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FINAL REPLY:

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Central New York-Citizens Awarenes Network
CNY Nuclear Security Coalition

TO:

Reyes, EDO

FOR SIGNATURE OF : ** GRN ** CRC NO:

Dyer, NRR

DESC:

2.206 - Entergy Nuclear Operations, Inc. and Entergy Nuclear Fitzpatrick, LLC (Fitzpatrick Nuclear Power Plant)

DATE: 10/28/04

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SPECIAL INSTRUCTIONS OR REMARKS:

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October 27, 2004

Luis Reyes
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U.S. Nuclear Regulatory Commission
Washington, DC 20555

By FAX (301) 415-2700

PETITION TO THE U.S. NUCLEAR REGULATORY COMMISSION REQUESTING ENFORCEMENT ACTION AGAINST ENTERGY NUCLEAR OPERATIONS, INC., AND ENTERGY NUCLEAR FITZPATRICK, LLC

Dear Mr.Reyes:

Citizens Awareness Network hereby submits this Petition for Emergency Enforcement Action to the US Nuclear Regulatory Commission (NRC) on behalf of the organizations signed below (hereafter "the Coalition" or "the Petitioners"). Contact information for all of the petitioners, and the individual designated to represent each organization, are provided below.

Pursuant to NRC Regulation 10 CFR § 2.206, the Petitioners request that the NRC institute a proceeding to modify or suspend license No. DPR-59, the operating license for the James A. FitzPatrick Nuclear Power Plant. Entergy Nuclear Operations, Inc., and Entergy Nuclear FitzPatrick, LLC (hereafter "Entergy") are, respectively, the operator and the owner of the reactor, and jointly possess the license.

This Petition discusses potential destructive attacks on nuclear facilities, attacks that could cause great public harm. All of the information contained in the Petition is publicly available. No information is contained in the Petition or its supporting documentation that could provide further assistance to the perpetrator of such an attack. Accordingly, this Petition is appropriate for general distribution.

Citizens Awareness Network obtained many of the documents from NRC by Freedom of Information Act request. Other information consists of non-safeguards and non-proprietary information provided by Carl R. Patrickson, a former Entergy employee fired in 2003 during an NRC investigation into his allegations regarding the issues in this petition. Many of the documents obtained by FOIA request relate to an NRC investigation into allegations Patrickson made in 1997, including an allegation regarding the

safety problems at issue in this petition. For some reason, NRC closed CAN's FOIA request without including any documents related to Mr. Patrickson's 2003 allegation. This petition includes a Demand for Information to obtain those documents. However, in the interest of initiating regulatory action on a serious safety and security problem – and because NRC's 2003 investigation does not appear to have been any more substantive than the inadequate 1997 investigation discussed below – the Petitioners choose to submit this petition now.

As detailed in this Petition, successive licensees of the James A. FitzPatrick Nuclear Power Plant (hereafter, "FitzPatrick") have failed to address a critical safety problem that has existed for at least 24 years: inadequate fire protection and ventilation affecting the Emergency Service Water and Fire Safety-Related Pump Rooms. This problem violates Appendix R fire protection requirements and to this date constitutes an unresolved safety issue. The successive licensees have failed to fulfill commitments to resolve this problem.

Requested Actions

The Petitioners request that NRC take emergency enforcement action to ensure that Entergy resolves fire protection vulnerabilities and provides alternative means of ventilation and cooling for the pump rooms. NRC must suspend Entergy's license to operate FitzPatrick until the following actions are completed:

1. Conduct physical tests of the ventilation and heat-up rates of the pump rooms under simulated fire scenarios, with verification of the test results by an independent third party, followed by an open public meeting where the results are presented and reviewed;
2. Seal floor/ceiling penetrations between the basement-level pump rooms and the first floor;
3. Provide alternate cooling and ventilation for ESW and Fire Safety-Related Pump Rooms; and
4. Verify the adequacy of completed actions by NRC Division of Reactor Safety fire protection inspection team, as the agency planned to do in 1997.

