11/26/03
68 FR 66501
(156)

From: Paul Gunter <pgunter@nirs.org>
To: <nrcrep@nrc.gov>
Date: Mon, Jan 26, 2004 5:20 PM
Subject: NIRS comments on Operator Manual Action Interim Criteria and Enforcement Discretion

To whom it may concern:

Attached please find the comments of Nuclear Information and Resource Service (NIRS) on Operator Manual Action Interim Criteria and Enforcement Discretion.

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E-RIDS = ADM-03
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Template = ADM-013

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January 26, 2004

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Comments of Nuclear Information and Resource Service (NIRS) on the "Draft Criteria for Determining Feasibility of Manual Actions to Achieve Post-Fire Safe Shutdown"

To Whom It May Concern:

On behalf of Nuclear Information and Resource Service (NIRS), I am filing comments regarding Federal Register notices dated November 26, 2003 (Volume 68 Number 228) "Draft Criteria for Determining Feasibility of Manual Actions To Achieve Post-Fire Safe Shutdown," [Page 66501-66503] and December 15, 2003 (Volume 68 Number 240) "Extension of Public Comment Period," [Page 69730].

NIRS is opposed to the Nuclear Regulatory Commission's (NRC) proposed issuance of draft criteria for enforcement discretion and consequently the relaxation of enforcement of current fire protection regulations embodied in 10 CFR 50 Appendix R Section III.G.2.

The Commission's proposed relaxation of fire protection at U.S. nuclear power reactors would regrettably return the nuclear industry and the agency to the vulnerable and dangerous days leading up to the Browns Ferry Fire in 1975. The risk to public health and safety is heightened with the need to have more of an inspected and comprehensive fire protection infrastructure as a increasingly critical part of today's nuclear power station security.

NIRS contends that the agency's proposed action sets a broad precedent effectively undermining the agency's ability to issue future Confirmatory Orders to licensees and follow through with effective enforcement to bring safety violations into compliance with the law. Such action would accomplish more to shield the industry from duly promulgated law than promote the public safety and as such constitutes a serious violation of the agency's mandate from Congress.

Sincerely,

Paul Gunter, Director
Reactor Watchdog Project

Attachment: NIRS Comments

BACKGROUND

"Based on plant operating experiences over the last 20 years, it has been observed that typical nuclear power plants will have three to four significant fires over their operating lifetime. Previous probabilistic risk assessments (PRA) have shown that fires are a significant contributor to the overall core damage frequency, contributing anywhere from 7 percent to 50 percent of the total, considering contributions from internal, seismic, flood, fire, and other events (Refs. C.12.1 and C.12.2). There are many reasons for these findings. The foremost reason is that like many other external events, a fire event not only acts as an initiator but can also compromise mitigating systems because of its common-cause effects."[1]

Current federal law mandates that nuclear power station operators physically protect emergency backup electrical systems (power, control and instrumentation cables) used to remotely shut down the reactor from the control room.[2] The affected regulatory provision requires the physical fire protection of electrical cabling to include independently tested to American Society Test and Measure standards for rating as qualified fire barriers. Such fire protection systems are to be designed, installed and maintained to resist the passage of flame and hot gas to protect encased electrical cables from excessive temperatures for a minimum of 3-hours or; one-hour in conjunction with sprinkler and smoke detector equipment or; alternately, physical separate redundant cables with a minimum of 20-feet with sprinklers and detectors in the same area.

The prescriptive fire code was put in place for U.S. nuclear power stations following the fire at Alabama's Browns Ferry nuclear power station on March 22, 1975 to provide the best assurance that no single fire can destroy a control room's ability to safely and remotely shutdown the reactor. The Browns Ferry fire was started by an employee using a candle flame to check for air leaks along electrical cable trays under the reactor control room, initially igniting polyurethane foam insulating material. The fire quickly spread from the cable spreading room into the reactor building. The fire burned out of control for seven and half hours destroying over 1600 electrical cables including 628 safety-related cable systems. The Browns Ferry fire demonstrated that a high number of circuit failures can occur in a relatively short period of time, in this case within 15 minutes from the ignition of the foam material.[3] It further demonstrated that the federal government's non-regulation to date of fire protection requirements at nuclear power stations was a principle contributing factor to the seriousness of the fire. Station nuclear engineers privately confided a catastrophic release of radiation was avoided only by "sheer luck."[4] NRC issued stricter fire protection guidance after the Browns Ferry fire and over the next several years in a rulemaking highly contested by the nuclear industry codified detailed and prescriptive fire protection requirements in1981. The new rule required fire protection equipment to limit damage done to structures and equipment "so that capability to shut down the plant safely is ensured."[5] The prescriptive fire code required the reactor shutdown circuitry to be protected by independently qualified fire barriers or by cable separation.

