



Union of Concerned Scientists

Citizens and Scientists for Environmental Solutions

Cumulative Effects of Regulation?

What About the Cumulative Effects from Non-Regulation?

1. May 1997 – GAO issues report on NRC’s oversight

GAO POINT ①

- a. **“...NRC has not gotten licensees to fix safety problems ... in a timely manner.”** pg. 10

GAO POINT ②

- b. **“The Watch List has not produced a consistent inventory of plants with performance problems.”** pg. 18

- c. **“In fact, Arthur Andersen identified 10 plants that were not placed on the Watch List but whose performance indicators were similar to those on the Watch List.”** pg. 19

GAO POINT ③

- d. **“Several current and former NRC inspectors told us that they cannot easily distinguish a safe plant from an unsafe one and that the guidance on when to shut down a plant does not cover all situations.”** pg. 12

2. The NRC deployed the Reactor Oversight Process (ROP) in April 2000 with intentions to remedy the GAO’s findings.

3. NRC acknowledges that fire is a real hazard: **“Approximately one-half of the core damage risk at operating reactors results from accident sequences that initiate with fire events.”**

GAO POINT ④

4. GAO report Appendix III list 47 reactors transitioning to NFPA 805 fire protection regulations (implicating meaning that these 47 reactors do not comply with neither the 1980 nor the 2004 fire protection regulations) and shows reactors are not scheduled to come into compliance for many years

5. For reactors transitioning to NFPA 805, the NRC uses a modified inspection regime: “...[there] is no reason to go and reinspect things like operator manual actions where we believe that the licensee is not in compliance.”

6. Current NRC ROP Action Matrix bins reactors into safety/performance columns without any consideration at all for known non-compliance with NFPA 805 regulations – reactors known to be out of compliance with fire protection regulations got a free pass while other reactors got sanctioned:

GAO POINT ⑤

- a. Columbia Generating Station received a green finding for an unanalyzed fire circuit
- b. Grand Gulf got a green finding for poor lighting in a fire brigade dress out area
- c. South Texas Project got a green finding for failing to correct a fire protection non-compliance
- d. South Texas Project got a green finding for a fire penetration seal being too thin
- e. Braidwood got a green finding for not training fire brigade members how to use an elevator

7. Before NRC imposes new or revises existing regulatory requirements, it performs “A formal, highly-structured, reasoned analysis ... [with] estimates of benefits and costs that are quantified to the fullest extent possible.”
8. Before NRC accepts non-compliance with existing regulatory requirements, no formal, highly-structured, reasoned analysis is performed; the process is more Monty Pythonesque wink wink, nudge nudge, say no more
9. **Exception:** When one reactor is about to violate one specific requirement within its technical specifications (operating license), the NRC uses its Notice of Enforcement Discretion (NOED) process that yields a formal, highly-structured, reasoned analysis.
10. When Duke sought 2-year extension to the deadline for complying with NFPA 805, the NRC denied it because the risk, once analyzed, was “about four times the greatest acceptable increased in CDF [core damage frequency] for a facility with very low total risk, and 40 times the greatest acceptable CDF increase for a high total risk plant. This significant increase in CDF warrants denial ...” of the request.

In May 1997, the GAO criticized the NRC for not getting licensees to fix known safety problems in a timely manner, for not fully accounting for reactors with known performance problems, and for not having sufficient guidance to determine when problems warrant reactors being shut down.

Nearly 16 years later, the NRC still has these same problems having the same consequences with the same need for effective remedies.

Prepared by: David Lochbaum
Director, Nuclear Safety Project

May 1997

NUCLEAR REGULATION

Preventing Problem Plants Requires More Effective NRC Action



**Resources, Community, and
Economic Development Division**

B-276754

May 30, 1997

The Honorable Joseph I. Lieberman
United States SenateThe Honorable Joseph R. Biden, Jr.
United States Senate

As requested, we reviewed the Nuclear Regulatory Commission's (NRC) oversight of the nuclear power industry. NRC, an independent agency created by the Congress in 1974, is responsible for, among other things, ensuring that the operation of the nation's 110 commercial nuclear power plants occurs in a manner that adequately protects the health and safety of the public. Identifying plants with safety problems and making sure that the owners of the plants (licensees) correct their safety deficiencies promptly is critical to NRC's safety mission.

As agreed with your offices, we focused our review on how NRC

- defines nuclear safety,
- measures and monitors the safety condition of nuclear plants, and
- uses its knowledge of safety conditions to ensure the safety of nuclear plants.

As part of our work, we looked at three plants that had long-standing histories of uncorrected safety concerns. Specifically, as agreed with your offices, we focused on the Salem Generating Station (Salem) in Salem, New Jersey; the Millstone Nuclear Power Station (Millstone) near New London, Connecticut; and the Cooper Nuclear Station (Cooper) near Brownville, Nebraska. We chose these three facilities because of your concerns that some nuclear plants have reached serious states of decline despite NRC's oversight efforts. The Millstone and Salem plants were shut down by their licensees because they violated NRC regulations. The licensees of these plants must address many long-standing safety problems before NRC will allow them to restart operations. Cooper is currently operating but was shut down by its licensee in 1994 because of safety concerns. As with Millstone and Salem, Cooper could not restart without NRC's approval. (App. I describes NRC's regulatory program; apps. II, III, and IV describe these facilities in more detail.)

Results in Brief

To achieve NRC's safety mission, it is critical that the Commission maintain a high degree of confidence in its regulatory program's ability to ensure that the nuclear industry performs to high safety standards. While we are not making judgments on the safety of plants, the many safety problems identified in some plants raises questions about whether NRC's regulatory program is working as it should. **Determining the safety of plants is difficult because NRC does not precisely define safety. Instead, NRC presumes that plants are safe if they operate within their approved designs and in accordance with NRC's regulations. Because of the many redundant safety systems built into the plants' designs, NRC believes that plants are safe to operate even when some of their safety systems are not working properly.** However, according to recent findings in some plants, including Millstone, NRC is no longer confident that all plants are still operating as designed and is requiring all 110 nuclear plant licensees to certify that they are maintaining their plants in accordance with their approved plant designs. NRC is also concerned that as nuclear plant owners pursue cost-cutting strategies to meet future competition, safety priorities may be jeopardized.

NRC is responsible for laying out clear requirements for operating nuclear plants and for overseeing its licensees to ensure that they are performing as they should. NRC has on-site inspectors that prepare reports on the plants' activities about every 6 weeks, and comprehensive assessments are assembled every 12 to 24 months for all nuclear plants. NRC also collects and publishes safety performance indicators, such as the number of safety system failures at all plants. These data, which are supplied by the licensees, show that the overall safety performance of the nuclear industry, as a whole, is good and improving but that some plants are chronically poor performers. Currently, NRC has placed 14 nuclear plants on its "Watch List," which includes those plants whose declining safety performance triggers additional oversight attention by NRC. This is the highest number of plants on NRC's Watch List since 1988. Thirty-seven percent of the nation's nuclear plants have been on NRC's Watch List at some point over the past 11 years, and many of these plants have stayed on the Watch List for many years. For example, Units 1 and 3 at the Browns Ferry site in Alabama have been on the Watch List for 10 years, and Dresden's two plants in Illinois have been on the Watch List for 7 years.

For some plants, NRC has not taken aggressive enforcement action to force the licensees to fix their long-standing safety problems on a timely basis. As a result, the plants' conditions have worsened, making safety margins

smaller. For example, Salem, Millstone, and Cooper were closed for safety deficiencies. In each of these cases, NRC's inspection records show a pattern of licensees that are not adequately identifying and correcting their plants' safety deficiencies over long periods of time. NRC allowed safety problems to persist because it was confident that redundant design features kept plants inherently safe and because it relied heavily on the licensees' promises to make changes. NRC forced the licensees to correct their problems only after the licensees voluntarily shut down plants. In addition, NRC lacks a process for ensuring that the licensee uses competent managers, which is widely recognized by NRC and industry officials as important to ensuring plants' safe performance. Finally, NRC was slow in placing plants on its Watch List, which it uses to trigger more regulatory attention at an early stage so that a plant's performance conditions can be improved. Salem was not placed on the Watch List until after the licensee shut it down for safety reasons. Millstone was eventually placed on the Watch List years after first being recognized as having many safety problems. Cooper was never on the Watch List, even though it was shut down by the licensee in 1994 because of many safety deficiencies.

NRC's ongoing reforms, which include expanding its inspection program and revamping its process for identifying plants with long-standing safety problems, show a strong commitment by the current Chairman and Commission to strengthen the Commission's oversight capability.

However, changing NRC's culture of tolerating problems will not be easy. Achieving fundamental reform starts with holding the licensees accountable for fixing their plants' problems more promptly and addressing management issues more directly.

Background

Under the authority of the Atomic Energy Act, the NRC licenses the construction and operation of nuclear power plants; develops, implements, and enforces the rules and regulations that govern nuclear activities; inspects facilities to ensure compliance with legal requirements; and conducts research to support its programs. NRC also maintains at least two inspectors at every operating nuclear reactor site and supplements their inspection activities with staff from any of its four regions and from NRC headquarters.

NRC's fiscal year 1997 budget is estimated at \$477 million. Its staff of about 3,000 is responsible to five Commissioners appointed by the President and approved by the Senate. About 55 percent of NRC's professional staff is dedicated to nuclear reactor activities. The 110 licensed nuclear plants

Twenty-four plants have been on the Watch List for 2 or more years. However, about half of the plants that NRC placed on the Watch List were known by NRC to be poor performers long before they were placed on the list. NRC's senior managers formally discuss plants that are experiencing declining safety performance. Although about half of these plants are eventually placed on the Watch List, NRC has not precisely defined the criteria for when a plant is formally discussed and/or placed on the Watch List. Salem and Millstone were under discussion by NRC for 3 to 4 years before they were placed on the Watch List in 1996 and 1997, respectively. NRC discussed Cooper as a problem plant but never placed it on the Watch List. In their letter commenting on a draft of this report, NRC said that 43 other plants have been discussed but not placed on the Watch List (see app. V for NRC's letter).

NRC Is Not Effectively Overseeing the Plants That Have Problems

Our review of three facilities with a history of poor performance shows that NRC has not gotten licensees to fix safety problems at these plants in a timely manner. Identifying and correcting safety deficiencies are among the licensees' most important safety responsibilities and a major focus of NRC's inspection program. Yet NRC allows licensees repeated opportunities to correct their safety problems, often waiting for a significant problem or series of events to occur at a plant before taking tough enforcement action. We found that NRC fined licensees, in some cases long after problems became apparent, and was very slow to place problem plants on its Watch List. NRC also lacks an effective process for ensuring that licensees have competent management in place, which is considered by NRC and nuclear experts as an important influence on a plant's safety performance. Finally, the Senior Management Meeting process, a tool created by NRC to provide an early warning of problem plants, is not working effectively.

NRC Is Not Getting Licensees to Fix Deficiencies in a Timely Manner

NRC's regulations require nuclear plants to have an effective program to "assure that conditions adverse to quality . . . are promptly identified and corrected." NRC places importance on evaluating plants' corrective action programs to ensure that they will lead to timely correction of the identified problems. However, in all three facilities we examined (Millstone, Salem, and Cooper), the licensees did not fix their substantial and recurring safety problems in a timely manner. For example, NRC concluded in its 1995 performance review of Salem that

“... overall performance has declined and ... the challenges to plant systems and operators caused by repetitive equipment problems and personnel errors ... had the potential to, or actually did, adversely affect plant or personnel safety.”

Of the 43 deficiencies that NRC required to be addressed before the Salem reactors can be restarted, all but 5 were conditions that were present when the reactor was operating. Two of these deficiencies had been continuing problems for 6 to 7 years—a control air system and circulating water for a motor—and one had been on NRC’s followup system since 1989 and was addressed in three separate NRC inspection reports. The licensee has identified approximately 31,000 work items that it feels should be completed before restarting the units.

Similarly, at Millstone, a special NRC inspection team reported in 1996 that it found several instances in which the licensee failed to identify safety problems and lacked an adequate system to track corrective actions. The team also reported that the licensee inappropriately closed corrective actions before they were completed. A former Senior Resident Inspector at Millstone told us that the plant’s managers were notoriously late in correcting problems. Also, the unpublished 1995 SALP on Millstone was very critical of Millstone’s inattention to a growing backlog of unresolved safety concerns.⁴

Like Salem’s, Millstone’s problems were also long-standing and well known to NRC. Moreover, NRC acknowledges that Millstone’s performance declined for years before the plant was first discussed as a potential Watch List candidate in 1991. In a 1990 meeting in which NRC officials determined which plants should be placed on the Watch List, they noted that “[Millstone] ... has acknowledged that weaknesses existed prior to 1991 in their programs for timely resolution and reporting of deficiencies.” A former Millstone Senior Resident Inspector also told us that he saw performance slip over several years as maintenance backlogs grew, violations increased, and management’s responsiveness to NRC waned. He also said that NRC should have pursued more aggressive enforcement action. A 1996 independent auditor’s report summed up the Millstone situation as follows:

“[Millstone’s] attempts to regain [confidence that it can operate safely] will be complicated by the fact that the NRC has also publicly admitted that, by failing to take more aggressive

⁴In accordance with NRC’s policy, Millstone’s latest performance assessment was not published because Millstone is shut down.

action against [Millstone] over the years, the agency itself has lost the confidence of the public it serves.”⁵

Similarly, problems in identifying and correcting the deficiencies at Cooper were long-standing and were well known to NRC. Cooper was shut down for 9 consecutive months in 1994 and 1995 because of safety system failures that were, according to NRC, of long standing. Some of Cooper’s problems dated back to the plant’s first start-up in 1974—problems that Cooper’s management should have addressed years earlier, according to the NRC inspectors we interviewed. An NRC audit reported that the plant’s managers were “living with problems, not fixing them” and that “ineffective self-assessment” and a “weak corrective action program” characterized operations.