These actions are necessary in order for Entergy to complete commitments it inherited when it obtained the operating license from the New York Power Authority (NYPA). NYPA made those commitments under the FitzPatrick operating license over 13 years ago in Licensee Event Report 91-021 (LER 91-021). NYPA and NRC reaffirmed them in 1992 when NYPA applied for, and NRC granted, a temporary exemption from fire safety regulations to postpone installing alternative ventilation and cooling for the pump rooms until the next refueling outage 1994. As substantiated below, those commitments were never completed, followed up upon, nor even addressed since NRC granted the temporary exemption. Thus, LER 91-021 has never been closed out and remains open.

The Basic Problem

All of the primary and backup cooling and fire safety-related pumps at FitzPatrick could be disabled by any of a number of different fire scenarios, whether accidentally or deliberately caused through acts of malice. This presents an inherent safety problem which could also be exploited as a security vulnerability.

All of these pumps are located in the Screenwell Building, The building faces Lake Ontario, approximately 100 feet from the shoreline, and is constructed of metal framework and sheet metal siding. The Circulating Water and Service Water Pumps (the primary cooling pumps for the reactor) are located in the basement of the building.

The Emergency Service Water (ESW) pumps, Residual Heat Removal Service Water (RHRSW, or just RHR) pumps, and fire safety-related pumps (two diesel-driven pumps and two electric pumps) are also located in rooms in the basement of the building. The ESW pumps are a backup system to the Service Water (SW) pumps, and the RHR pumps are necessary for safe shutdown of the reactor.

When the pumps are operating, they generate significant amounts of heat. The ventilation and cooling for the rooms is provided by ducts that allow for cooler air to be drawn in from adjacent rooms. To prevent the spread of fires from room to room, the ventilation ducts have dampers that close when the air becomes too hot. When the dampers close, there is no alternative source of ventilation or cooling for the rooms that house the ESW, RHR, and fire safety-related pumps.

The ESW pumps are only rated to operate up to an air temperature of 212 F. The dampers had previously been equipped with mechanisms called Electro Thermal Links (ETLs) which would close the dampers when the air passing through is 135 degrees F. However, NYPA removed the ETLs at some point in the 1990s, leaving only fusible links as a way of automatically closing the dampers. The fusible links melt when the air passing through reaches 165 degrees F, closing the dampers permanently. Thus, by the time the dampers close, the rooms would now effectively be preheated.

As a result, the pumps could overheat themselves in ten minutes or less, leaving the reactor without water for its primary and backup cooling, safe shutdown, and fire suppression systems. The only alternative source of water for these systems is for workers to manually hook up a 4" hose to the city water main on site, which is unlikely to provide enough water for these systems to perform their safety functions. The location of the water main connection may pose further obstacles for operators attempting to access it.

The simultaneous failure of all the pumps for the primary, backup, shutdown, and fire-suppression systems could cause a loss of cooling water to the reactor and uncover the core, thus leading to a meltdown. This presents a "common cause" vulnerability for the following equipment:

Circulating Water Pumps (Main Condenser)

Service Water Pumps
Emergency Service Water Pumps
Residual Heat Removal Pumps
Fire Pumps (4 total: two electric-driven and two diesel)

Some of the basement pump rooms have open penetrations in the ceilings, covered only by grates. These open penetrations make it possible for burning material to fall through, further increasing the risk that a single fire could disable pumps for both the primary and backup cooling systems in a matter of minutes. This presents a further concern in terms of national security, since an attack could be devised specifically to exploit that vulnerability.

Background

In 1975, workers at the Browns Ferry Unit 1 reactor caused a fire that disabled all of the reactor's automatic safety systems. The workers were using a candle to inspect electrical cables (wires). The flame ignited the insulation on the wires, and a fire quickly spread throughout many of the reactors' electrical systems. The reactor narrowly averted a meltdown, according to one employee by "sheer luck."

In response, NRC changed its regulations to build in fire safety requirements in the design and construction of reactors and in operating procedures. Most of the nation's current fleet of reactors had been built before these regulations (collectively referred to as Appendix R) went into effect in January 1979. FitzPatrick was one of these, having begun commercial operation in 1975.