In 1992, the majority of the U.S. nuclear power industry was caught using "inoperable" Thermo-Lag 330 fire barriers credited for protecting these reactor safe shutdown systems from fire damage.[6] Other nuclear power station operators were found in violation of the alternate requirement for 20 feet of separation between backup safe shutdown wiring. By 1998, NRC began issuing a series of Confirmatory Orders requiring licensees to replace bogus fire barriers and restore fire barrier operability at nuclear power stations. Through a set of Confirmatory Orders licensees responded that they would come into compliance with duly promulgated law by restoring operability to the fire barriers.

Between 2000 and 2004, renewed NRC fire inspections discovered that a significantly large number of these nuclear power station operators never fulfilled their obligations to restore fire barrier operability or achieve cable separation. Instead, industry quietly opted to sacrifice these electrical systems in the event of fire. In the event that the safe shutdown electrical wiring burned away due to nonfunctional fire barriers and inadequate separation, operators would simply send someone from the control room throughout the station to manually operate once remotely automated equipment or disable spurious operations of safety-related equipment resulting from electrical shorts ("hot-shorts") by throwing a switch, pulling a circuit breaker, or turning a valve to shutdown the reactor. In many cases, the manual tasks involved numerous and complex actions. While a few NRC inspectors had randomly, on a case-by-case basis, provided approval for a small number of simple operator manual actions through the regulatory exemption process, the industry had adopted a wholesale application of manual actions that never sought to get NRC approval nor completed adequate safety reviews. In case after case, NRC inspectors found that licensees were unable to validate that the manual actions could be accomplished. Employees were designated to enter station areas that were potentially fully involved in a fire to manually operate reactor shutdown equipment. One station operator was discovered with over 100 unapproved and illegal manual actions. NRC identified that licensees had taken manual actions to the "extreme interpretation" resulting in a significant increase in risk of reactor core damage in the event of fire. As one NRC official explained "This condition is similar to the condition Browns Ferry was in prior to the 1975 fire."[7] NRC discovered that the violations were so numerous throughout the industry that an enforcement effort "creates a prospect of significant resource expenditure without clear safety benefits. Licensees faced with enforcement actions might flood NRC with exemption or deviation requests, which would divert NRC resources from more significant safety issues and may not result in any net safety improvement if the operator manual actions are determined to be acceptable."[8]

Faced with widespread and stubborn industry non-compliance, NRC is now poised to suspend its regulatory enforcement of this section of the fire code nullifying industry long held commitments to restore fire barrier operability and cable separation requirements. Instead, NRC proposes to provide licensees with an option to voluntarily abandon physical fire protection requirements through an alternate loose set of criteria that would bring "feasible" manual actions into interim "compliance." Then through subsequent rulemaking, NRC proposes to codify the interim criteria into law deeming industry-designated manual actions not only legal but providing the equivalent level of safety as

independently tested and qualified fire barriers, sprinkler and smoke detection systems and designed physical separation for reactor shutdown electrical systems.

NIRS COMMENTS ON THE INTERIM CRITERIA

The NRC interim criteria for relaxing enforcement of federal fire code at nuclear power stations are alarming because of the following concerns:

1. Operator Manual Actions Increase the Risk of Core Damage from a Reactor Fire

SECY 03-0100 acknowledges "Replacing a passive, rated, fire barrier or automatic suppression system with human performance activities can increase risk."[9]

Sending someone down a potentially burning, smoke filled corridor in cumbersome gear possibly even carrying a ladder or other tools to manually operate safe shutdown equipment after required control room automated functions are burned away is not a reasonable or acceptable substitute for "upgrading" currently inoperable fire protection features. Such actions do not provide the equivalent level of safety as restoring qualified fire barriers used in conjunction with sprinklers and smoke detectors and physical separation of redundant electrical cables used to shutdown the reactor.

