESS REGULATORY ENFORCEMENT FAIRNESS ACT

TITLE OF ACTION:

RIN OR NRC ID NUMBER:

Part 1 - Applicability determination.

Indicate whether, in your judgement, the Act applies to this final action. If you indicate that the Act does not apply, you must also indicate the reason for this determination.

____ The requirements of the Act are not applicable to this final action. Indicate the reason for this determination, sign and date this record, and retain a copy of this record in the subject file for this action.

- ____ The action does not provide any new interpretation of law or policy
- ____ The action applies to a specific licensee or individual.
- ____ The action approves a product.
- ____ The action is a rule of agency management or personnel.
- ____ The action is a rule of agency organization, procedure or practice that does not substantially affect the rights or obligations of external parties.

____ The requirements of the Act apply to this final action because it is the whole or part of a final agency action that has general applicability and future effect designed to implement, interpret, or prescribe law or policy. Continue with Parts 2-5.

Signed:_____ Dated:_____

Part 2 - Major rule determination.

____ The final action is not a "major rule" as defined in 5 U.S.C. 804(2).

____ The final action is a "major rule" as defined in 5 U.S.C. 804 (2) because the final action has resulted or is likely to result in--

____ An annual effect on the economy of $100,000,000 or more

____ A major increase in costs or prices for consumers, individual industries, Federal, State or local government agencies, or geographic regions

____ Significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic and export markets

Signed:_____ Dated:_____

Part 3 - OMB confirmation of NRC determination.

__(date)__ Summary of final action prepared

__(date)__ Summary of final action was forwarded to RRDB

__(date)__ OMB response received

____ OMB confirmed NRC determination

____ OMB overturned NRC determination

Signed:_____ Dated:_____

Part 4 - Congressional notification.

__(date)__ Letters to the House, Senate, and GAO have been prepared and included in the concurrence package for the final action

__(date)__ Appropriate concurrences have been obtained for the letters

__(date)__ Final action submitted for publication or signed by issuing official

__(date)__ Letters submitted to OCA for signature

__(date)__ Letters transmitted to the House, Senate, and GAO

__(date)__ Final action published or issued

Signed:_____ Dated:_____

ATTACHMENT B - FORMAT FOR DESCRIBING FINAL RULES

AGENCY: Nuclear Regulatory Commission

TITLE OF ACTION: Import and Export of Radioactive Material

LEVEL OF SIGNIFICANCE: Not a major rule

UPCOMING ACTION: Final rule

RIN: 3150-AD66

ESTIMATED DATE OF ISSUANCE: July 1996

STATUTORY OR JUDICIAL DEADLINE: None

DESCRIPTION OF ACTION:

The final rule will strengthen the Commission's control over radioactive waste coming into and leaving the United States by requiring specific NRC licensing of radioactive waste imports and exports. The final rule will help to ensure that transactions involving the import and export of radioactive waste are subject to the approval of the U.S. Government and the consent of other involved parties. The new regulations will conform U.S. policies with the IAEA approved voluntary Code of Practice, which was adopted to guide Nation States in the development of policies and laws on the transboundary shipments of radioactive wastes.

[Note: If the final action is not a final rule, substitute an agency identification number, such as docket number or regulatory guide number, for the RIN.]

ATTACHMENT C - ADDRESSEES FOR LETTERS TRANSMITTING FINAL RULES FOR CONGRESSIONAL REVIEW

The Honorable Newt Gingrich
Speaker of the United States
House of Representatives
Washington, DC 20515

The Honorable Al Gore
President of the United
States Senate
Washington, DC 20510

Mr. Robert P. Murphy
General Counsel
General Accounting Office
Room 7175
441 G St., NW.
Washington. DC 20548

ATTACHMENT D - SAMPLE LETTER FOR A MAJOR RULE

Mr. Robert P. Murphy
General Counsel
General Accounting Office
Room 7175
441 G St., NW.
Washington, DC 20548