Several reasons may account for why NRC tolerated safety problems in these plants. As previously discussed, NRC believes that the multiple safety systems gives NRC and its licensees confidence that plants are safe even when they have many safety problems. Therefore, unless an accident or serious event poses an obvious safety or health risk to workers or the public, NRC appears reluctant to take swift enforcement action. In addition, since NRC does not precisely define safety, perceptions of safety levels and risk are subjective and are not always consistent from inspector to inspector. Several current and former NRC inspectors told us that they cannot easily distinguish a safe plant from an unsafe one and that the guidance on when to shut down a plant does not cover all situations. Finally, as discussed below, NRC inspectors are heavily influenced by licensees’ promises to fix identified problems. As a result, NRC inspectors allow licensees’ managers considerable time and effort to fix a problem before enforcement action is considered.

NRC’s Chairman has expressed concern about the consequences of NRC’s past patience with licensees. The Chairman has stated that nuclear plant safety is based on full compliance with all of NRC’s regulations.

Relying on Plant Managers to Fix Problems Is Not Always Effective

NRC gives licensees considerable latitude to fix their problems. This strategy works well when the licensees’ managers place priority on maintaining a strong safety culture. However, we found that this condition was not present in the problem plants we examined and that the conditions worsened when NRC did not hold the licensees accountable for fixing their problems.

⁵Focused Audit of the Connecticut Light and Power Company: Nuclear Operations, prepared for the State of Connecticut’s Department of Public Utility Control (Dec. 31, 1996).

professionals with the proper training and experience would be needed, along with objective criteria for making judgments. We also believe that gauging management factors is critical to the goal of the early identification of the problems in nuclear plants. A 1996 Arthur Andersen report to NRC agrees. Arthur Andersen noted the importance of management, stating that “To assess plant performance proactively, the NRC needs to remain fully aware of plant management activities.”¹² Andersen recommended that NRC hire experts or train staff to evaluate management performance and changes, which they viewed as necessary steps to allow NRC to be more proactive. They also noted that by evaluating management factors (and other factors as well), NRC would be better positioned to identify problems earlier, which would in turn reduce safety risks to the public and lead to an earlier and less costly resolution of problems. NRC is currently evaluating Arthur Andersen’s recommendations.

The Senior Management Meeting Needs Revamping to Aid Early Intervention

A major tool for intervening in plants before they become major problems—the Senior Management Meeting (SMM)—is not working effectively. The SMM process was created in 1986 for the purpose of providing NRC with an early warning on plants exhibiting declining performance. SMM meetings, which are held twice every year, include NRC’s senior managers from headquarters and regional directors. Data on plant performance are drawn from NRC’s performance indicator program and from inspection and audit reports so that senior managers can take steps to prevent the problems at these plants from worsening. An important outcome of the SMM is the Watch List. A plant’s inclusion on the Watch List can lead to more oversight by NRC in the form of additional inspections, letters to licensees expressing NRC’s concern about declining performance, or other actions. Being on the Watch List also brings significant public attention to the plant. NRC also prepares a list of plants that are discussed during its SMM meetings but not placed on the Watch List. NRC informs the senior management of affected licensees that their plants were discussed.

The Watch List has not produced a consistent inventory of plants with performance problems. As noted earlier, Millstone and Salem exhibited clear performance declines long before NRC placed them on the Watch List in 1996 and 1997, respectively. Salem was placed on the Watch List after they were forced to shut down for safety problems. Millstone was shut down several times before they were placed on the Watch List. The Watch

¹²Recommendations to Improve the Senior Management Meeting Process, Arthur Andersen (Dec. 30, 1996).

List actions were far too late to achieve the objective of “early identification of declining performance.” Other plants that were shut down, such as Cooper and Haddam Neck, were never on the Watch List. Still other plants, such as Washington Nuclear Power II, had performance indicators that were consistently worse than some plants on the Watch List. In fact, Arthur Andersen identified 10 plants that were not placed on the Watch List but whose performance indicators are similar to those on the Watch List.

Recognizing the weaknesses in its SMM process, NRC is making improvements. For example, NRC asked Arthur Andersen to examine how the Commission can improve the timeliness and thoroughness of its plant-safety assessments through the SMM decision-making process. Andersen reported findings that parallel our observations, noting that many procedural problems prevent the process from working as intended. These problems include a lack of rigor and discipline in the process; unclear criteria for placing plants on the Watch List; and the confusion among some NRC managers about their role in the process. Also noted was the highly subjective nature of the process. NRC is currently examining Arthur Andersen’s recommendations.

NRC is making other changes to its oversight program to aid early intervention. For example, future inspections will determine if plants are still operating within their design basis. Also, NRC is attempting to improve its knowledge base on the plants’ conditions by better integrating its many sources of information on performance information into a more consistent data format. NRC also reports that it is piloting a program that identifies, tracks, and verifies licensee commitments. Moreover, NRC is conducting an internal strategic reassessment, in which all current programs and activities are being re-examined. These are useful efforts that illustrate a commitment by the current Chairman and Commission to improve how NRC operates.

Conclusions

There are a number of instances in which NRC has neither taken aggressive enforcement action nor held nuclear plant licensees accountable for correcting their problems on a timely basis. NRC’s practice of giving licensees extensive time to fix their problems allows nuclear plants to continue to operate and the problems to grow worse. Fines levied against licensees for violations of regulations often occur long after problems are first identified. In the plants we examined, NRC forced the licensees to correct their problems only after they had voluntarily shut down their

plants. In addition, by not evaluating the competency of the licensees' plant managers as part of the on-going plant inspection process, NRC is missing an opportunity to act on the plants' safety performance problems at an early stage, when problems are easier and cheaper to address. Finally, NRC's process to focus attention on those plants with declining safety performance—the Senior Management Meeting—needs substantial revisions to achieve its goal of an early warning tool.

By intervening early and taking aggressive enforcement action when warranted, NRC can prevent declines in nuclear plants' long-term performance and better assure itself that the plants are meeting high safety standards. With concern growing that some licensees are pursuing aggressive cost-cutting strategies at the risk of reducing safety margins, now is the time to take steps to make sure that NRC's regulatory program is working as effectively as it can. The changes that the Commission has under way provide a basic framework for making its regulatory strategy work, but additional measures are needed if NRC's culture of tolerating problems is to change. Ensuring that licensees fix their safety deficiencies promptly and have high-quality management in place is the key for NRC to fulfill its mission of adequately protecting the public's health and safety from the dangers inherent in nuclear power plants.

Recommendations

To enhance licensees' accountability, we recommend that the Commissioners of NRC direct NRC staff to develop strategies to more aggressively act on safety deficiencies when they are discovered. To achieve this goal, NRC should take the following steps:

- Require inspection reports to fully document for all plants the status of the licensees' actions to address identified problems under NRC's corrective action requirements, including timetables for the completion of corrective actions and how NRC will respond to nonconformance with planned actions.
- Make licensees' responsiveness to identified problems a major feature of the information provided to the participants of the Senior Management Meetings, including how NRC will respond if problems go uncorrected. For example, NRC should describe the range of sanctions that it will impose on the licensees on the basis of the potential seriousness of their failure to resolve problems within a predetermined time. These sanctions should range from assessing fines to involuntary shutdown of the plant.
- Require that the assessment of management's competency and performance be a mandatory component of NRC's inspection process.

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UNITED STATES NUCLEAR REGULATORY COMMISSION

BRIEFING ON FIRE PROTECTION ISSUES

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THURSDAY

July 17, 2008

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The Commission convened at 2:00 p.m., the Honorable Dale E. Klein, Chairman
presiding.

NUCLEAR REGULATORY COMMISSION

DALE E. KLEIN, CHAIRMAN

GREGORY B. JACZKO, COMMISSIONER

PETER B. LYONS, COMMISSIONER

KRISTINE L. SVINICKI, COMMISSIONER

1 PANEL 1: STAKEHOLDERS

2 RICHARD MUENCH, President and CEO, Wolf Creek Nuclear

3 Operating Corporation

4 JOSEPH DONAHUE, Vice President Engineering, Shearon Harris

5 Nuclear Plant, Progress Energy

6 DAVID BAXTER, Site Vice President, Oconee Nuclear Station, Duke

7 Energy

8 KEN CANAVAN, Senior Program Manager, Risk and Safety

9 Management, Electric Power Research Institute (EPRI)

10 JIM WARREN, NCWARN

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1 PANEL 2: NRC STAFF

2 WILLIAM BORCHARDT, Executive Director for Operations

3 JACK GROBE, Associate Director for Engineering and Safety

4 Systems, Office of Nuclear Reactor Regulation

5 MARK CUNNINGHAM, Director, Division of Risk Assessment, Office

6 of Nuclear Reactor Regulation

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1 regulations were established 27 years ago.

2 Second, we believe that we are now working on a proactive approach to
3 bring the current issues to closure. We'll be the first to admit it's long overdue.

4 While tough issues remain, we believe that they are solvable and that this
5 briefing is going to focus today on a look forward at how we're going to close these
6 issues in an open and a transparent manner.

7 Even though the two speakers today are from the Office of Nuclear Reactor
8 Regulations, I just want to reiterate the point that this is truly an agency wide effort
9 and activity.

10 The offices of Nuclear Reactor Regulation and Research, the Office of
11 Enforcement, all the regional offices, Office of Information Services and the Office
12 of Public Affairs are all intimately involved in the activities that have been taking
13 place and on the path forward.

14 Bringing fire protection back into a stable, regulatory environment will
15 require the hard work of all these offices as well as other parts of the agency over
16 the near future.

17 With that, I'll turn to Jack Grobe.

18 MR. GROBE: Thanks, Bill. Slide 2, please. My name is Jack
19 Grobe. I'm Associate Director in the Office of Nuclear Reactor Regulation for
20 Safety Systems and Engineering. With me today is Mark Cunningham. Mark is
21 Director of the Division of Risk Assessment, which also includes fire protection
22 activities in the Office of Nuclear Reactor Regulation.

1 We are here today representing the NRC's Fire Protection Steering
2 Committee. We have the full committee here and I'd like to introduce them. Steve
3 West. Make yourself know, Steve. Thank you.

4 He's the Director of the Division of Reactor Safety in Region III. Steve
5 brings a great spectrum of experiences to the committee in that in his past life he
6 was responsible for fire protection engineering here in NRR and he has since been
7 responsible for all aspects of reactor inspection in the field. So, he has great
8 experience.

9 Christiana Lui is the Director of the Division of Risk Analysis in the Office of
10 Nuclear Regulatory Research who has responsibility both for risk as well as fire.

11 And Stu Magruder is our enforcement guru. He's the Deputy Office Director
12 for the Office of Enforcement.

13 The Executive Director for Operations established the Steering Committee
14 in 2007 to facilitate resolution of key fire protection issues and to ensure effective
15 interface with the industry and other external stakeholders.

16 The overall goal of the Steering Committee is to ensure that the staff
17 completes the necessary actions to return fire protection to a normal, predictable
18 regulatory environment.

19 I realize we're short on time so I'm going to try to go quickly. Slide three,
20 please.

21 Fire protection remains a significant safety focus for the staff.

22 Approximately one-half of the core damage risk at operating reactors results from

1 accident sequences that initiate with fire events.

2 Our presentation today will focus on operating reactor issues. Fire
3 protection at new reactors will be simplified through designed-in separation and
4 isolation of redundant safe shutdown systems, extensive use of fiber optic cable in
5 control systems, as well as passive plant designs that have few active components
6 necessary for safe shutdown.

7 The Steering Committee focus has been on the four issues that Mark will
8 cover today in our presentation. The committee has met regularly with the staff
9 and frequently with the industry and other external stakeholders.

10 Progress is being made in all of these areas and the Steering Committee
11 has issued a closure plan documenting key milestones and deadlines to bring
12 these issues to closure.

13 Few actions remain to resolve fire barrier issues and Operator manual
14 actions. While there is more work to do on multiple spurious operations and
15 implementation of NFPA 805, the path toward is defined, well understood and
16 being implemented.

17 I'd now like to turn it over to Mark.

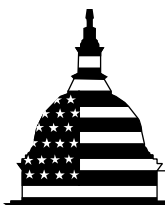
18 MR. CUNNINGHAM: I'm going to be covering this afternoon the
19 closure path for three remaining fire protection issues, as well as the process for
20 more broadly risk informing fire protection activities.