Internal NRC documents obtained by NIRS through the Freedom of Information of Act point to a significant lack of confidence within the agency's Nuclear Reactor Regulation staff. For example, take to following email transmission:

"I'm not quite sure what you expected of my review of the rulemaking plan. In any case, here's my reaction.

"When replacing a barrier with a human action, it seems to me that what you are doing is giving up reliance on detection and suppression, which is enabled by the existence of the barrier and replacing with a reliance on the operators to recover, or otherwise find a workaround for those things that the barrier would have protected. In a sense what you're saying is that, in the time line of the fire progression, you'll initially give up the equipment whose functionality was supposed to be protected, and rely on late recovery. In the original design, i.e. with the barriers intact, you don't lose it because you suppress the fire before the equipment is lost. These are very different models of the risks from fire, and it is not simple to trade on[e] off against the other. The trade off you'd have to evaluate is the probability of recovery against the reliability of detection and suppression. This is not spelled out in the rulemaking plan, and I'm not sure who is prepared to take this on (J.S?). However, you probably can make a good case that if all the criteria a through j have been met, then you've done as well as you can to ensure that the operators will succeed. Whether you can say this is as good as a three hour fire barrier I don't know."[10]

Manual operator actions, while made "compliant" by permitting the sacrifice of control room operated shutdown functions are at best questionable by NRC's own admission in

terms of providing equivalence in fire protection. NRC is literally "giving up" on years of duly promulgated fire protection regulations in a hasty and ill prepared plan to provide a non-compliant and obstinate industry with compliance. This significantly undermines the public confidence that the agency has the public safety as its priority.

Furthermore, such actions would possibly send licensed and non-licensed operators into harms way making reactor safety dubiously reliant upon heroic, at best, and potentially suicidal actions in an effort to head off a catastrophic nuclear accident.

SECY-03-0100 states "While the use of unapproved operator manual actions may contribute to increases in risk from fires, results from staff inspections to date indicate that there is insufficient evidence that the generic use of these actions poses a safety risk. Therefore, the staff does not consider this an immediate safety issue that requires prompt action."[11] The agency's reasoning on dismissing the safety significance defies sound logic given that the impetus for the industry's illegal application of operator manual actions goes back to the NRC declaration of inoperable Thermo-Lag 330-1 fire barriers in 1992. The agency has deliberately failed to put the context of operator manual actions into a long standing non-compliance with fire code violations particularly given the significant contributor to fire to core damage frequency as has already been identified by NUREG-1150. The onus of assurance should be on the industry to show that its fire protection features including operator manual actions are safe, not that the generic application of the unreviewed actions are unsafe, hence the NRC's acknowledged requirement for a thorough agency review through the exemption and deviation process. The agency's reversal of logic employed by the SECY that there is "insufficient evidence" of a safety risk unduly and inappropriately places the burden of risk on the public health and safety.

2. Reliance on mere "Feasibility" of Manual Actions Sets an Unreasonably Low and Unacceptable Standard for Fire Protection at U.S. Nuclear Power Stations

As stated, the affected fire code (Chapter 10 of the Code of Federal Regulation Part 50 Section III.G.2) mandates that reactor shutdown electrical systems be protected by three hour rated fire barriers, one-hour rated fire barriers with sprinklers and smoke detectors that are qualified through independent laboratory testing and inspections. Cable separation requirements are required to be maintained through design controls and inspections. Under the proposed interim criteria the licensee need only deem the replacement manual actions "feasible," clearly a lower and nebulous standard. NRC staff has publicly expressed its own misgivings over the choice of a "feasible" standard.[12] Moreover, NRC staff identified that the substitution of manual actions for Appendix R III.G.2 requirements "will make Appendix R virtually uninspectable [sic]."[13] Further more, NRC's Advisory Committee on Reactor Safeguards Subcommittee (ACRS) on Fire Protection had numerous problems with the use of "feasible" manual actions. ACRS identified that "feasibility" does not provide reasonable assurance that any given action is "reliable." The "feasible" standard is not effectively enforceable by NRC. As one ACRS member repeatedly interrupted both industry and NRC presenters, "I'll make a plea again for not using the word 'feasibility." "Don't use the word," he emphatically stated.[14]