Because of the expense and difficulty of retrofitting reactors that were built with serious vulnerabilities to fires, the industry quickly began inundating NRC with requests for exemptions from the new regulations. This began a trend of allowing licensees to propose procedural changes and "programmatic controls" in order to avoid the cost of addressing inherent design problems and establishing compliance with the regulations.

NYPA avoided compliance for years at FitzPatrick, and went even further by violating NRC regulations and providing NRC with incorrect information. NRC fined NYPA $500,000 in 1992, in part because of violations in its fire protection program:

> ... The inspection team found the fire brigade training program, procedures for properly using, storing and disposing of combustible materials and ignition sources, and plans for fighting fires had not been adequately developed and implemented at the FitzPatrick plant. *Also, NYPA failed to take steps to protect from fire, heat and smoke damage, the equipment that is essential to shutting down the reactor.*
>
> Finally, NRC regulations require that all information provided to the Agency be complete and accurate. The final alleged violation cites *several examples of NYPA submitting incomplete or inaccurate information to the NRC,* including three Licensee Event Reports, as well as documents used to support a proposed change

> to the plant's technical specifications. (NRC Press Release, September 16, 1992; emphasis added)

It should be noted that NRC discovered these violations during the same time frame that the pump room ventilation problem was revealed. One week before it cited NYPA for the violations, NRC granted NYPA a temporary exemption to postpone modifications that would partially address the problem. After that, neither NYPA nor NRC addressed the issue again – until a FitzPatrick employee reported it to NRC in 1997.

ESW and Fire-Safety Related Pump Rooms Lack Adequate Ventilation

NRC granted NYPA an exemption from its fire protection regulations in 1986, so that NYPA would not have to install dampers in the floor/ceiling penetrations to the basement pump rooms. At the same time, NRC refused to grant an exemption that would have allowed NYPA to get out of installing dampers in the ventilation ducts in the basement pump rooms.

NYPA later hired a contractor to install the dampers. However, in 1991 NYPA discovered that the dampers were installed incorrectly and would not operate properly. NYPA filed LER 91-010-00 on July 12, 1991. This LER also identified another problem with ventilation in the basement pump rooms: electric wiring to ventilation fans in these rooms was unprotected from fires. NYPA identified a fire scenario that could disable the fans and compromise ventilation to the rooms – namely, a fire in the East Cable Tunnel (adjacent to the North and South Pump Rooms) could burn out the electric cables that provide power to the fans as well as the pumps in the South Pump Room. This problem is unrelated to the problems that are the subject of this petition.

> In the course of reinstalling the dampers, NYPA discovered the inherent problem facing the basement pump rooms. While the dampers were still closed, the ventilation fan in the North Pump Room was operating and the fan in the South Pump Room was spinning in reverse. Due to inadequate air supply while the dampers were closed, air was being drawn from one pump room to the other through the open fire door between them. At the time, FitzPatrick's standard operating procedures called for the fire doors to the North Pump Room from the South Pump Room and the East Cable Tunnel to remain open on the assumption that the East Cable Tunnel would provide adequate backup ventilation for the pump rooms when the dampers closed. The failure of the ventilation fan proved that assumption to be false.

As a result, NYPA identified another fire scenario that could disable the ESW, RHR, and fire safety-related pumps:

> ... a postulated fire in the circulating water intake structure (screenwell) ... would result in the closure of the fire dampers and/or loss of power to the ventilation exhaust fans (and subsequent damper closure if the RHRSW/ESW pumps were operating). (LER 91-021, p. 4)

> ... A calculation was initially performed to determine the temperature which the pump rooms would reach following failure of an exhaust fan during operation of the two RHRSW pumps and one ESW pump in one pump room. It was determined that the temperature would reach 171 degrees F. However, the calculation assumed the fire dampers would remain open. In fact, the heat detector system would have closed the fire dampers at 135 degrees F. Further, the fusible links would have melted at 165 degrees F. Thus, the actual rate of heat-up and maximum temperature would both be considerably higher. *The temperature has been estimated to increase from 70 degrees F to 240 degrees F within the first ten minutes with the fire dampers closed and fans inoperable.* The maximum temperature determination will require a detailed evaluation of the heat sinks in the rooms.
>
> Accordingly, subject to further investigation and engineering calculation, it may be conservatively projected that loss of the exhaust fans and/or the closure of the fire dampers would result in elevated temperatures which would materially shorten the expected service life of the pump motors.
>
> ... fire damper closure in the north safety-related pump room has the potential to render the electric fire pump inoperable.
>
> ... the dampers must be open for proper operation [of the diesel-driven fire pumps]. (LER 91-021, pp. 7-8)

LER 91-021 did not look at the full scope of the ventilation issue. At least two major concerns were omitted: 1) the maximum temperature at which the pumps would fail and 2) the floor/ceiling penetrations to the basement-level pump rooms.