21 The first specific issue is fire barrier performance. NRC regulations
22 mandate that key equipment is protected from fires and fire barriers are one

October 2012

NUCLEAR REGULATORY COMMISSION

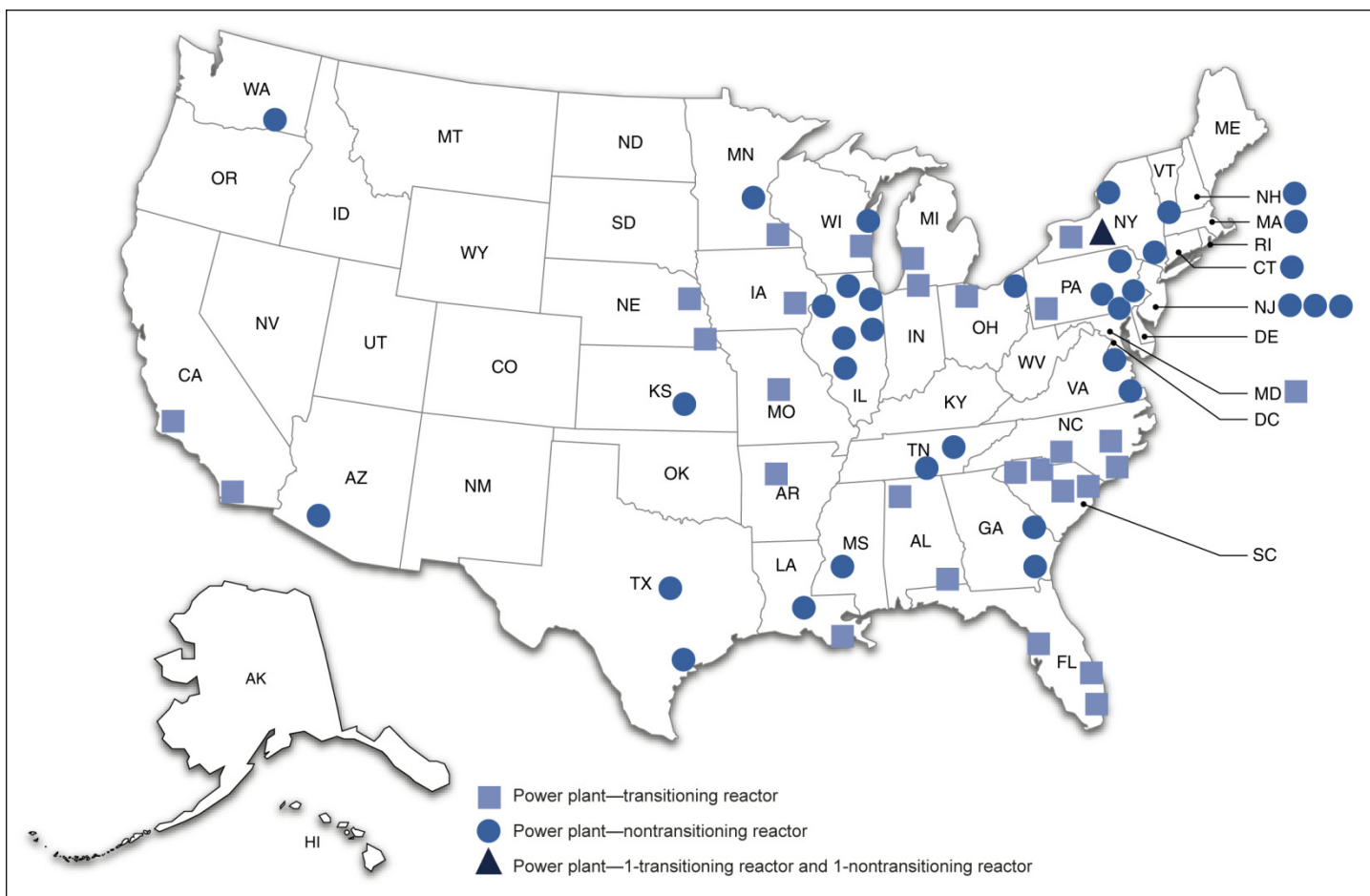
Oversight and Status of Implementing a Risk-Informed Approach to Fire Safety



G A O

Accountability * Integrity * Reliability

Figure 3: Nuclear Power Plants with Reactors Transitioning to the Risk-Informed Approach or Remaining under the Deterministic Approach



Sources: NRC (data); Map Resources (map).

Note: The 65 operating commercial nuclear power plants are located in 31 states. Some plants house multiple nuclear reactors.

NRC Has Taken Steps to Resolve Long-standing Fire Safety Issues

NRC, in conjunction with plant operators, has made progress in resolving the three long-standing fire safety issues raised in our 2008 report at nuclear power plants remaining under the deterministic approach and those transitioning to the risk-informed approach. NRC implemented one of our three recommendations and took actions to resolve issues we had identified in making the other two recommendations but did not specifically implement these recommendations.

Appendix III: Schedule for Plants Transitioning to a Risk-Informed Approach to Fire Safety

Plant	Owner	State	Number of units	License amendment request submittal date
Shearon Harris	Duke Energy	North Carolina	1	05/29/2008 ^a
Oconee	Duke Energy	South Carolina	3	05/30/2008 ^b
D.C. Cook	Indiana Michigan Power Company	Michigan	2	07/01/2011
Callaway	AmerenUE	Missouri	1	08/29/2011
Duane Arnold	NextEra Energy	Iowa	1	07/29/2011
Fort Calhoun	Omaha Public Power District	Nebraska	1	09/29/2011
VC Summer	SC Electric and Gas	South Carolina	1	11/15/2011
Waterford—Unit 3	Entergy Nuclear Operations	Louisiana	1	11/17/2011
Arkansas Nuclear One—Unit 2	Entergy Nuclear Operations	Arkansas	1	03/27/2012 ^c
Cooper	Nebraska Public Power District	Nebraska	1	04/25/2012
Nine Mile Point— Unit 1	Constellation Energy	New York	1	06/29/2012
Turkey Point	NextEra Energy	Florida	2	06/30/2012
Arkansas Nuclear One—Unit 1	Entergy Nuclear Operations	Arkansas	1	08/31/2012 ^d
Beaver Valley	First Energy Nuclear	Pennsylvania	2	09/30/2012 ^e
Brunswick	Duke Energy	North Carolina	2	09/30/2012
Farley	Southern Nuclear Operating Company	Alabama	2	09/30/2012
Prairie Island	Northern States Power	Minnesota	2	09/30/2012
Palisades	Entergy Nuclear Operations	Michigan	1	12/31/2012
Browns Ferry	Tennessee Valley Authority	Alabama	3	03/29/2013 ^f
Ginna	Constellation Energy	New York	1	03/29/2013
St. Lucie	NextEra Energy	Florida	2	03/30/2013
San Onofre	Southern California Edison	California	2	03/31/2013
Diablo Canyon	Pacific Gas and Electric	California	2	06/28/2013
Point Beach	NextEra Energy	Wisconsin	2	06/30/2013
Calvert Cliffs	Constellation	Maryland	2	09/30/2013
Catawba	Duke Energy Power	South Carolina	2	09/30/2013
McGuire	Duke Energy Power	North Carolina	2	09/30/2013
Robinson	Duke Energy	South Carolina	1	09/30/2013
Davis Besse	First Energy Nuclear	Ohio	1	07/01/2014
Crystal River 3	Duke Energy	Florida	1	07/01/2014

Source: NRC.

^aShearon Harris was a pilot plant for the risk-informed approach transition. NRC approved the plant's license amendment request on June 28, 2010.

Official Transcript of Proceedings
NUCLEAR REGULATORY COMMISSION

Title: Petition Review Board

Docket Number: (not applicable)

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Pages 1-56

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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PETITION REVIEW BOARD

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MONDAY,

NOVEMBER 13, 2006

The proceeding was conducted at NRC headquarters, Room 05B4, 11545 Rockville Pike, Rockville, MD, at 1:15 p.m., Ho Nieh, Chairman, presiding.

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23 JOHN D. RUNKLE, ESQ.
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1 Black with the Division of Licensing Project
2 Management, Office of Nuclear Reactor Regulation, and
3 it does describe sort of the process and what of the
4 parts of the SR and the SER are in play with these
5 prior protection rules.

6 And it's the Shearon Harris Nuclear Power
7 Plant operating license condition 2.F, which states,
8 Caroline Power & Light Company, now Progress Energy,
9 shall maintain in effect all provisions of the
10 approved fire protection program as described in the
11 final safety analysis report for the facility as
12 amended in the SER safety evaluation report dated
13 November 1983, and supplements one through four, and
14 the safety evaluation dated January 12th, 1987,
15 subject to the following conclusions, and it goes
16 through several other parts of the fire protection
17 under the SAR, but the condition 2F is the one in the
18 license that the client has been out of compliance
19 with.

20 MS. LONGO: I'm sorry, section 2F of the
21 license, or of the -

22 MR. RUNKLE: Of the operating license
23 condition. It - as described in the final safety
24 analysis report.

25 And it does reference the safety
26 evaluation report in some other documents.

27 MR. LOCHBAUM: Thank you, John.

28 You just have one other small thing to
29 add. Based on the long time frame, 2010, 2015, pick
30 a date, for progress to become - to get Harris into
31 compliance, we are not sure how NRC inspectors are
32 doing fire protection inspection at Harris.

33 What criteria are they evaluating against?

1 Are they ensuring that the plant is not in compliance
2 with the original regulations, or NFPA 805, since the
3 company has already confessed to that?

4 I would hate to be in the shoes of a fire
5 inspector going into this facility, when you arrive
6 you know they are not in compliance. I don't know
7 what you are evaluating against since you know they
8 are not in compliance.

9 I'm not saying those inspections are a
10 fraud, but they just don't seem to have a lot of value
11 to hold the plant to. And I don't think the public
12 living around that facility are getting good service
13 and respect and these other things on this back wall
14 when that's the situation.

15 MR. NIEH: Regional inspection staff, would
16 you like to address that comment?

17 MR. PAIGE: Could you repeat it please?

18 MR. NIEH: I could try to summarize. Mr.
19 David Lochbaum, his question was, if I could just
20 paraphrase, what guidance the fire protection
21 inspectors are using when they are going out to the
22 facilities to do the periodic fire protection
23 inspections, at Sharon Harris specifically.

24 MR. PAYNE: Yes, this is Charley Payne. We
25 use the inspection procedure that is prescribed in our
26 procedures here for doing triennial fire protection
27 inspections, and while Harris is in their transition
28 to NFPA 805 we use a modified version of that
29 inspection procedure, and that's inspection procedure
30 71111.05T, and have we done a -

31 MR. FRUMKIN: TTP.

32 MR. PAYNE: Yes, I realize that, but we
33 haven't done a TTP inspection yet at Harris. We

1 haven't gone back to them since they've actually
2 started their transition. We did a draft version of
3 what became TTP, but at the time it was just the 05T
4 procedures modified.

5 MR. WEERRAKKODY: This is Suni Weerrakkody.
6 For Sharon Harris and all other plants that are
7 transitioning to 805, we have a revised inspection
8 procedure. And at a high level what I can say is, we
9 have told inspectors to focus on the fire inspection
10 infrastructure, like for example when inspectors go,
11 you have the fire brigade, you have the suppression
12 systems you know, and if the plant is transitioning to
13 805, in areas where we have basically said, our
14 position is that they are not in compliance, we enable
15 them to transition. In other words, that is no reason
16 to go and reinspect things like operator manual
17 actions where we believe that the licensee is not in
18 compliance.

19 So the inspector, we want to make sure
20 that they spend their time on things that - where they
21 can make a difference in the transition.

22 MR. NIEH: All right, hearing no other
23 questions and no other comments from the petitioners
24 and the NRC staff and those folks on the phone - I'm
25 sorry, Paul?

26 MR. GUNTER: I'm sorry, not to prolong this
27 too much further, but I did have one question. If you
28 could give us some insight on how the NFP 805 in the
29 Shearon Harris plants to transition to treats fire
30 protection in the context of security infrastructure,
31 where fire modeling, traditionally used to address
32 fire loads in certain fire areas that can be projected
33 or can be assessed, can't possibly be modeled in a

Action Matrix Summary – April 16, 2013

Reactors not in compliance with
NRC's fire protection regulations

Licensee Response Column	Regulatory Response Column	Degraded Cornerstone Column	Multiple/Repetitive Degraded Cornerstone Column	Unacceptable Performance Column
Arkansas Nuclear 1	Beaver Valley 1	Columbia Generating Station	Browns Ferry 1	
Arkansas Nuclear 2	Beaver Valley 2	Perry 1		
Braidwood 1	Browns Ferry 2	Wolf Creek 1		
Braidwood 2	Browns Ferry 3			
Brunswick 1	Catawba 1			
Brunswick 2	Davis-Besse			
Byron 1	Fermi 2			
Byron 2	FitzPatrick			
Callaway	Harris 1			
Calvert Cliffs 1	Kewaunee			
Calvert Cliffs 2	Nine Mile Point 1			
Catawba 2	Point Beach 1			
Clinton	Prairie Island 1			
Comanche Peak 1	Prairie Island 2			
Comanche Peak 2	Seabrook 1			
Cooper	Susquehanna 2			
Crystal River 3				
D.C. Cook 1				
D.C. Cook 2				
Diablo Canyon 1				
Diablo Canyon 2				
Dresden 2				
Dresden 3				

Duane Arnold

Farley 1

Farley 2

Ginna

Grand Gulf 1

Hatch 1

Hatch 2

Hope Creek 1

Indian Point 2

Indian Point 3

La Salle 1

La Salle 2

Limerick 1

Limerick 2

McGuire 1

McGuire 2

Millstone 2

Millstone 3

Monticello

Nine Mile Point
2

North Anna 1

North Anna 2

Oconee 1

Oconee 2

Oconee 3

Oyster Creek

Palisades

Palo Verde 1

Palo Verde 2

Palo Verde 3

[Peach Bottom 2](#)

[Peach Bottom 3](#)

[Pilgrim 1](#)

[Point Beach 2](#)

[Quad Cities 1](#)

[Quad Cities 2](#)

[River Bend 1](#)

[Robinson 2](#)

[Saint Lucie 1](#)

[Saint Lucie 2](#)

[Salem 1](#)

[Salem 2](#)

[San Onofre 2](#)

[San Onofre 3](#)

[Sequoyah 1](#)

[Sequoyah 2](#)

[South Texas 1](#)

[South Texas 2](#)

[Summer](#)

[Surry 1](#)

[Surry 2](#)

[Susquehanna 1](#)

[Three Mile Island
1](#)

[Turkey Point 3](#)

[Turkey Point 4](#)

[Vermont Yankee](#)

[Vogtle 1](#)

[Vogtle 2](#)

[Waterford 3](#)

[Watts Bar 1](#)

Columbia Generating Station

Significance:  Jun 29, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Analyze Post Fire Safe Shutdown Circuitry for Isolation for a Control Room Fire

Green. The inspectors identified a non-cited violation for the failure to ensure that material, parts, and equipment specified met or exceeded the design criteria as required by License Condition 2.C.14, ♦Fire protection Program (Generic Letter 86-10).♦ Specifically, prior to implementing engineering change EC 9123, the licensee failed to analyze for all possible failure modes of fire induced circuit failures for transducers installed for ensuring electrical isolation in the event of a fire in the control room for post fire safe shutdown standby service water pump SW-P-1B, residual heat removal pump RHR-P-2B, and circuit breaker E-CB-B/8 as required by FSAR Appendix F, Table F.3-1.