The "feasibility" standard therefore does not "reduce regulatory burden." Instead it complicates inspection and enforcement with a nebulous alternative approach that provides a workaround that cannot be inspected. Since NRC is unwilling to demonstrate its enforcement arm to current fire code violations there is less than little reason for the public to have confidence that the agency would have any authority to enforce such a non-prescriptive standard.

By ignoring the warnings of public interest groups, its own staff and its advisory committee by inappropriately qualifying manual actions as merely "feasible," NRC's proposed interim criteria for relaxation of enforcement for illegal operator manual actions is establishing an unreasonable standard for inspection and enforcement which significantly jeopardizes public health and safety. It is unreasonable, arbitrary and capricious to lower public safety standards to unduly accommodate the nuclear industry with a misleading mantle of "compliance" at the considerable expense of increased risk of core damage.

It should be noted that the "feasibility" standard originates from the industry with longstanding violations of compliance to 10 CFR 50 Appendix R III.G.2. As Mr. Alex Marion stated in a public meeting on operator manual actions, "Please, for the record, NEI [Nuclear Energy Institute] takes full responsibility for the term 'feasibility.'"

NIRS will close its argument for the inappropriate use of "feasibility" as the standard for operator manual actions with a quote from Mr. Richard Dudley

3. "Environmental Considerations" During a Fire Cannot Be Reliably Predicted To Assure Manual Actions Will Provide the Equivalent Safety of Control Room Automated Actions Protected by Barriers, Suppression, Detection and Separation

NRC states that the full effects of a fire (flame, temperature, smoke, toxic gases and possibly radiation) can be accurately predicted so as to provide confidence that licensed operators or employees will arrive at destinations within the station to successfully complete the manual actions required to shutdown the reactor before the radioactive core is damaged. For an example to the contrary, on March 07, 1997 a main transformer fault resulted in the previously unanalyzed spill of 4,300 gallons of combustible lubricating oil into the Pilgrim nuclear power station turbine building spreading out over 2,200 square feet on the ground floor potentially affecting both division of safety-related switchgear leading to station blackout and core damage.[15] The environmental conditions of this potential fire were unpredictable.

4. The Interim Criteria for Proposed Operator Manual Actions Only Requires a "Demonstration" by the Licensee without Validation by Realistic Simulation or Graded Exercises of Licensee Performance

The proposed interim criteria is extremely weak and apparently set up to provide the industry with the easiest way around duly promulgated law established to protect the public health and safety following the Browns Ferry fire in 1975.

The agency's proposed criteria state that the licensee shall demonstrate and document its capability to successfully accomplish operator manual actions within the allowable time using the designated procedures and equipment. However, the September 09, 2003 ACRS Fire Protection Subcommittee raised serious questions regarding the qualitative difference between "demonstration" and validation of the manual actions. "Is there any hope? It's not like you can set up a simulator and test an operator action," queried a subcommittee member.[16] "How do you simulate smoke, light, fire, ringing bells, fire engines, crazy people running around."[17] A mere demonstration does not simulate potential environmental conditions and challenge human behavior to adequately evaluate whether the manual actions can be accomplished with any level of confidence. A demonstration does not qualify manual actions nor provides equivalence in confidence of performance as do the currently required standardized fire tests to qualify fire barriers.