On page 8 of LER 91-021, NYPA noted that the ESW pumps would still operate at a temperature of 194 degrees F. However, the pumps are rated to fail at 212 degrees F – well below the estimated maximum temperature given in the LER (240 degrees F).

The 1986 exemption for the floor/ceiling penetrations was based on NYPA's commitment to reduce the amount of combustible material in these areas. If consistently satisfied, this commitment reduces the possibility of an accidental fire; however, there is still a chance that, due to negligence and/or temporary situations in which combustible materials are being used in these areas, an accidental fire could spread through the floor/ceiling penetrations.

NRC determined, among other criteria, that the exemption "is consistent with the common defense and security." However, in a post-September 11 environment, NRC's determination in granting the 1986 exemption is no longer accurate. An act of sabotage or

an attack could be devised specifically to exploit the vulnerability created by the floor/ceiling penetrations – particularly in combination with the pump room ventilation problem. If these penetrations were sealed and the basement pump rooms provided with independent means of cooling and ventilation, the possibility of a single fire knocking out all of FitzPatrick's cooling systems would be greatly reduced. That is, enforcement of NRC fire protection regulations could virtually eliminate a safety problem that presents an obvious security vulnerability.

Commitments Never Fulfilled, Ventilation Problem Never Fixed

NYPA committed to a set of six corrective actions to respond to the exhaust fan failure and this unreviewed safety problem. Not all of them are relevant to the pump room ventilation problem when the dampers close. The relevant corrective actions were:

1. Post a fire watch until the issue is resolved;
2. Investigate an alternate method of providing adequate ventilation to the fire safety-related pump rooms; and
3. Perform a series of engineering calculations and analyses to determine how the RHRSW, ESW and fire safety-related pumps would be affected by closure of the dampers.

In 1992, NYPA applied for a temporary exemption from Appendix R requirements to "assure that ventilation is available to one division of RHRSW and ESW and either the electric- or diesel-driven fire pump in the event of a fire in the Screenwell House or in the East Cable Tunnel" (NRC Exemption, September 10, 1992, page 12). NRC goes on to note, "*it is anticipated that the modifications will be extensive* and, due to the procurement of long lead time equipment, will require approximately 18 months to complete. The licensee has proposed interim compensatory actions *until the above stated modifications are complete*" (emphasis added).

Among the "interim compensatory actions" NYPA used to justify the temporary exemption are three significant modifications to the ventilation system:

closing the fire doors to the North Pump Room from the East Cable Tunnel and the South Pump Room;
closing the fire damper between the North Pump Room and the West Diesel Fire Pump Room; and
removing the ETLs on the four dampers in the North and South Pump Rooms.

These modifications to the ventilation system appear to have never been tested to ensure that the pump rooms are adequately ventilated when the dampers close.

By the time NYPA requested the temporary exemption in June 1992, it is clear that NYPA had determined the ventilation in the rooms was inadequate and the pumps could overheat themselves. It is also clear that NRC understood this when it granted the Exemption: "the exemption provides only temporary relief from the applicable regulation ..." (page 13).

It is significant that NYPA was under investigation for fire safety violations – and potentially lying to NRC about its fire protection programs – at the time it applied for the temporary exemption. FitzPatrick had already been shut down October of 1991, and would not restart until Spring of 1993. Without the exemption, NYPA faced an even longer outage and modifications that were likely to be expensive.