The failure to analyze a modification to post fire safe shutdown circuitry for all possible modes of fire induced circuit failures was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external events (fire) attribute of the Mitigating Systems Cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors evaluated this deficiency using Inspection Manual Chapter 0609, Appendix F, ♦Fire Protection Significance Determination Process.♦ The performance deficiency affected the fire protection defense-in depth strategies involving post-fire safe shutdown systems.

This finding was evaluated using the process in Inspection Manual Chapter 0609, Appendix F, ♦Fire Protection Significance Determination Process,♦ Attachment 2, ♦Degradation Rating Guidance Specific to Various Fire Protection Program Elements,♦ and was determined to be of very low safety significance. The finding was assigned a low degradation rating because the capability to achieve safe shutdown in the event of a control room fire would be minimally impacted by the failure to analyze the control circuitry for equipment required for post fire safe shutdown. This was based on the licensee verifying through bench testing that the component in question does provide adequate electrical isolation. Because this finding had a low degradation rating, it screened as having very low safety significance (Green). The performance deficiency had a cross-cutting aspect in the area of human performance associated with decision making because the licensee did not make risk-significant decisions using a systematic process, especially when faced with uncertain or unexpected plant conditions, to ensure safety was maintained and failed to implement the roles and authorities as designed for risk-significant decisions [H.1(a)]. (Section 1R05.06.b)

Inspection Report# : 2012007 ([pdf](#))

Grand Gulf

Significance:  Mar 23, 2012
Identified By: NRC
Item Type: NCV NonCited Violation

Failure to Correct a Condition Adverse to Fire Protection, in That the Licensee Failed to Adequately Provide Contingency Lighting in the Fire Brigade Dress Out Area While Normal Lighting was Inoperable

Green. The inspectors identified a Green non-cited violation of Facility Operating License Condition 2.C(41), for the failure to correct a condition adverse to fire protection. Specifically, the licensee failed to adequately provide contingency lighting in the fire brigade dress out area while normal lighting was inoperable due to maintenance on an associated breaker. The inadequate lighting delayed fire brigade response to a potential fire in the turbine building. Immediate corrective action included placing temporary lighting in the area. Normal lighting to the area was restored the next week. The licensee entered this issue into their corrective action program as condition report CR-GGN-2012-01488. The finding is more than minor because it is associated with the protection against external factors attribute of the Mitigating System Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609.04, ♦Phase 1 - Initial Screening and Characterization of Findings,♦ the inspectors determined from table 3b that issues related to performance of the fire brigade are not included in Appendix F and require NRC management review using Appendix M. Regional management review evaluated the overall impact of lighting issue in the fire brigade dress out area and concluded that, while the fire protection defense-in-depth was affected by the performance deficiency, the overall defense-in-depth of the front-line systems was not impacted because of train separation and safe shutdown analysis at the site. Therefore the finding screened as having very low safety significance (Green) in accordance with Manual Chapter 0609, Appendix M. The inspectors determined the finding had a cross-cutting aspect in the area of human performance associated with the work control component, in that licensee personnel failed to ensure adequate job site conditions (lighting in the fire bridge dress out area) were in place prior to performance electrical maintenance in the turbine building [H.3(a)] (Section 40A3).

Inspection Report# : 2012002 ([pdf](#))

South Texas Project

Significance:  Oct 31, 2012

Identified By: NRC

Item Type: VIO Violation

Failure to Timely Correct Conditions Adverse to Fire Protection

The team identified a violation of License Condition 2.E for the failure to correct a noncompliance. Procedure OPOP04-ZO-0001, ♦Control Room Evacuation,♦ Revision 35, was not consistent with the post-fire safe shutdown analysis in that it failed to ensure the actions met critical time requirements. The licensee failed to implement timely corrective actions to correct this deficiency. Inspection Report 05000498/2011006 and 05000499/2011006 documented a violation involving the failure to implement and maintain in effect all provisions of the approved fire protection program. During this inspection, the team identified that the licensee had failed to restore compliance with its license condition within a reasonable time.

The licensee♦s failure to implement timely corrective actions to correct conditions adverse to fire protection as required by its Operations Quality Assurance Plan is a performance deficiency. This performance deficiency was of more than minor safety significance because it was associated with the mitigating systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events (such as fire) to prevent undesirable consequences. Specifically, the licensee failed to ensure reliability of its post-fire safe shutdown systems by demonstrating that it could achieve safe shutdown following a fire in the control room by using approved actions. The significance of this finding could not be evaluated using Inspection Manual Chapter 0609, Appendix F, ♦Fire Protection Significance Determination Process,♦ because the performance deficiency involved a control room fire that led to control room evacuation. A senior reactor analyst determined that the upper bound for the overall change in core damage frequency that resulted from this performance deficiency was $2.702\text{E-}7/\text{yr}$ and was not significant with respect to large early release frequency. The analyst therefore determined that this performance deficiency was of very low risk significance (Green). The team determined that the performance deficiency had a cross-cutting aspect in the corrective action component of the problem identification and resolution cross-cutting area because the licensee did not thoroughly evaluate the problem such that resolutions addressed the cause. Specifically, the licensee failed to take adequate corrective actions to ensure that operators could perform all necessary manual actions as approved prior to exceeding the regulatory requirements (P.1(c)).

Inspection Report# : [2012007 \(pdf\)](#)









South Texas Project



Significance:  Dec 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain Adequate Fire Penetration Seal Material Thickness

The inspectors identified a non-cited violation of Technical Specification 6.8.1.d,  Fire Protection Program Implementation,  for the failure to follow work order package instructions requiring the use of Drawing C012- 00081-F7F,  Detail  E-1  Silicone Elastomer Typical Electrical Pen. Seals (Walls & Floors),  to establish 6 inches of fire retardant sealant material for penetrations in Units 1 and 2. The inspectors noticed that Unit 1 train B safety-related 4160 Vac switchgear room electrical penetration F4476 had gaps around the edge. A design change installed new electrical cables that required the penetration be sealed using work order package 139376, that stated  the penetration seal WILL BE IAW the Penetration Seal Permit and detail Drawing C012- 00081-F7F.  During the repair activities to correct the gaps, it was discovered that a portion of the seal was only 4.5 inches. The licensee captured this issue as Condition Report 12-28283. Corrective actions included restoring the seal to 6 inches, performing additional analysis to support a 3-hour fire barrier with just 5 inches, and performing extent of condition inspections.

The finding was more than minor because it was associated with the Initiating Events Cornerstone attributes of Design Control and Procedure Quality, and affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions because it resulted in multiple fire penetration seals being declared nonfunctional as a result of being less than the design thickness. The inspectors used Manual Chapter 0609, Attachment 0609.04, to determine that fire protection issues are processed through Appendix F,  Fire Protection Significance Determination Process,  dated February 28, 2005. The inspectors used Appendix F, Attachment 1, to determine that the finding was of very low safety significance because it was a Moderate A fire confinement issue that screened out using Task 1.3.2 questions, since the seals would still have provided a 2-hour fire endurance rating or a 20 minute fire endurance rating without the seal being subject to direct flame impingement. In addition, this finding had human performance cross-cutting aspects associated with work practices because the licensee did not communicate human error prevention techniques such as self and peer checking, commensurate with the risk, such that the work activity was performed safely [H.4(a)].

Inspection Report# : [2012005 \(pdf\)](#)

Braidwood

Significance:  Sep 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO TRAIN FIRE BRIGADE MEMBERS ON THE USE OF ELEVATORS

The inspectors identified a finding of very low safety significance (Green) and an associated NCV of Braidwood Operating License Condition 2.E, ♦Fire Protection Program,♦ when licensee personnel failed to ensure that fire brigade members retained knowledge provided in fire brigade initial training. Specifically, station Fire Chiefs and fire brigade members did not have an adequate knowledge or continuing training on the proper methods and implementation for the use and control of elevators during a fire as demonstrated during a fire drill on June 14, 2012. Corrective actions included ensuring all elevator keys were adequately stored, informing the Fire Chiefs and fire brigade members of the key locations, and initiating a training request to provide the Fire Chiefs and fire brigade members with adequate training covering elevator key usage and elevator control during a fire response.

The inspectors determined that the failure to ensure Fire Chiefs and fire brigade members had the knowledge to perform their duties was a performance deficiency. The inspectors determined that the performance deficiency was more than minor because it was associated with the External Factors (Fire) attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the turbine building and auxiliary building elevators could be utilized in the licensee's Fire Protection Program to transport fire brigade members and their equipment in response to a fire. Safety-related equipment was in (or adjacent to) these fire zones. Therefore, if elevators were not controlled in the correct manner, the elevator may not be available for fire brigade use or may place personnel in danger by stopping at an undesirable elevation. The inspectors screened the finding in accordance with IMC 0609, Attachment 4, ♦Initial Characterization of Findings.♦ Based on Table 2, the inspectors concluded the issue represented a weakness in the External Event Mitigation Systems (Seismic/Fire/Flood/Severe Weather Protection Degraded) function of the Mitigating Systems Cornerstone. The inspectors reviewed the questions in Table 3 of IMC 0609, Attachment 4, and answered ♦No♦ to Questions A-D and ♦Yes♦ to Question E.1, ♦Does the finding involve discrepancies with the fire brigade?♦ As a result, the inspectors transitioned to IMC 0609, Appendix A, ♦The Significance Determination Process (SDP) for Findings at Power.♦ The inspectors reviewed IMC 0612, Appendix A, Exhibit 2, and answered ♦No♦ to Question B - External Event Mitigation Systems (Seismic/Fire/Flood/Severe Weather Protection Degraded), ♦Does the finding involve the loss or degradation of equipment or function specifically designed to mitigate a seismic, flooding, or severe weather initiating event (e.g., seismic snubbers, flooding barriers, tornado doors)?♦ As a result, the finding screened as having very low safety significance (Green). This finding had a cross-cutting aspect in the Resources component of the Human Performance cross-cutting area because the licensee failed to ensure Fire Chiefs and fire brigade members had an adequate knowledge or continuing training on the proper methods and implementation for the use and control of elevators during a fire as demonstrated during a fire drill on June 14, 2012 (H.2(b)).

Inspection Report# : 2012004 (*pdf*)

Regulatory Analysis

A formal, highly-structured, reasoned analysis of a proposed government agency requirement containing estimates of benefits and costs that are quantified to the fullest extent possible.

Coverage

- **A regulatory analysis should accompany any proposed action that establishes or communicates requirements, guidance, requests or staff positions that would result in a change in resources by our licensees**

Legislative and Procedural Requirements for Different Regulatory Actions

	Regulatory Analysis	Backfit Rule	Nat'l Technology Transfer and Advancement Act	NEPA	Paperwork Reduction Act	Reg Flex	SBREFA
Rulemaking Plan	X (NRR only)	X	X	X	X	X	X
ANPR							
Proposed Rule	X	X	X	X	X	X	
Final Rule	X	X	X	X	X	X	X
Direct Final Rule	X	X	X	X	X	X	X
Bulletins	X	X ¹	X	X	X		X
Generic Letters	X	X ¹	X	X	X		X
Regulatory Guides	X	X ¹	X	X	X		X
Orders	X	X		X			
Standard Review Plans	X	X ¹	X		X		X
Branch Technical Positions	X	X ¹	X		X		X
Standard Technical Specifications	X	X	X	X	X		X

[1] These actions do not legally require backfits, however, CRGR has indicated that backfit analyses should ordinarily be added as if these regulatory vehicles are legally binding (i.e., "imposed").