The government's own studies indicate that replacing automated functions with human actions can contribute to the likelihood that a variety of failed and erroneous human actions will significantly increase the risks for safely shutting down the reactor during an operational event such as fire. "This includes operating with known deficiencies, permitting 'workarounds' (i.e. requires alternate operator actions usually manual actions to operate the system) or documenting problems and solutions but failing to take action in time to prevent an equipment or system failure."[18]

In fact, the interim criteria shift the burden of proof for the provision of adequate fire protection at nuclear power stations from the licensee to the NRC. Should the interim criteria be adopted it is the agency's staff that will need to demonstrate that the actions taken by the licensee fail to meet the proposed criteria. The agency's pursuit of providing the industry with "compliance" adds to the burden of the NRC staff, contrary to the action's stated intent.

NIRS submits that a mere demonstration by the licensee does not foster safety confidence that the operator manual action can actually be successfully carried out in the event of a fire. Under the current scheme, a licensee could assemble a crack team of operators and perform the manual action until it is successfully completed even though that may mean that 9 out of 10 times they failed. That same team may never be onsite together again and while the single demonstration achieves compliance it in no way provides confidence that the manual action is reliable or the equivalent to a rated and tested fire barrier, detection and suppression system or 20-foot separation with no intervening combustibles in conjunction with smoke detectors and automated sprinkler systems or other automated fire suppression equipment.

It is therefore inappropriate to apply a "feasibility" standard to fire protection just as it would be inappropriate and unwise to apply a "feasibility" standard to nuclear power station Operational Safeguard Response Evaluations for force-on-force security response in preparation for defense of the site from radiological terrorism. In fact, fire protection infrastructure is an ever more critical part of addressing the core damage frequency and

risk associated with a terrorist attack on other target sets including the irradiated fuel storage ponds and dry cask storage of irradiated fuel.

IN ABANDONING ITS ENFORCEMENT OF CONFIRMATORY ORDERS REQUIRING THE RESTORATION OF INOPERABLE THERMO-LAG FIRE BARRIERS NRC IS ABANDONING ITS MANDATED COMMITMENT TO PUBLIC HEALTH AND SAFETY

The proposed interim criteria for enforcement discretion not only send a wrong message that the agency is unwilling to enforce its mandate for public health and safety but reveal the agency's willingness to abandon its enforcement of duly promulgated law in favor of an industry production and economic agenda.

The NRC interim criteria would establish a much broader precedent by undermining the agency's ability to issue and follow through on its own Confirmatory Orders to bring licensees into compliance with legal requirements through corrective action programs designated to protect the public's health and safety.

The agency's SECY 03-100 identifies that a significantly large portion of the Operator Manual Actions arise out of licensees failing to follow up to corrective action programs for inoperable Thermo-Lag-330-1 fire barriers. "It is the staff's understanding that most of the unapproved operator manual actions came about during the resolution of the Thermo-Lag fire barrier issue in the mid-1990's."[19]

Seventy-nine nuclear power stations utilized inoperable Thermo-Lag 330-1 fire barriers. NIRS wishes to point out to the agency that if significant numbers of licensees used unapproved operator manual actions to "resolve" these Thermo-Lag fire barrier violations of Appendix R III.G.2, when current regulations specify that changes to the license condition require submittal and scrutiny of the exemption process, then the safety issues originally posed by inoperable fire barriers have never been resolved. The violations have only been compounded.

NIRS finds the agency's choice of words "during the resolution of the Thermo-Lag fire barrier issue" curious, at best.

NIRS contends that the agency language in the SECY is misleading so as to suggest that original reactor safety issues arising out of inoperable Thermo-Lag fire barrier found "resolution" and were closed out.

In fact, NIRS contends that the agency continues to obfuscate ongoing and open safety issues arising out of Thermo-Lag inoperable fire barriers and other materials and the associated wide spread non-compliance with Appendix R III.G.2.

NIRS is struck by the fact that the NRC website on Technical Issues under Fire Protection does not provide the public with any of the extensive history of the Thermo-Lag fiasco going back to 1982. The agency fire protection technical issues page seems to

have erased the ongoing industry-wide non-compliance which by the agency staff's own admission in the SECY is the principle reason why there are so many illegal and unapproved operator manual actions throughout the nuclear industry.