NRC Oversight Inadequate

According to documents Citizens Awareness Network obtained by Freedom of Information Act request (submitted January 24, 2004), NYPA never filed an update to close out LER 91-021, and NRC never followed up to ensure that NYPA fixed the problem. For nearly five years, there is apparently no mention of the pump room ventilation problem in the official record except an oblique reference at the end of an update to LER 91-010 filed June 13, 1994:

> Related Events: 1) LER-91-021 describes a similar event where mispositioning of ventilation dampers jeopardized the operability of safety-related equipment.

This statement misrepresents the actual issues identified in LER 91-021. The South Pump Room ventilation fan failure (the "event") was not caused by "mispositioning" of the dampers, but was what alerted NYPA to the insufficient ventilation that could result if the dampers operated *properly*. This description of the pump room ventilation problem identified in LER-91-021 suggests that the problem was the failure of the ventilation fan – not *the inherent ventilation problem* that caused the fan to fail.

This misrepresentation has been repeated by the FitzPatrick licensees since then to muddy the issue and has allowed them to escape commitments to resolve the pump room ventilation issue that were clearly reiterated in 1992. In addition, none of the documents filed subsequent to the 1992 exemption address the diesel pump rooms at all, even though LER 91-021 identified a definite need to provide alternative means of ventilation. NRC has never independently verified the consistency of the licensees' representations with material fact by conducting inspections, engineering analyses, or tests.

After the 1994 update to LER 91-010, the issue is not mentioned again until Carl Patrickson, an engineer at FitzPatrick, filed an allegation reporting approximately 20 safety problems NYPA had failed to address. The pump room ventilation problem was among the issues Patrickson reported. NRC then began an investigation, as evidenced by Status of Allegations documents CAN obtained by FOIA request. According to two of these documents (dated 5/28/1997 and 6/20/1997), NRC initially planned to conduct fire protection inspection into the pump room ventilation problem.

However, in June 1997, Patrickson identified himself to then NYPA Vice President of Nuclear Operations James Knubel. NYPA then wrote to NRC offering to write a report responding to Patrickson's allegations. After obtaining approval from Patrickson essentially to hand over

the investigation to NYPA, NRC permitted NYPA to evaluate the allegations. Unsurprisingly, NYPA's report to NRC (JPN-97-029, dated November 1997) told NRC that none of Patrickson's allegations were valid. With regard to most of the allegations, NRC merely accepted NYPA's responses uncritically, often without documentary evidence or even specific details to support its conclusions.

NYPA's response to the pump room ventilation allegation reveals its failure to fulfill its commitments (JPN-97-029, Attachment 2, page 27).

- **"The restricted air supply [in the South Pump Room] resulted in overload during fan auto start *while windmilling in reverse or due to low flow during operation*"** (emphasis added): Five years later, NYPA had still apparently not determined the actual cause of the ventilation fan failure. This suggests that NYPA never followed up with a detailed analysis of the pump rooms' ventilation. This appears to contradict the statements made in LER 91-021 that the cause of the failure was windmilling in reverse due to air being drawn through the door to the North Pump Room.
- **"Inadequate ventilation following fire damper closure *resulted from inadequate analysis* of the effects of the closure of dampers installed to meet NRC requirements in 1980"** (emphasis added): This statement characterizes the actual, physical problem of inadequate ventilation as having been caused by bad paperwork, rather than another actual, physical problem – the actual, physical construction of the room. It also implicitly blames NRC for passing regulations requiring the dampers.
- **"Corrective actions described in LER 91-021-00 have all been completed"** (emphasis added): NYPA provided no supporting evidence for its claim that all corrective actions have been completed. In fact, it does not even detail the corrective actions listed in LER 91-021 so that it can be held accountable.
- ***"Perhaps most germane to present concerns,* the closure of the fire dampers was attributed to an inadequate installation procedure"** (emphasis added): The inadequate installation of the fire dampers is actually the *least* germane issue to LER 91-021, since the problem it identified results from the proper operation of the dampers. The only way this could be attributed to the installation procedure is if one believes that the problem is actually that the problem was discovered, not the problem itself. This appears to have been NYPA's perspective. If not for the inadequate installation of the dampers and the maintenance to repair them, the events that precipitated LER 91-021 may not have occurred until there was an actual accident.

It is a failure of the NRC Allegations Department that it accepted NYPA's response without conducting a more rigorous investigation of this issue.