Source: ML073180140

§ 50.109 Backfitting.

(a)(1) Backfitting is defined as the modification of or addition to systems, structures, components, or design of a facility; or the design approval or manufacturing license for a facility; or the procedures or organization required to design, construct or operate a facility; any of which may result from a new or amended provision in the Commission's regulations or the imposition of a regulatory staff position interpreting the Commission's regulations that is either new or different from a previously applicable staff position after:

(i) The date of issuance of the construction permit for the facility for facilities having construction permits issued after October 21, 1985;

(ii) Six (6) months before the date of docketing of the operating license application for the facility for facilities having construction permits issued before October 21, 1985;

(iii) The date of issuance of the operating license for the facility for facilities having operating licenses;

(iv) The date of issuance of the design approval under subpart E of part 52 of this chapter;

(v) The date of issuance of a manufacturing license under subpart F of part 52 of this chapter;

(vi) The date of issuance of the first construction permit issued for a duplicate design under appendix N of this part; or

(vii) The date of issuance of a combined license under subpart C of part 52 of this chapter, provided that if the combined license references an early site permit, the provisions in § 52.39 of this chapter apply with respect to the site characteristics, design parameters, and terms and conditions specified in the early site permit. If the combined license references a standard design certification rule under subpart B of 10 CFR part 52, the provisions in § 52.63 of this chapter apply with respect to the design matters resolved in the standard design certification rule, provided however, that if any specific backfitting limitations are included in a referenced design certification rule, those limitations shall govern. If the combined license references a standard design approval under subpart E of 10 CFR part 52, the provisions in § 52.145 of this chapter apply with respect to the design matters resolved in the standard design approval. If the combined license uses a reactor manufactured under a manufacturing license under subpart F of 10 CFR part 52, the provisions of § 52.171 of this chapter apply with respect to matters resolved in the manufacturing license proceeding.

(2) Except as provided in paragraph (a)(4) of this section, the Commission shall require a systematic and documented analysis pursuant to paragraph (c) of this section for backfits which it seeks to impose.

(3) Except as provided in paragraph (a)(4) of this section, the Commission shall require the backfitting of a facility only when it determines, based on the analysis described in paragraph (c) of this section, that there is a substantial increase in the overall protection of the public health and safety or the common defense and security to be derived from the backfit and that the direct and indirect costs of implementation for that facility are justified in view of this increased protection.

(4) The provisions of paragraphs (a)(2) and (a)(3) of this section are inapplicable and, therefore, backfit analysis is not required and the standards in paragraph (a)(3) of this section do not apply where the Commission or staff, as appropriate, finds and declares, with appropriated documented evaluation for its finding, either:

(i) That a modification is necessary to bring a facility into compliance with a license or the rules or orders of the Commission, or into conformance with written commitments by the licensee; or

(ii) That regulatory action is necessary to ensure that the facility provides adequate protection to the health and safety of the public and is in accord with the common defense and security; or

(iii) That the regulatory action involves defining or redefining what level of protection to the public health and safety or common defense and security should be regarded as adequate.

(5) The Commission shall always require the backfitting of a facility if it determines that such regulatory action is necessary to ensure that the facility provides adequate protection to the health and safety of the public and is in accord with the common defense and security.

(6) The documented evaluation required by paragraph (a)(4) of this section shall include a statement of the objectives of and reasons for the modification and the basis for invoking the exception. If immediately effective regulatory action is required, then the documented evaluation may follow rather than precede the regulatory action.

(7) If there are two or more ways to achieve compliance with a license or the rules or orders of the Commission, or with written licensee commitments, or there are two or more ways to reach a level of protection which is adequate, then ordinarily the applicant or licensee is free to choose the way which best suits its purposes. However, should it be necessary or appropriate for the Commission to prescribe a specific way to comply with its requirements or to achieve adequate protection, then cost may be a factor in selecting the way, provided that the objective of compliance or adequate protection is met.

(b) Paragraph (a)(3) of this section shall not apply to backfits imposed prior to October 21, 1985.

(c) In reaching the determination required by paragraph (a)(3) of this section, the Commission will consider how the backfit should be scheduled in light of other ongoing regulatory activities at the facility and, in addition, will consider information available concerning any of the following factors as may be appropriate and any other information relevant and material to the proposed backfit:

(1) Statement of the specific objectives that the proposed backfit is designed to achieve;

(2) General description of the activity that would be required by the licensee or applicant in order to complete the backfit;

(3) Potential change in the risk to the public from the accidental off-site release of radioactive material;

(4) Potential impact on radiological exposure of facility employees;

(5) Installation and continuing costs associated with the backfit, including the cost of facility downtime or the cost of construction delay;

(6) The potential safety impact of changes in plant or operational complexity, including the relationship to proposed and existing regulatory requirements;

(7) The estimated resource burden on the NRC associated with the proposed backfit and the availability of such resources;

(8) The potential impact of differences in facility type, design or age on the relevancy and practicality of the proposed backfit;

(9) Whether the proposed backfit is interim or final and, if interim, the justification for imposing the proposed backfit on an interim basis.

(d) No licensing action will be withheld during the pendency of backfit analyses required by the Commission's rules.

(e) The Executive Director for Operations shall be responsible for implementation of this section, and all analyses required by this section shall be approved by the Executive Director for Operations or his designee.

[53 FR 20610, June 6, 1988, as amended at 54 FR 15398, Apr. 18, 1989; 72 FR 49504, Aug. 28, 2007]

The Committee To Review Generic Requirements (CRGR)

The Committee to Review Generic Requirements (CRGR) reviews proposed generic backfits that are to be imposed on all power reactors and/or selected nuclear materials facilities that are licensed by the U.S. Nuclear Regulatory Commission (NRC). The purpose of these reviews is to ensure that such backfits are appropriately justified based on the backfit provisions of applicable NRC regulations and the Commission's backfit policy. Specifically, Title 10, Section 50.109, of the *Code of Federal Regulations* ([10 CFR 50.109](#)) defines a *backfit* as "the modification of or addition to systems, structures, components, or design of a facility; or the design approval or manufacturing license for a facility; or the procedures or organization required to design, construct or operate a facility; any of which may result from a new or amended provision in the Commission's regulations or the imposition of a regulatory staff position interpreting the Commission's regulations that is either new or different from a previously applicable staff position." *Generic backfits* are those that apply to one or more classes of nuclear power reactors or materials facilities.

As an advisory committee to the NRC's [Executive Director for Operations \(EDO\)](#) , the CRGR's primary responsibilities are to recommend either approval or disapproval of the staff's proposed backfits, and to guide and assist the NRC's program offices in implementing the Commission's backfit policy. The [CRGR Charter](#) is incorporated in [Management Directive 8.4](#) , "Management of Facility-Specific Backfitting and Information Collection," as well as various program office administrative procedures for developing new or revised generic actions.

The CRGR also provides an annual report to the Commission describing the CRGR's activities during the previous year, as well as its decisions regarding the various topics that the CRGR reviewed during the year. As an additional responsibility, the CRGR reviews the NRC's generic administrative backfit controls to ensure that they are sufficient and that the related staff guidance is comprehensive and clear. See the following for additional information:

- [CRGR Membership](#)
- [CRGR Charter](#)
- [Procedures for Requesting a CRGR Review](#)
- [Content Requirements for Packages Submitted for CRGR Review](#)
- [Results of Previous CRGR Reviews](#)
- [Contact Us](#)
- [Related Information About Backfitting and Regulatory Analysis](#)

NRC INSPECTION MANUAL

DLPM

PART 9900: TECHNICAL GUIDANCE

TG OpsNOED.wpd

OPERATIONS - NOTICES OF ENFORCEMENT DISCRETION

A. PURPOSE

This document provides guidance to staff in the Regional Offices and the Office of Nuclear Reactor Regulation (NRR) on the process for the NRC to exercise enforcement discretion with regard to limiting conditions for operation (LCO) in power reactor Technical Specifications (TS) or other license conditions. This type of discretion is addressed in Section VII.C of the "General Statement of Policy and Procedures for NRC Enforcement Actions" (Enforcement Policy, NUREG-1600) and is designated as a Notice of Enforcement Discretion (NOED). An NOED can be granted for a power reactor at power, in startup, or in shutdown, provided the specific applicable criteria set forth below are met. This guidance is not applicable to non-power or permanently shutdown reactors. NOEDs may be warranted only if compliance with a TS LCO or with other license condition would involve:

- (1) an unnecessary plant transient; or
- (2) performance of testing, inspection, or system realignment that is inappropriate for the specific plant conditions; or
- (3) unnecessary delays in plant startup without a corresponding health and safety benefit; or
- (4) the potential for an unexpected plant shutdown during severe weather or other natural phenomena that could exacerbate already degraded electrical grid conditions and could have an adverse impact on the overall health and safety of the public.

The NOED process is designed to address unanticipated temporary noncompliance with license conditions and TS only. NOEDs are not appropriate to: allow planned entries into TS Required Actions to perform maintenance, troubleshooting, or other activities; after a violation of the license has already occurred; or, for operator licenses.

Further, NOEDs are not appropriate for nonconformances with regulations, Updated Final Safety Analysis Reports (UFSARs), or codes. Exemptions from regulations, non-compliance with UFSARs, and reliefs from codes must be processed in accordance with the provisions of Title 10, Code of Federal Regulations (10 CFR) Parts 50.12, 50.59 or 50.55a, respectively, and are not addressed by the NOED policy. In these situations, the licensee must perform a prompt safety assessment of the noncompliance and make an

appropriate operability determination. The licensee should determine what other NRC requirements apply to the situation (e.g., 10 CFR Part 50, Appendix B, Criterion XVI, 10 CFR 50.12) and take the required actions.

When an NOED is granted, it is recognized that the operating license will be violated, but the NRC is exercising its discretion to not enforce compliance with the operating license for a specified time period. In all cases, appropriate enforcement actions consistent with the NRC's Enforcement Policy must be considered for the root causes leading to the need for the NOED.

B. CRITERIA

1.0 General Considerations

A licensee may depart from its TS in an emergency, pursuant to the provisions of 10 CFR 50.54(x), without prior NRC approval, when it must act immediately to protect the public health and safety. However, situations occur occasionally that are not addressed by the provisions of 10 CFR 50.54(x), and for which the NRC's exercise of enforcement discretion may be appropriate. Provided that the licensee has not abused the emergency provisions of 10 CFR 50.91 by failing to apply for an amendment (including an exigent or emergency amendment) in a timely manner, it is appropriate that the NRC have the NOED procedure for expeditious notice to a licensee of NRC's intention to exercise enforcement discretion under limited circumstances. An NOED request may be considered by the staff only if it is not possible to resolve the situation with an emergency license amendment.

The NRC staff expects to grant NOEDs infrequently. Although requirements may dictate that a plant must be shut down, refueling activities suspended, or plant startup delayed, the NRC staff is under no obligation to grant an NOED. The decision to forego enforcement action is discretionary. An NOED is to be granted only if the NRC staff is clearly satisfied that such action is warranted from a public health and safety standpoint. NOEDs should be granted on a case-by-case basis, considering the individual plant circumstances. The staff may perform an independent risk assessment of the NOED request, in addition to the licensee's assessment, as an input to its decision process. Typically, this would involve a joint effort by the regional Senior Reactor Analyst and the NRR's Probabilistic Safety Assessment Branch. If a Licensee Event Report (LER) is required by 10 CFR 50.73 as a result of the non-conformance, the licensee must submit that LER, notwithstanding the staff's granting of an NOED. If the NRC decides not to grant an NOED, the licensee must take the action required by the TS (except as stated in 10 CFR 50.54(x)).

2.0 Types of NOEDs

There are two types of NOEDs: (1) "regular" NOEDs and (2) "severe weather or other natural phenomena-related" NOEDs (severe-weather NOEDs). "Regular" NOEDs are appropriate where forced compliance with the license would involve unnecessary transients which may affect the radiological health and safety of the public. Severe-weather NOEDs involve overall public health and safety considerations (e.g., potential impact on public health and safety because of power delivery challenges as opposed to only radiological safety considerations). Severe-weather NOEDs are only intended for use when an emergency situation has been determined to exist. This determination must be based on an assessment of potential adverse effects to public health and safety in combination with

a potential interruption of power delivery resulting from severe weather or other natural phenomena. When these conditions exist, a severe-weather NOED may be appropriate, if enforcing compliance with specific license requirements could worsen the emergency situation. Situations that meet the prerequisites for a severe weather NOED are rarely expected to occur.

2.1 Situations Affecting Radiological Safety - Regular NOEDs

Granting this type of an NOED shall not involve any net increase in radiological risk. Requests for enforcement discretion should provide a risk-informed basis demonstrating that continued operation is essentially within the plant's normal work control levels and, therefore, there is no net increase in radiological risk to the public at those levels or adverse impact on the environment. Normal work control levels, expressed in terms of incremental core damage probability and large early release probability, are specified in industry and NRC guidance on configuration risk management (e.g., R.G. 1.182). Plant-specific transition and shutdown risk models may be used to gain additional risk insights to support an NOED request.