In fact, the agency has chosen to attempt to erase the over-a-decade old and ongoing open-item reactor safety issues arising out of a host inoperable fire barriers deployed throughout the nuclear industry. As one NRC manager stated for the record "NRC and nuclear industry agreed to suspend debate over past history and focus on regulatory actions that would permit these actions provided their feasibility could be assured."[20]

NRC staff has noted that this is not only a significant policy shift by attempting to substitute manual actions for inoperable fire barriers, but acknowledges that "There appears to have been a Commission expectation that Thermo-Lag [fire barriers], where found deficient was to be resolved by replacement or upgrade rather than through the use of operator manual actions."[21] In fact, Commissioner Ivan Selin made the commitment before Congress in March 1993 to restore mandated fire barrier operability for the protection of reactor safe shutdown equipment and the public health and safety in the event of fire.[22]

Dr. Selin states in testimony before the House Committee on Energy and Commerce, Subcommittee on Oversight and Investigations,

"At the outset we want to assure the subcommittee that the NRC has assessed the short and mid-term safety significance of this issue [inoperable Thermo-Lag fire barriers] and has taken steps that have caused the utilities to take steps, to assure that plant safety is assured while these deficiencies are corrected.

"As you have already heard, the need for review of fire protection arose at the Browns Ferry fire in 1975. A post-fire survey showed weaknesses both in our regulations and at many power plants. After initially trying to follow a case by case approach, the Commission issued a fire protection rule in 1980. A key element of that rule was the assurance of a safe shutdown capability in the face of fire.

"To assure safe shutdown, electrical cables that are connected to redundant emergency systems must be separated in one of three ways: by a physical separation of at least 20-feet plus automatic detection and sprinklers or fire suppression systems; they may be separated by a passive fire barrier; able to withstand fire for at least 3 hours; or, by a passive fire barrier able to withstand 1 hour, again, coupled with automatic fire detectors and an automatic fire suppression system."[23]

Dr. Selin's testimony goes on to state that the NRC moved to develop more precise guidance towards imposing clear testing and qualification standards for assuring operable fire barriers to meet the requirements of Appendix R III.G.2. He notes that while the cost of compliance with the law cannot be assessed from his perspective in 1993, the cost of compliance with Appendix R will be levied on the industry.

"I assure you, sir, that on the basis of my own experience here and the experience of the Commission, whatever those costs turn out to be the Commission will, to the best of its ability, hold the licensees to meeting those costs that are necessary to meet the requirements and to assure the health and safety of the general public."[24]

NIRS points out that the agency's recent SECY 03-100, not only establishes that the preponderance of illegal manual actions in violation of 10 CFR 50 Appendix R III.G.2 arise out of the industry's failure to restore operability to circuits unprotected by Thermo-Lag 330-1 fire barriers, but NRC is now proposing to renege on the Commission's commitment to Congress to bring operators into compliance with operable fire barriers systems without consideration of cost. As SECY-03-0100 reads,

"Based on this compliance issue, the NRC staff is faced with the need to expend resources to evaluate fire inspection findings related to operator manual actions and the potential need to process a large number of enforcement actions. Additionally, inspecting for operator manual actions might precipitate a large number of exemptions or deviation requests from licensees that use unapproved operator manual actions."[25]

NIRS further points out that the Commission has not only failed to demonstrate willingness as Dr. Selin pledged to Congress "to the best of its ability, hold the licensees to meeting those costs that are necessary to meet requirements and to assure the health and safety of the general public," but more seriously, failed to enforce its own Orders issued to a noncompliant and non-cooperating nuclear industry.

In 1998, the agency issued Confirmatory Orders to 20 nuclear power station sites impacting at least 26 units with enforcement action requiring restoration of Thermo-Lag 330-1 fire barriers for compliance with 10 CFR 50 Appendix R III.G.2 requirements. The agency is now proposing to renege on its obligation to enforce those Orders. More over, NRC states that the agency got together with industry violators and the regulatory stonewall tacticians at the Nuclear Energy Institute to "suspend debate over past history and focus on regulatory actions that would permit these actions provided their feasibility could be assured."[26]

It is as if the NRC thinks the public safety and fire protection community has forgotten that the agency made commitments to Congress to raise the bar on fire protection testing and qualification standards through the 1990's. Industry's continued recalcitrance resulted in the agency issuing Orders requiring the restoration of operable fire barriers to those clearer standards at nuclear power stations. Each of the twenty Orders was filed and published in the Federal Register.