Dear Mr. Murphy:

Pursuant to Subtitle E of the Small Business Regulatory Enforcement Fairness Act of 1996, 5 U.S.C. 801, the Nuclear Regulatory Commission (NRC) is submitting a "major rule" to comply with the Omnibus Budget Reconciliation Act of 1990 (OBRA-90), as amended, 42 U.S.C. 2214. OBRA-90 requires that the NRC recover approximately 100 percent of its budget authority, less the appropriation from the Nuclear Waste Fund, for each fiscal year 1991 through 1998 by assessing license and annual fees. For FY 1996, the NRC must collect approximately $462 million through these fees. Two types of fees are assessed. Applicants and licensees are charged for specific services, such as licensing reviews, that are provided by the NRC. In addition, the NRC assesses an annual fee to its licensees, largely to recover generic costs that cannot be attributed to specific licensees.

We have determined that this rule is a "major rule" as defined in 5 U.S.C. 804 (2). We have confirmed this determination with the Office of Management and Budget.

Enclosed is a copy of the final FY 1996 rule, which is being transmitted to the Federal Register for publication. Appendix A of the rule includes a Regulatory Flexibility Analysis. This final rule is scheduled to become effective 60 days after publication in the Federal Register.

Sincerely,

Shirley Ann Jackson

Enclosure: Final FY 1996 Fee Rule

[Note: If Regulatory Analysis, or similar analysis, is prepared for the final rule, it must also be enclosed with each of these three letters.]

ATTACHMENT E - SAMPLE LETTER FOR A NON-MAJOR RULE

Mr. Robert P. Murphy
General Counsel
General Accounting Office
Room 7175
441 G St., NW.
Washington, DC 20548

Dear Mr. Murphy:

Pursuant to Subtitle E of the Small Business Regulatory Enforcement Fairness Act of 1996, 5 U.S.C. 801, the Nuclear Regulatory Commission (NRC) is submitting a final rule that will strengthen the Commission's control over radioactive waste coming into and leaving the United States by requiring specific NRC licensing of radioactive waste imports and exports. The final rule will help to ensure that transactions involving the import and export of radioactive waste are subject to the approval of the U.S. Government and the consent of other involved parties. The new regulations will conform U.S. policies with the IAEA approved voluntary Code of Practice, which was adopted to guide Nation States in the development of policies and laws on the transboundary shipments of radioactive wastes.

We have determined that this rule is not a "major rule" as defined in 5 U.S.C. 804(2). We have confirmed this determination with the Office of Management and Budget.

Enclosed is a copy of the final rule, which is being transmitted to the Federal Register for publication. The Regulatory Flexibility Certification is included in the final rule. Also enclosed is a copy of the regulatory Analysis for this final rule that contains the NRC's cost-benefit determinations. This final rule is scheduled to become effective 30 days after publication in the Federal Register.

Sincerely,

Dennis K. Rathbun, Director
Office of Congressional Affairs

Enclosures: Final Rule
Regulatory Analysis

(2.4)

August 21, 1996

Note: CRGR Members
(Edward Jordan, Frank Miraglia, Joseph Murphy, Charles W. Hehl, Malcolm Knapp, Dennis Dambly)

From: Brian Grimes, NRR

SUBJECT: DOCUMENTS FOR EXIGENT CRGR MEETING

Attached are electronic versions of the draft Commission paper and sample letter to licensees that are the subject of the CRGR meeting scheduled for August 22, 1996. This is sensitive material and is not to be further distributed inside or outside the NRC.

cc: J. Conran
V. McCree
F. Miraglia
L. Chandler

9/19

(4)

From: Frank Akstulewicz, NRR
To: TWD1.TWP4.JHC Norman, AEOD
Date: 8/22/96 2:11pm
Subject: Revised Documents

Attached are copies of the documents from this a.m. revised to include the CRGR comments. We would appreciate any additional comments/corrections you may have by 2:30 today. Remember to delete the electronic files. Thx.

9/20

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