The following are NOED criteria applicable for various plant conditions:

1. For a plant in power operation, an NOED is intended to:
 - a. avoid unnecessary transients as a result of compliance with the license condition and, thus, minimize potential safety consequences and operational risks; or
 - b. avoid testing, inspection, or system realignment that is inappropriate for the particular plant conditions (e.g., an activity that may initiate an unnecessary transient).
2. For plants in a shutdown condition, an NOED is intended to reduce shutdown risk by avoiding testing, inspection, or system realignment that is inappropriate for the particular plant conditions, in that it does not provide an overall safety benefit or may, in fact, be detrimental to safety in the particular plant condition.
3. For plants attempting to start up, NOED requests are more difficult to justify than for operating plants, because delaying startup¹ does not usually leave a plant in a condition in which it could experience undesirable transients. NOEDs for plants attempting to start up are to be granted only when the licensee demonstrates and the NRC staff has concluded that:
 - a. the equipment or system does not perform a safety function in the Mode in which operation is to occur (e.g., a TS which requires the equipment to be operable in a Mode not required by the UFSAR); or,

¹For purposes of this guidance, "startup" is defined as any condition with the reactor being in other than "operation" in Mode 1 or cold shutdown.

- b. the safety function performed by the equipment or system, in the Mode in which operation is to occur, may have only marginal safety benefit and remaining in the current Mode increases the likelihood of an unnecessary plant transient; or,
- c. the TS or other license conditions require a test, inspection, or system realignment that is inappropriate for the particular plant conditions, in that it does not provide a safety benefit or may, in fact, be detrimental to safety in the particular plant condition.

The licensee's NOED request should specifically address which of the above criteria were satisfied. If none of the criteria are satisfied, an NOED will not be granted and the licensee must comply with the license requirements until a license amendment is approved.

2.2 Situations Arising from Severe Weather or Other Natural Phenomena

In granting this type of NOED, a determination must be made that public health and safety and the environment will not be impacted unacceptably. This determination is qualitative and must be based upon balancing the effect on public health and safety of not operating, against the potential radiological or other hazards associated with continued operation, using both risk insights and informed judgements, as appropriate.

In unusual situations, severe weather or other natural phenomena may result in a government entity or a responsible independent entity (such as a regional power authority) making the determination that power delivery challenges in combination with potential adverse effects (non-radiological) to public health and safety constitute an emergency situation. Such situations are expected to occur rarely. When these conditions exist, a severe-weather NOED may be appropriate if enforcing compliance with specific license requirements could worsen the emergency situation.

The licensee's request must be sufficiently detailed for the staff to assess and balance the effect on public health and safety of not operating, against the potential radiological or other hazards associated with continued operation and make a determination that public health and safety will not be impacted unacceptably by granting the NOED.

3.0 General Expectations

Whenever possible, licensees should request an emergency license amendment in accordance with 10 CFR 50.91 rather than an NOED. Although the NOED process addresses unanticipated and time-critical conditions, the potential for NOED requests is often predictable. Periodic communication between licensees and the staff, such as routine calls between licensees and their Project Managers (PMs), and daily plant status calls between the region and NRR, should identify situations where an NOED might be requested by the licensee. In addition, Resident Inspectors, PMs, and regional Projects Branch Chiefs should promptly discuss situations that may result in a licensee NOED request.

These routine communications provide adequate advance notice of potential NOED requests to the staff such that the cognizant PM and the regional staff can mobilize appropriate technical and project resources for participating in NOED teleconferences to

discuss and promptly process NOED requests. An internal NRC teleconference should typically be held first, followed by a licensee-staff NOED teleconference. In these situations, the regional Projects Branch Chief and PM will organize the teleconferences with appropriate regional and headquarters personnel and the licensee.

As a minimum, the following personnel (or their backups) should be included: resident inspector, PM, Section Chief, regional Projects Branch Chief, cognizant regional director, DRP, regional SRA, SPSB representative, Project Director (PD), and NRR NOED Process Expert. Appropriate additional regional and headquarters personnel will participate as needed to address specific areas of expertise. For severe-weather NOEDs technical reviewers from EEIB, Probabilistic Safety Assessment, Reactor Systems, Plant Systems, Materials and Chemical Engineering, Mechanical and Civil Engineering branches will likely be needed to support the teleconference.

There may be other emergent and unanticipated circumstances, e.g., inoperable equipment, missed surveillances etc. with associated short Completion Times that occur during off-business hours, when a licensee might request an NOED. In the unlikely event that a licensee is unable to make contact with either their resident inspector or PM (or their respective management), licensees should call the Emergency Operations Center (Telephone Number (301) 816-5100), to request a teleconference with cognizant staff. In these cases, the Headquarter's Operations Officer (HOO) will contact appropriate staff personnel so that the NOED request is considered in a timely manner. The Technical Assistant, DLPM, will ensure that the Emergency Operations Center always has an up-to-date roster of PMs and their backups, Section Chiefs, NRR NOED Process Experts, and Project Directors for all plants. If none of the project-specific DLPM staff can be contacted, the HOO will contact the DLPM Director, Deputy Director, or another PD.

C. NOED PROCESS

Typically, licensees request an NOED orally. An oral NOED request must be followed by a written request by the licensee within 2 working days, except in the case of severe-weather NOEDs. Because the staff is required to inform the Commission expeditiously of granting a severe-weather NOED, a written NOED request must be provided within a few hours of the oral request.

The staff may grant an NOED orally, but this must be followed by written authorization within 2 working days of the licensee's written request. When an NOED is granted, the staff's evaluation of the licensee's request, including the applicable items in Section D of this guidance, shall be documented in a letter to the licensee. The letter should follow the format and content of Attachment A to this guidance. All licensee-staff teleconferences to discuss formal NOED requests should be made through the NRC headquarter's Emergency Operations Center recorded telephone line (Telephone No.: (301) 816-5100). This provides a record of the discussion and a basis for future verification of its consistency with the licensee's follow-up written request.

Licensees are encouraged to engage the staff immediately upon identifying a situation that might potentially warrant the licensee to request an emergency license amendment or NOED. This provides an early opportunity for the licensee and staff to discuss the situation

and determine whether an emergency license amendment should be requested rather than an NOED. Preliminary licensee-staff teleconferences to discuss the status of a plant condition or situation, but not formally request an NOED, are not required to be made through a recorded line.

In general, the staff will not consider an NOED request if at least 72 hours of Completion Time remain at the time the situation is identified. Emergency license amendment requests are usually more appropriate in such situations.

The authority to grant an NOED is assigned to the cognizant Regional Administrator, who may delegate the authority to the Regional Director, Division of Reactor Projects (DRP). Before granting an NOED, the region shall obtain the concurrence of the cognizant NRR management individuals. The assigned PD for the plant is authorized to provide the concurrence of NRR, after consulting with appropriate NRR personnel and management and will designate any additional NRR concurrences.

Within 4 working days of oral granting of the licensee's NOED request, the licensee must submit a follow-up exigent license amendment request in accordance with 10 CFR 50.91, unless the staff agrees, in advance of granting the NOED, that a follow-up license amendment is not needed. Staff agreement that a follow-up amendment is not warranted shall be documented in the written NOED authorization.

Generally, permanent, as opposed to temporary (or one-time), license amendments should be requested, either in lieu of or as follow-up to an NOED to resolve plant conditions or situations. The intent of this guidance is to institute permanent solutions that will minimize the likelihood of recurrence. However, there are situations where a temporary amendment is appropriate. Examples include:

- (1) amendments whose acceptability relies on complex compensatory actions that are not practical on a permanent basis;
- (2) risk-informed amendments whose acceptability cannot be demonstrated on a permanent basis; and
- (3) amendments requested and approved until a supportable permanent amendment request can be submitted and approved.

Licensee justification for a temporary amendment should be discussed with the staff during the formal NOED request teleconference, or before submitting an emergency amendment request. The licensee's amendment request shall include justification for the temporary nature of the requested amendment. The staff cannot require the licensee to request a permanent amendment. However, in situations where agreement is not reached but where a licensee's temporary amendment request is otherwise technically justified, the staff's safety evaluation will document: the insufficient justification for the temporary nature of the amendment; that subsequent requests for the same condition might not meet 10 CFR 50.91 emergency criteria; and that recurrence of the condition may be considered inadequate corrective action in accordance with 10 CFR Part 50, Appendix B. If warranted, a license condition may be added to require a permanent amendment request subsequent to approval of a temporary amendment.

Follow-up license amendments should be processed by NRR on an exigent basis in accordance with the process for exigent amendments. Follow-up license amendments should be issued by the staff within 4 weeks of the written authorization of the NOED, unless otherwise justified by special circumstances. Such special circumstances should be documented promptly in a memorandum from the responsible PD to the Associate Director for Project Licensing and Technical Analysis (ADPT). When the follow-up amendment is issued, the transmittal letter should identify the NOED which the amendment supersedes. The PM should ensure that an electronic copy of the letter issuing the follow-up license amendment is sent to the E-mail address: NOED and OE Internet Webmaster, E-mail: OEWEB (file MUST be the FINAL agency document).

For severe-weather NOEDs, the regional and headquarters staffs should make reasonable efforts to assess the nature of the emergency situation. A teleconference should be held as soon as possible among senior licensee management, NRR and regional staffs. Participating staff personnel should include: NRR PM, NRR NOED Process Expert, PD, cognizant technical branch chiefs, including the EEIB chief, if possible, to evaluate the emergency assessment, appropriate regional projects and technical management, the SRA and RI. Following the teleconference the licensee must immediately submit (within a few hours) a written request documenting all the bases, justifications, commitments and other considerations and conditions discussed and agreed upon in the teleconference. The PM should inform the Commission of the granting of the NOED through the cognizant Regional Coordinator, OEDO, as expeditiously as possible. See Attachment B for a sample memorandum from the OEDO to the Commission. The cognizant PM should prepare this memorandum in draft and give it to the cognizant Regional Coordinator, OEDO, for finalization and processing.

There may be occasions when several plants in different regions might request NOEDs simultaneously to address common conditions, e.g, a vendor advisory letter or severe weather conditions. In such cases, the regions and NRR should coordinate closely with each other to avoid potential duplication of effort and/or inconsistent approaches and to obtain any special assistance or expertise needed. In such cases, plant-specific NOEDs will be granted by the cognizant region in accordance with the guidance in this section. To improve consistency in staff determinations relating to the NOED requests, approvals, root cause violations and enforcement actions, the cognizant NRR technical branch chief(s) should be included in all discussions and decisions.

D. STAFF EVALUATION AND DOCUMENTATION

The staff should ensure that the licensee's oral and written requests for an NOED address the following:

1. The TS or other license conditions that will be violated.
2. The circumstances surrounding the situation: including likely causes; the need for prompt action; action taken in an attempt to avoid the need for an NOED; and identification of any relevant historical events.
3. Information to show that the cause and proposed path to resolve the situation are understood by the licensee, such that there is a high likelihood that planned actions to resolve the situation can be completed within the proposed NOED time frame.

4. The safety basis for the request, including an evaluation of the safety significance and potential consequences of the proposed course of action. The following information should be provided in support of this evaluation. To the extent practicable, the licensee should address the quantitative and qualitative aspects noted below. The numerical guidance for acceptance was established to augment qualitative arguments that the continued operation of the plant during the period of enforcement discretion will not cause risk to exceed the level determined acceptable during normal work controls and, therefore, there is no net increase in radiological risk to the public.
 - a. Use the zero maintenance PRA model to establish the plant's baseline risk and the estimated risk increase associated with the period of enforcement discretion. For the plant-specific configuration the plant intends to operate in during the period of enforcement discretion, the incremental conditional core damage probability (ICCDP) and incremental conditional large early release probability (ICLERP) should be quantified and compared with guidance thresholds of less than or equal to an ICCDP of $5E-7$ and an ICLERP of $5E-8$. These numerical guidance values are not pass-fail criteria.
 - b. Discuss the dominant risk contributors (cut sets/sequences) and summarize the risk insights for the plant-specific configuration the plant intends to operate in during the period of enforcement discretion. This discussion should focus primarily on risk contributors that have changed (increased or decreased) from the baseline model as a result of the degraded condition and resultant compensatory measures, if any.
 - c. Explain compensatory measures that will be taken to reduce the risk associated with the specified configuration. Compensatory measures to reduce plant vulnerabilities should focus on both event mitigation and initiating event likelihood. The objectives are to:
 - i. reduce the likelihood of initiating events;
 - ii. reduce the likelihood of unavailability of trains redundant to the equipment that is out-of-service during the period of enforcement discretion;
 - iii. increase the likelihood of successful operator recovery actions in response to initiating events.

An example is a situation where a motor-driven auxiliary feedwater (MDAFW) pump has failed and risk insights have established that plant transient initiators may be risk-significant events because the plant has no primary feed-and-bleed capability and only limited secondary feed capability is available. As a compensatory measure during the period of enforcement discretion, the licensee may defer non-essential surveillances or other maintenance activities where human error contributes to the likelihood of a plant scram and subsequent demand on the remaining AFW pumps. Another example of appropriate compensatory measures would be actions that

increase the likelihood of success in manually aligning or starting equipment in response to an initiating event (e.g., stationing operators locally at equipment, "just-in-time training", and/or additional contingency plans).