As one of many examples, NIRS illuminates on the Confirmatory Order issued to the Crystal River nuclear power station in Red Levee, Florida on May 21, 1998.

"This Order confirms Florida Power Corporations commitment, as stated in your [utility] letter dated April 10, 1998, to complete implementation of Thermo-Lag 330-1 fire

barriers corrective action programs by June 30, 2000. This commitment was set out in your letter of consent dated May 6, 1998."[27]

Did Florida Power Corporation complete its corrective action programs by June 30, 2000? The answer is revealed in the NRC Briefing Summary of Crystal River Triennial Fire Protection Baseline Inspection conducted June 24-28 and July 8-12, 2002, which states:

"The team [NRC] independently verified several examples where local manual actions were taken in lieu of complying with the requirements of 10 CFR 50 Appendix R, Section III.G.2."

"The licensee concurred with the inspection team that current guidelines suggest that FPC should have formally requested Appendix R exemptions or deviations. No such exemptions or deviations were requested during correspondence with NRR concerning the use of manual actions."

"The licensee confirmed that information provided to NRR was never detailed enough to distinguish the difference between local manual actions taken at the switchgear/MCC or at the component, and remote manual actions taken from the Main Control Room using plant design features protected in accordance with the requirements of 10 CFR 50 Appendix R III.G.2."

"A significant number of local manual actions have been incorporated in OP-880 in order to resolve various Thermo-Lag issues. The 10 CFR 50.59 Evaluation performed to incorporate these local manual actions did not consider the following factors:

- Complexity of new local manual actions
- The number of manual actions and time available for completion
- Availability of instruments to detect system/component mal-operation
- Human performance under high stress
- Effects of products of combustion on operator performance
- Available man power, timing, and feasibility of local manual actions"[28]

It is obvious to NIRS why Florida Power Corporation did not file an exemption request to NRC to substitute local manual actions for compliance with 10 CFR 50 III.G.2. They were under NRC Order to bring the very same barriers into compliance. It is curious that this level of detail on the significant lack of enforcement action has escaped the attention of the on-site fire protection inspectors, the NRC Region 2 Headquarters in Atlanta, GA and NRC Headquarters in Rockville, MD along with the writers of the proposed enforcement discretion.

In addition to Crystal River the operators of the reactor units listed below were also under NRC Confirmatory Orders issued in 1998 to bring inoperable Thermo-Lag 330-1 fire barriers back into compliance with 10 CFR 50 Appendix R III.G.2.:

- Oyster Creek
- Turkey Point 1& 2
- Peach Bottom 2 & 3
- Surry 1 & 2
- Three Mile Island 1
- Hatch 1
- Sequoyah 1 & 2
- St. Lucie 1
- North Anna 1 & 2
- Davis-Besse
- Limerick 1 & 2
- Hatch 2
- Susquehanna 1 & 2
- WNP-2 (Columbia)
- Comanche Peak 1
- Clinton
- South Texas 1 & 2

So what has become of the Thermo-Lag 330-1 Confirmatory Orders for these reactors?

As the NRC continues to conduct its Triennial Fire Protection Inspections more non-compliance with Confirmatory Orders appear. The NIRS request under Freedom of Information Act 2003-0358 continues to document operators that consented to restore fire protection operability through compliance with Thermo-Lag 330-1 Confirmatory Orders, who have long since past agreed upon deadlines, failed to comply with those Orders by instead quietly instituting the subject illegal operator manual actions. It is our contention that many or all of these failures are willful violations of the Confirmatory Order.