Another document obtained by FOIA request is undated, but appears to have been composed as part of NRC's review of JPN-97-029. It is titled "Assessment of the Licensee Reponse to Concerns Raised to the NRC Regarding Activities at FitzPatrick Nuclear Power Plant." It is a spreadsheet consisting of three columns titled "Concerns", "Resolution/Corrective Action", and "NRC proposed response to concerns." For the pump room ventilation problem

(Concern #15), it lists NYPA's response that all corrective actions for LER 91-021 were completed, and NRC's proposed response:

> Regarding the alleger's concern expressed with the emergency service water (ESW) pump room ventilation as is described in Licensee Event Report (LER) 91-021-00, **it appears that the licensee has completed the corrective actions described in LER 91-021-00. Therefore, the NRC considers this concern closed with no further follow-up.** (emphasis per original document)

It is disturbing that NRC would accept *an appearance of compliance* – particularly without evidence – to dismiss the allegations of an engineer who works at the reactor. NYPA's response hardly warrants NRC taking NYPA at face value given its documented financial motive to evade regulatory enforcement: the costs and lost revenues resulting from a possible 18-month outage described in the 1992 temporary exemption request.

There appear to be at least two versions of the "Assessment" document in NRC's possession. One copy, obtained by Carl Patrickson under FOIA request, is merely a plain copy. The copy obtained by CAN has handwritten notes and marks apparently made by an NRC staffperson who reviewed the document. In the margin next to the above-quoted paragraph, there is a note asking, "Did NRC close this LER?" referring to LER 91-021. Apparently, at least one person within NRC has questioned this light-handed treatment. There was clearly no documentary basis to support NYPA's assertions, NYPA never filed an update to close out LER 91-021, and the NRC never completed the fire protection inspection planned earlier in its review of Mr. Patrickson's allegations.

Despite these deficiencies, NRC accepted NYPA's answer over Patrickson's objections. The final record on the issue, until Patrickson's allegation in 2003, is a document NYPA provided to NRC on May 5, 1998: NYPA's response to the concern Mr. Patrickson reported through the company's Speakout Program in 1997, completed in January 1998. This document, JPN-98-015, includes a more detailed response regarding the corrective actions in LER 91-021. However, rather than resolving the issue, the response suggests that NYPA may have worsened the problem. With regard to the relevant corrective actions, it indicates that:

1) The fire watch was cancelled after completion of the fire damper reinstallation in 1991. Presumably, this means that the fire watch was cancelled before the ventilation problem was resolved. However, the corrective action committed to in LER 91-021 was to maintain the fire watch until "the consequence of closed fire dampers on the pump operability has been determined." It appears that NYPA's cancellation of the fire watch was actually in violation of its commitments, particularly since NYPA's 1992 temporary exemption presumed that a ventilation problem was unresolved and that temporary corrective actions – including a fire watch – were to be maintained (1992 Exemption, page 12). In fact, the 1992 commitment succeeds the commitment in the LER and suggests another violation of NRC regulations.
2) **"An alternate method of providing adequate ventilation to the fire safety-related pump rooms, while maintaining adequate barriers to prevent the spread of a fire, will be investigated. ... <u>Response</u>: ACTS item 2625 issued to track this corrective action. Temporary jumper 92-225 was initiated to provide alternate**

ventilation and was removed by M1-92-331 mod." The jumper was installed to temporarily prevent the ETLs from closing the fire dampers at 135 degrees F. M1-92-331 involved removing the ETLs – making the jumper irrelevant – so that the dampers would only close when the air passing through them reached 165 degrees F. Without an alternative source of ventilation, this modification ensures that the pumps would overheat themselves even more quickly. along with simply restored the status quo, which was actually the worst-case scenario in LER 91-021, since the pumps would begin to heat up the room at an earlier point and hence disable themselves even sooner.