- d. Discuss how the proposed compensatory measures are accounted for in the PRA. These modeled compensatory measures should be correlated, as applicable, to the dominant PRA sequences identified in item b. above. In addition, other measures not directly related to the equipment out-of-service may also be implemented to reduce overall plant risk and, as such, should be explained. Compensatory measures that cannot be modeled in the PRA should be assessed qualitatively.
 - e. Discuss the extent of condition of the failed or unavailable component(s) to other trains/divisions of equipment and what adjustments, if any, to the related PRA common cause factors have been made to account for potential increases in their failure probabilities. The method used to determine the extent of condition should be discussed. It is recognized that a formal root cause or apparent cause is not required given the limited time available in determining acceptability of a proposed NOED. However, a discussion of the likely cause should be provided with an associated discussion of the potential for common cause failure.
 - f. Discuss external event risk for the specified plant configuration. An example of external event risk is a situation where a reactor core isolation cooling (RCIC) pump has failed and a review of the licensee's Individual Plant Examination of External Events or full-scope PRA model identifies that the RCIC pump is used to mitigate certain fire scenarios. Action may be taken to reduce fire ignition frequency in the affected areas or reduce human error associated with time-critical operator actions in response to such scenarios.
 - g. Discuss forecasted weather conditions for the NOED period and any plant vulnerabilities related to weather conditions.
- 5. The justification for the duration of the noncompliance.
 - 6. The condition and operational status of the plant (including safety-related equipment out of service or otherwise inoperable).
 - 7. The status and potential challenges to off-site and on-site power sources.
 - 8. The basis for the licensee's conclusion that the noncompliance will not be of potential detriment to the public health and safety.
 - 9. The basis for the licensee's conclusion that the noncompliance will not involve adverse consequences to the environment.
 - 10. A statement that the request has been approved by the facility organization that normally reviews safety issues (Plant On-site Review Committee, or its equivalent).

11. The request must specifically address which of the NOED criteria for appropriate plant conditions specified in Section B is satisfied and how it is satisfied.
12. Unless otherwise agreed as discussed in Section B, a commitment is required from the licensee that the written NOED request will be submitted within 2 working days and the follow-up amendment will be submitted within 4 working days of verbally granting the NOED. The licensee's amendment request must describe and justify the exigent circumstances (see 10 CFR 50.91(a)(6)). The licensee should state if staff has agreed during the teleconference that a follow-up amendment is not needed. If the licensee intends to propose a temporary amendment, the licensee's amendment request shall include justification for the temporary nature of the requested amendment.
13. In addition to items 1-12 above, for a severe-weather NOED request the licensee must provide the following information:
 - a. The name, organization and telephone number of the official in the government or independent entity who made the emergency situation determination. If deemed necessary, the staff may contact the appropriate official to independently verify the information provided by the licensee prior to making an NOED determination.
 - b. Details of the basis and nature of the emergency situation including, but not limited to, its effect on:
 - i. on-site and off-site emergency preparedness;
 - ii. plant and site ingress and egress;
 - iii. off-site and on-site power sources;
 - iv. grid stability; and
 - v. actions taken to avert and/or alleviate the emergency situation (e.g., coordinating with other utilities and the load dispatcher organization for buying additional power or for cycling load, or shedding interruptible industrial or non-emergency loads).
 - c. Potential consequences of compliance with existing license requirements (e.g., plant trip, controlled shutdown).
 - d. The impact of the emergency situation on plant safety including the capability of the ultimate heat sink.
 - e. Potential adverse effects on public health and safety from enforcing compliance with specific license requirements during the emergency situation.

The request from the licensee should normally be sent by facsimile or e-mail to the NRR PD and the Regional Director, DRP. The signed original should be sent to the Document Control Desk. However, if circumstances do not permit time for a formal written request to

be prepared and sent to the NRC, the licensee may make the request orally, describing to the best of its ability the information required by the staff.

If the request is made orally, the NRC must have sufficient information to reach the same conclusions as if it had received a written submittal. The follow-up written request must confirm the information that the staff relied upon in arriving at its decision to grant the NOED. If an NOED is authorized orally but the licensee subsequently determines that no violation of the license will occur and thus the NOED is not needed, the licensee and staff should still follow up with appropriate documentation. In such cases, the licensee must submit a letter within 2 working days, documenting its oral request, the NRC's oral approval, and the circumstances that led to the determination that the NOED is no longer needed.

Prior to issuance of an NOED, to the extent practicable, the regional Projects Branch Chief and/or the PM should verify the licensee's oral assertions, including likely cause and compensatory measures, and that the NOED request is consistent with the staff's policy and guidance. Verification can be accomplished by NRC regional and/or headquarters personnel through various methods including, but not limited to: independent reviews of licensee records; physical observations; or reviews of docketed information. If any of the verifications cannot be made prior to issuance of the NOED, this should be done subsequently, as soon as time permits. The results of the verification activities are to be documented in a subsequent inspection report. When an NOED is granted, the responsible resident inspector should open an Unresolved Item (URI) to facilitate prompt tracking, documentation and closure of inspection, verification and resolution activities, including enforcement action determinations, associated with the NOED.

The staff's letter documenting the NOED should be self-standing, address the appropriate items in Section D of this guidance, and demonstrate that issuance of the NOED is consistent with the policy and guidance. The NOED letter should also clearly specify which of the licensee's reasons the staff accepted in reaching its decision and the NOED criterion that is satisfied. The sequence of events in the staff's letter should be clear and include: how and when the licensee first requested the discretion, what the length of the Completion Time/surveillance interval involved was, when the allowed time will end, when (if applicable) oral discretion was granted, the date of the licensee's follow-up written request (if the original was made orally), the specific period of discretion starting at the end of the Completion Time and, if the NOED was terminated before the staff's letter is issued, the letter should contain the time the NOED was actually terminated. The staff should document in the NOED letter its verification of the consistency between the licensee's oral and written requests. The letter should also identify by name and title, the key NRC staff who participated in the NOED evaluation and approval and, when the licensee's follow-up license amendment request will be or was submitted. If the staff and licensee were unable to agree on whether the follow-up amendment should be permanent, the staff shall document this information in the NOED letter, and include a statement that, if a temporary amendment is proposed, recurrence of the situation may be considered as ineffective corrective action in accordance with 10 CFR Part 50, Appendix B and subsequent requests related to the same situation may not meet the 10 CFR 50.91 emergency criteria.

Once an NOED request is made, either orally or in draft or final written form and the licensee-staff teleconference to discuss the request has been made through the NRC Headquarter's Emergency Operations Center recorded telephone line, the staff must follow

up with a letter documenting its decision and bases for its decision even if the NOED request is denied or if the need for the NOED dissipates (see Attachment A).

It is not acceptable to permit the licensee to not follow a TS or license condition while the staff considers a request for discretion. If the licensee is unable to provide the staff an adequate basis before the Completion Time ends, the licensee must take the Required Actions to comply with the TS while endeavoring to provide the staff an adequate basis for granting the NOED. It is recognized that in cases involving short Completion Times or complex issues, the staff may have to act before all the information is available. In such cases, if the information presented provides a clear basis that public health and safety is assured and that the criteria of the NOED policy are satisfied, then an NOED may be granted. If subsequent information fails to support the initial issuance of the NOED, it should be terminated, as discussed in Section E.

E. ENFORCEMENT

1.0 Early Termination of NOED

The NRC may terminate an NOED for any reason before the time specified in the NOED as a matter of its discretion. In such cases, the staff should verify that the licensee takes steps to achieve the appropriate plant status and implement the existing TS Required Actions upon oral notification of the termination by the cognizant Regional Division Director.

Upon notification of termination of the NOED, the licensee must inform the NRC of the proposed course of action to restore the plant to a condition of compliance with the license. The termination of the NOED by the NRC should be documented in a letter to the licensee and should address the actions taken or planned by the licensee, including the time necessary for the licensee to achieve the required plant conditions in the most prudent manner, considering safety.

2.0 Consideration of Enforcement

The decision to exercise enforcement discretion by granting an NOED does not change the fact that a violation will occur, nor does it imply that enforcement discretion is being exercised for any violation that may have led to the need for the NOED. In each case where the NRC staff has chosen to exercise enforcement discretion, appropriate enforcement action, in accordance with the NRC's Enforcement Policy, will normally be taken for any violations that contributed to the noncompliance. Such enforcement action is intended to emphasize that licensees should not rely on the NRC's NOED process as a substitute for compliance or for requesting a license amendment.

The staff should follow the guidance in the NRC Enforcement Manual located on OE's website (<http://www.nrc.gov/reading-rm/doc-collections/enforcement/notices/more.html>), to evaluate the need for and process any appropriate enforcement action. OE approval is required if more than a minor violation is involved and the staff determines not to pursue an enforcement action, i.e., notice of violation or a non-cited violation. The enforcement action should reference the NOED number. All staff determinations regarding enforcement actions associated with granting an NOED should be documented by the region in the next appropriate inspection report under the URI established to track that NOED, regardless of whether or not the determination is to take enforcement action.

F. DISTRIBUTION

Copies of the letter to the licensee are distributed according to established regional and NRR procedures and should include the following:

1. Regional Coordinator, OEDO
2. Regional Administrator
3. ADPT, NRR
4. Division Director, Division of Licensing Project Management (DLPM), NRR
5. Director, Office of Enforcement
6. Director, Division of Reactor Projects, Region [X]
7. Public
8. Technical Assistant, DLPM, NRR
9. Electronic copy (WordPerfect file) to E-mail address: NOED
10. Electronic copy (WordPerfect file) to OE Internet Webmaster, E-mail: OEWEB (file MUST be the FINAL agency document).
11. Appropriate Branch Chiefs (Region and NRR)
12. Appropriate NRR PD and Section Chief
13. Appropriate NRR PM
14. Appropriate Senior Resident Inspector

Further, the issuing region should ensure that the licensee's request is profiled into the Agencywide Documents Access and Management System (ADAMS) as "publicly available" in accordance with agency policy. Electronic copies of NOEDs should also be prepared in accordance with Attachment C. OE will post the staff's NOED approval or denial letter on the NRC external web page:

(<http://www.nrc.gov/reading-rm/doc-collections/enforcement/notices/>).

The NOED database manager in DLPM, NRR, will maintain a file of all NOEDs. Also, the PM should send an electronic copy of the letter issuing the follow-up license amendment to the E-mail address: NOED.

G. TRACKING OF NOTICES OF ENFORCEMENT DISCRETION

The cognizant NRR PM should open a Technical Assignment Control (TAC) number under Licensing Action code LD for all NOED actions consuming at least 4 hours of NRR resources. The cognizant regional Branch Chief will assign the appropriate work tracking codes for the regional staff.

Each NOED request will be assigned a number to permit tracking (regardless of whether granted or not). The cognizant region will assign a number consisting of seven characters (five numbers and two dashes) in the format XX-X-XX. The first two numbers indicate the year, the third number indicates the number of the region, and the last two numbers are the sequential number of the NOED for that region during the current calendar year. For example, NOED 04-3-02 is the 2nd NOED issued by Region III in 2004. The NOED number should be included in parenthesis at the end of the subject line for the NOED written authorization, for example: (NOED 04-3-02) and in the ADAMS profile per the ADAMS template. NOED numbers will be assigned and tracked by designated regional personnel. OE will post the staff's NOED approval letter on the NRC external web page:

(<http://www.nrc.gov/reading-rm/doc-collections/enforcement/notices/>).

Each region is responsible for tracking the NOEDs it grants and for entering the required data into its tracking system. Additionally, each region is responsible for inspection, follow-up, and enforcement for NOEDs it granted.

On a semi-annual basis, the DLPM NOED database manager will request the regions to provide updated database information regarding follow-up actions to previously granted NOEDs. This should include references to documents and dates for verification of licensees' oral assertions in the NOED requests, the determination to take or to not take enforcement action for any violations that may have led to the need for the NOED, and any follow-up inspections of licensees' root cause determinations, and corrective actions.

H. REFERENCE

NUREG-1600, "General Statement of Policy and Procedures for NRC Enforcement Actions, Section VII C. 'Exercise of Discretion for an Operating Facility'"

END

Attachments:

- A. Sample Letter Granting an NOED
- B. Sample Memorandum for Notification to the Commission Regarding Granting an NOED for Severe Weather or Other Natural Phenomena.
- C. File Format for Electronic Copy (WordPerfect file) of NOED Approval / Disapproval Letters.

Attachment A
SAMPLE LETTER FOR GRANTING AN NOED(*)

Addressee

SUBJECT: NOTICE OF ENFORCEMENT DISCRETION FOR [LICENSEE NAME]
REGARDING [PLANT NAME(S)] [TAC NO. XXXXXX, NOED NO. XX-X-
XX]

By letter dated [date of letter], you requested that the NRC exercise discretion to not enforce compliance with the actions required in [TS or license requirement citation]. Your letter documented information previously discussed with the NRC in a telephone conference on [date] at [time]. The principal NRC staff members who participated in that telephone conference included [list name and titles of the principal staff participants]. You stated that on [date and time] the plant(s) would not be in compliance with [TS or license requirement] which would require [statement of the requirement including the Completion Time and the date and time when the required action was entered]. You requested that a Notice of Enforcement Discretion (NOED) be granted pursuant to the NRC's policy regarding exercise of discretion for an operating facility, set out in Section VII.C, of the "General Statement of Policy and Procedures for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600, and be effective for the period [state licensee's requested period for the NOED]. This letter documents our telephone conversation on [date and time] when we orally issued this NOED. [If appropriate: We understand that the condition causing the need for this NOED was corrected by you causing you to exit from the [TS/license condition] and from this NOED on [date and time].