As the Triennial Inspection process has not yet completed its first round of inspections, nor is FOIA 2003-0358 yet final, the list of licensee issued Confirmatory Order using illegal operator manual actions includes but is not limited to:

- ✓ Turkey Point
- ✓ Crystal River
- ✓ St. Lucie
- ✓ Oyster Creek
- ✓ Comanche Peak
- ✓ Sequoyah

SECY-03-0100 fails to acknowledge or address the Thermo-Lag 330-1 Confirmatory Orders as a significant part of the "interim enforcement discretion and refrain from taking enforcement action for those licensees that rely on unapproved operator manual

actions."[29] The SECY further fails to analyze or address legal implications to the agency for its failure to compel the industry to comply under Orders. Now, NRC sets forth that the interim criteria for manual actions will somehow supercede these Confirmatory Orders is an arbitrary and capricious standard to apply to the enforcement process aided by the proposed issuance of the hastily adopted interim criteria which in our view is in violation of the Atomic Energy Act.

The Triennial Fire Inspections while referencing the substituted, unreviewed and non-compliant operator manual actions mentions nothing of the failure to follow through on compliance with Thermo-Lag-330-1 Confirmatory Orders.

NIRS sternly advises NRC not to attempt to "suspend" enforcement of Confirmatory Orders along as part of the so-called "historical debate" over inadequate fire protection and industry non-cooperation to remediate these dangerous inadequacies. In our view to do so is a serious dereliction of the agency's mandate and duty to protect the public health and safety.

THE AGENCY IS INAPPROPRIATELY ACTING IN HASTE TO IMPLEMENT INTERIM ENFORCEMENT DISCRETION AND THE INTERIM CRITERIA FOR ALTERNATIVE "COMPLIANCE" WITH 10 CFR 50 APPENDIX R III.G.2.

10 CFR 50 Appendix R fire protection regulations took several years to promulgate. The industry has been in open non-compliance with III.G.2 since at least 1992. The agency struggled with the non-compliant and non-cooperating nuclear industry until 1998 before issuing Orders to restore compliance to III.G.2. The industry blatantly failed to comply with agency Orders and further violated fire code law by instituting illegal operator manual actions without NRC review. These compounded violations didn't start turning up until the Triennial Fire Protection Inspections were instituted in 2000.

Now after over 12 years of noncompliance of III.G.2, meeting after meeting between NRC staff to bring a recalcitrant industry into compliance with duly promulgated law, multiple Orders, NRC is now attempting to ramrod through an hastily fashioned interim criteria for enforcement discretion and interim criteria for acceptance of an industry led end run of fire protection law through an expedited rulemaking process.

Mr. Sunil Weerakkody, NRC, documents that the agency only began looking at inspection criteria for operator manual actions in March 2003.[30] In November 2003, Mr. Sunil goes on to say "And before I conclude, just to make sure in summary, how we started, the schedule, we started with the criteria, two or three months ago.... So what you are seeing today is what we believe is the best available interim criteria." [31]

This can only be interpreted as hasty and inexcusable action on the part of the regulatory to fake compliance with no benefit to public safety. In fact, the agency's proposed actions increase the risk to public health and safety.

In light of the attempt to erase the decades of history of noncompliance beginning with the Browns Ferry fire, the agency move to bring a non-cooperating industry into "compliance" in with criteria that has been reviewed over the past several months is extremely disturbing and does not warrant the trust of the public and the fire protection community.

Additionally there is the concern that the agency and the industry sought to speed up the rulemaking process through the implementation of a direct final rule.[32] Such a process would have severely truncated the public's meaningful participation in the comment process. It is our understanding through communications with the NRC that the direct final rule approach has been abandoned.

CONCLUSION

As identified in SECY 03-0100 the agency should therefore exercise Option 1 where there are no regulatory changes to 10 CFR 50 Appendix R III.G.2 and the staff is to notify nuclear power station licensees that using operator manual actions to operate safe shutdown equipment is not permitted as an alternative to providing fire barrier protection from a fire in a location where redundant fire trains are located.

Additionally, the agency should promptly take enforcement action against all licensees under Confirmatory Orders issued in 1998 regarding inoperable Thermo-Lag 330-01 fire barriers who have not complied with the Order by the licensee stipulated deadlines in confirming the Orders. These enforcement actions may include criminal prosecution for willful failure to comply with an Order in accordance with the Atomic Energy Act.

Sincerely,

Paul Gunter, Director
Reactor Watchdog Project

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