3) NYPA's response lists the calculations it committed to in LER 91-021, and what it completed:

> JTS-91-0337 Memorandum (dated 9/6/91) was generated to document the minutes of the meeting on safety pump ventilation requirements. This memorandum documented that JAF-CALC-ESW-00284, Rev. 0, determined the maximum temperature in the south safety pump room. Additional corrective actions were generated and listed in this memorandum.
>
> The following calculations were performed for the ESW Pump Rooms ...: JAF-CALC-SWC-326 South ESW Pump Room Maximum Temperature, JAF-CALC-SWC-329 ESW Pump Room Temperature When Ventilation Failed and JAF-CALC-SWC-749 Screenwell Exhaust Fan Evaluation. These calculations are described in the Design Basis Manual, sections 7.1.8-7.10.
>
> The M1-92-331 mod was completed to restore the ventilation systems to their original design conditions. This investigator reviewed this mod package and it satisfactorily resolved the identified design deficiencies."

It is not at all clear from this response that NYPA followed through on its commitments.

- The memorandum mentioned is irrelevant, since it predates LER 91-021 and the commitments made in it.
- NYPA's response does not produce documentation for its calculations, only indicates that they were done and that the ventilation systems were later restored to their original design conditions.
- The calculations were to be performed for *all* of the fire and safety-related pump rooms, not just the South Pump Room. This is troubling since the North Pump Room is in fact more important than the South Pump Room, as it also contains the electric-driven fire pumps.
- M1-92-331 mod did not "restore the ventilation systems to their original design conditions" – the installation of the dampers in 1980 was a significant configuration change to the ventilation systems that has never been tested.
- Again, the diesel fire pump rooms are not even mentioned.

Had NYPA in fact resolved the pump room ventilation problem, it would have been easy for the company to come up with a more thorough, detailed, and convincing report of its findings and solutions.

Based on the documentation made available to CAN by FOIA request, NYPA appears to have reneged on its commitments to resolve the pump room ventilation problems identified in LER 91-021. Entergy inherited this problem – and NYPA's commitments to resolve it – when NRC approved the license transfer in November 2000. After Entergy took over, Mr. Patrickson reported the problem to plant management on several occasions, beginning in 2001. He filed a second allegation with NRC in 2003 when it became clear that Entergy also had no intention of resolving it.

NRC concluded that investigation in early 2004, but none of the documents were included in the agency's response to CAN's FOIA request. Mr. Patrickson claims to have submitted additional documentation to NRC in the course of that investigation – some of it calculations and analyses commissioned by NYPA from outside entities – which substantiates the need for alternative ventilation to the ESW and fire safety-related pump rooms. Many of those documents were also submitted as evidence into Mr. Patrickson's discrimination case, which is still pending before the US Department of Labor.

NRC's Allegations Department apparently reached the same conclusion in 2004 as in 1997. This fact is unsurprising, since NRC still has not conducted a fire protection inspection to verify the licensees' claims, and the pump room ventilation has not been tested. In addition, there is an apparent conflict of interest compromising the Allegation Department's investigation: the department is still managed by the same person as it was during the flawed 1997 investigation, NRC Senior Allegation Coordinator Dave Vito. After having approved a plainly inadequate investigation in 1997, Mr. Vito could be embroiled in a controversy questioning both his management of the Allegations department and Entergy's financial liability for a problem NYPA clearly should have been required to fix years before it sold the reactor.

Conclusion

It is more than twelve years since NYPA committed to resolve the pump room ventilation problem. Entergy just concluded the sixth refueling outage since that work was supposed to be completed. This problem amounts to a "common cause failure," by which a single fire could disable all of the cooling and fire-protection systems at the reactor. NRC's records and the allegations of Mr. Carl Patrickson indicate that, far from having resolved it, the licensees have manipulated reports and NRC's regulatory process to avoid installing the modifications necessary to provide adequate ventilation to the ESW and fire safety-related pump rooms.

This problem is all the more urgent because it could easily be exploited as a security vulnerability by those wishing to attack the United States. The security threat against US reactors has changed dramatically since the pump room ventilation problem was discovered. The possibility of attacks on US nuclear facilities cannot be merely dismissed

as unlikely. The fact that this has been a well-documented and obvious vulnerability for 13 years makes it imperative that it be resolved immediately.

For these reasons, the Petitioners request that NRC take emergency enforcement action by suspending Entergy's license to operate FitzPatrick until the requested actions are completed.

Sincerely,

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