[Briefly restate the licensee's description of the events leading up to the request for the NOED. Cite the explicit criterion in Section B of this guidance that the licensee satisfied. Summarize the staff's evaluation of the licensee's request and supporting safety rationale including all applicable items in Section D of this guidance and document the staff's basis for determining the acceptability of the request. State which of the licensee's justifications the staff accepted and to what extent that staff verified the licensee's oral and written assertions, prior to issuance of this letter.

The licensee's commitments with regard to a follow-up amendment and the nature of the request (i.e., permanent or temporary) should be discussed. If the licensee intends to propose a temporary amendment, the staff should discuss the acceptability of the licensee's position. The staff cannot require the licensee to request a permanent amendment. However, in situations where a licensee states its intention to propose a temporary amendment, the staff will document in the NOED, that if insufficient justification for the temporary nature of the amendment is provided: that subsequent requests for the same condition might not meet 10 CFR 50.91 emergency criteria; that recurrence of the condition may be considered inadequate corrective action in accordance with 10 CFR Part 50, Appendix B; and if warranted, a license condition may be added to require a permanent amendment request subsequent to approval of a temporary amendment.]

On the basis of the staff's evaluation of your request, we have concluded that granting this NOED is consistent with the Enforcement Policy and staff guidance, and has no adverse impact on public health and safety or the environment. Therefore, it is our intention to exercise discretion to not enforce compliance with [TS or license requirement] for the period from [date and time] until [date and time: state if the approved NOED effective duration differs from the requested time and why].

[The staff plans to complete its review and disposition the follow-up license amendment within 4 weeks of the date of this letter].

As stated in the Enforcement Policy, action will be taken, to the extent that violations were involved, for the root cause that led to the noncompliance for which this NOED was necessary.

signature

Regional Administrator or designee

Docket No(s).: 50-xxx

* Note: A similarly formatted letter should be used for situations when an NOED request is denied based on its technical/safety merits or when early termination is required.

Attachment B

SAMPLE MEMORANDUM FOR NOTIFICATION OF NOED FOR SEVERE WEATHER
OR OTHER NATURAL PHENOMENA

(Date)

OFFICE OF NUCLEAR REACTOR REGULATION
NOTIFICATION OF ISSUANCE OF AN NOED
FOR SEVERE WEATHER OR OTHER NATURAL PHENOMENA

Licensee: (Name of Licensee)

Facility:

Docket No:

NOED No.

To: Chairman and Commissioners

SUBJECT: NOED GRANTED FOR [Be specific: SEVERE WEATHER OR OTHER
NATURAL PHENOMENA]

This is to inform the Commission that a Notice of Enforcement Discretion (NOED) as a result of [severe weather or other natural phenomena] was granted on [date] to [licensee name and facility] by Region [X].

This action is based on the licensee's request on [date] for an NOED. This is an information memorandum and requires no Commission action.

[Describe in summary form: the name, organization and telephone number of the official that made the emergency assessment, Details of the basis and nature of the emergency; consequences of compliance with the license conditions to the plant and to exacerbation of the emergency situation; status, and potential challenges to off-site and on-site power sources, and the impact of the emergency on plant safety; demonstrated actions taken to avert and/or alleviate the emergency situation, including steps taken to avoid being in the noncompliance, as well as efforts to minimize grid instabilities (e.g., coordinating with other utilities and the load dispatcher organization for buying additional power or for cycling load, shedding interruptible industrial or non emergency loads)].

Contact:(name), NRR, 415-XXXX

Distribution:

Regional Administrators

Director, NRR

Cognizant PM/PD/Regional DRP Director

Attachment C

FILE FORMAT FOR ELECTRONIC COPY (WORDPERFECT FILE)
OF NOED APPROVAL LETTER

1. Replace the WordPerfect Letterhead Paper Size with Standard Paper Size and include typed letter heading, and letter issue date, as follows:

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
U.S. Nuclear Regulatory Commission
61 Forsyth Street, SW., Suite 23T85
Atlanta, GA 30303-3415
[Date]

2. Remove the concurrence page and any attached internal distribution list.
3. Include the following above the letter author's name:

/RA/ or /RA by (identify person who signed letter) for/
4. Save the WordPerfect file with the following filename: NEyyrnn.wpd

where the number of the NOED is yy-r-nn, for example, NOED 04-2-01 for the first NOED granted by Region 2 in 2004. (WPD just tells users that it is a WordPerfect document.)
5. E-mail WordPerfect file to NOED and OEWEB (file MUST be FINAL agency document).
6. ADAMS accession number.



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II**
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

July 26, 2012

Mr. George Hamrick, Vice President
Carolina Power and Light Company
Shearon Harris Nuclear Power Plant
P. O. Box 165, Mail Code: Zone 1
New Hill, North Carolina 27562-0165

SUBJECT: **NOTICE OF ENFORCEMENT DISCRETION (NOED) FOR SHEARON HARRIS
NUCLEAR POWER PLANT, UNIT 1 [NOED NO. 12-2-001]**

Dear Mr. Hamrick:

By letter dated July 24, 2012, you requested that the NRC exercise discretion to not enforce compliance with the actions required in Shearon Harris Nuclear Power Plant, Unit 1 (HNP) required action of Technical Specification (TS) 3.8.1 A.C. Sources – Operating. Your letter documented information previously discussed with the NRC staff in a telephone conference on July 21, 2012, at 5:00 p.m. (all times refer to Eastern Daylight Time). The principal NRC staff members who participated in the telephone conference are listed in the Enclosure. The NRC staff determined that the information in your letter requesting the NOED was consistent with your oral request.

To summarize, you stated that, on July 19, 2012, at 4:00 a.m., Emergency Diesel Generator B (B-EDG) was removed from service for routine maintenance. Shearon Harris Nuclear Power Plant, Unit 1 (HNP), entered Technical Specification (TS) 3.8.1, "A.C. Sources - Operating," TS 3.8.1.1, Action b.3, which requires the inoperable EDG to be restored to operable status within 72 hours (i.e., on July 22, 2012, at 4:00 a.m.). On July 19, 2012, B-EDG was being barred locally as part of post-maintenance testing. During the barring, water was observed issuing from the 5L cylinder. Investigation has determined that the cause of the water intrusion is a cracked cylinder head of the 5L cylinder. At the time of your request, repair efforts were complete, however, the time needed to complete the operability testing associated with the planned and emergent maintenance may not have been sufficient to preclude exceeding the existing allowed out-of-service time (AOT). You requested that a NOED be granted pursuant to the NRC's policy regarding exercise of discretion for an operating facility, set out in Section 3.8 of the "General Statement of Policy and Procedures for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600, and that the NOED be effective until July 22, 2012, at 4:00 p.m. This letter documents our telephone conversation of July 21, 2012 at 5:00 p.m., when we orally granted your NOED request. We understand that the condition which prompted your request for this NOED was corrected allowing HNP to exit from the TS action listed above at 1:50 a.m. on July 22, 2012. Because the TS AOT was not exceeded, this NOED was not needed in order to comply with the existing TS.

On July 19, 2012, at 4:00 a.m. EDT, B-EDG was removed from service for unrelated routine maintenance. On July 19, 2012, at approximately 11:46 p.m., restoration from maintenance revealed that the 5L cylinder on B-EDG had water intrusion that was later confirmed to be from a crack in the cylinder head. You informed us that there have been no similar failures associated with the HNP EDG cylinder heads. Due to the emergent nature of the failure and lack of historical problems associated with the EDG cylinder heads, you stated that the need for an NOED could not have been reasonably avoided. The cracked head was replaced and the cylinder liner inspected to confirm there were no additional sources of leakage.

The NRC staff determined that the requested NOED was necessary to avoid an unnecessary transient as a result of compliance with the license conditions and, thus, minimize potential safety consequences and operational risks (Part 9900, Technical Guidance, Operations – Notices of Enforcement Discretion, Section B.2.1, criterion 1.a). The NRC staff's basis for this discretion considered: (1) your commitment to defer non-essential surveillances and other maintenance activities in the switchyard to reduce the likelihood of a loss of offsite power; (2) your commitment to defer non-essential surveillances and other maintenance activities on risk-significant equipment including, A-EDG and its auxiliaries (i.e., including emergency service water), Turbine-Driven Auxiliary Feedwater Pump (TDAFWP), Dedicated Shutdown Diesel Generator (DSDG), Essential train A AC/ DC power, Division A Switchgear, and Diesel-driven Fire Pump; (3) to review and brief operator actions related to connection of the DSDG to station battery chargers; (4) to review and brief operator actions related to restoration of power using the start-up transformers in the event of an automatic transfer failure; (5) to protect against maintenance and surveillances that could result in a reactor trip; (6) to protect against maintenance and surveillances that could result in loss of main Feedwater; (7) to protect breakers from the Unit Auxiliary Transformers and Startup Transformers to 1D and 1E buses; (8) to walk-down the alternate seal injection system for challenges to functionality; (9) to verify grid conditions are stable; (10) to verify that your calculated Incremental Conditional Core Damage Probability and Incremental Conditional Large Early Release Probability values did not exceed the threshold guidance provided in Inspection Manual Part 9900 Technical Guidance and were consistent with values calculated by NRC regional analysts; (11) to assure that the cause and proposed path to resolve the situation were understood such that there was a high likelihood that planned actions to resolve the situation could be completed within the proposed NOED time frame; (12) to assure that the noncompliance would not be of potential detriment to the public health and safety; and (13) independent verification of some of these conditions and actions by our inspection staff.

On the basis of the NRC staff's evaluation of your request, we have concluded that granting this NOED is consistent with the Enforcement Policy and NRC staff guidance and has no adverse impact on public health and safety or the environment. Therefore, as we informed you at 6:15 p.m., on July 21, 2012, we exercised discretion to not enforce compliance with TS 3.8.1.1, Action b.3 for the period from July 22, 2012, at 4:00 a.m., until July 22, 2012, at 4:00 p.m. As stated during the conference call and in your letter, you have determined that a follow up license amendment is not necessary; however, you plan to perform a study to evaluate extended TS Completion Times for the EDGs and associated equipment. The NRC staff agrees with this determination.

G. Hamrick

3

Because you did not use the extended allowed outage time granted by this NOED, enforcement action related to this matter is not anticipated.

Sincerely,

/RA/

Richard P. Croteau, Director
Division of Reactor Projects

Docket No.: 50-400

License No.: NPF-63

cc w/encl: (See page 4)

☒ PUBLICLY AVAILABLE

☐ NON-PUBLICLY AVAILABLE

☐ SENSITIVE

☒ NON-SENSITIVE

ADAMS: ☐ Yes

ACCESSION NUMBER: _____

☐ SUNSI REVIEW COMPLETE ☐ FORM 665 ATTACHED




OFFICE	RII:DRP	RII:DRP	NRR	RII:DRP	RII:DRP		
SIGNATURE	Via email	RAM /RA/	Via email	Via email	EFG /RA for/		
NAME	JDodson	RMusser	SCoffin	CEvans	RCroteau		
DATE	07/26/2012	07/26/2012	07/26/2012	07/26/2012	07/26/2012		
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY

DOCUMENT NAME: G:\DRPI\RPB4\HARRIS\NOED 12-2-001.DOCX

Related Information About Backfitting and Regulatory Analysis

The following reference documents provide information about backfitting and regulatory analysis, which relates to the activities of the Committee To Review Generic Requirements (CRGR):

- [The Backfit Rule](#) (10 CFR 50.109) sets forth the backfit-related regulatory requirements established by the U.S. Nuclear Regulatory Commission (NRC).
- [Management Directive 8.4](#) , "Management of Facility-Specific Backfitting and Information Collection," reflects the NRC's relevant responsibilities and authorities of various offices, and provides the NRC staff with guidance for implementing the facility-specific backfit provisions of [10 CFR 50.109](#) for nuclear power reactors, [10 CFR 52.39](#), [10 CFR 52.63](#), and [10 CFR 52.98](#) for new reactors and [10 CFR 70.76](#), [10 CFR 72.62](#), and [10 CFR 76.76](#) for nuclear materials facilities, as well as the provisions of [Appendix O to 10 CFR Part 50](#), [10 CFR 50.54\(f\)](#), and the corresponding requirements in [10 CFR Parts 70, 72, and 76](#), and [10 CFR 2.204](#).
- [NUREG/BR-0058](#), "Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission," provides guidance for use in conducting a regulatory analysis of proposed actions that may be needed to protect public health and safety. This guidance will aid the staff and the Commission in determining whether the proposed actions are needed, providing adequate justification, and in documenting the basis for recommending the proposed actions. As such, the guidelines establish a framework for (1) identifying the problem and associated objectives, (2) identifying: alternatives for meeting the objectives, (3) analyzing the consequences of available alternatives, (4) selecting a preferred alternative, and (5) documenting the analysis in an organized and understandable format.
- [NUREG-1409](#), "Backfitting Guidelines," reviews the backfitting process that the NRC uses to decide whether to issue new or revised regulatory requirements, generic correspondence, regulatory guidance, and staff positions to nuclear power reactor licensees.
- [The Regulatory Analysis Slide Presentation](#)  is a set of slides prepared for a training seminar held on June 21, 2004.
- [The NUREG/BR-0058 Slide Presentation](#)  is a set of slides prepared for a training seminar held on June 21, 2004.

Source: NRC website