

EDO Principal Correspondence Control

FROM: DUE: 07/14/04 EDO CONTROL: G20040440
DOC DT: 06/24/04
FINAL REPLY:

William E. Lemanski
Town of Tuxedo

TO:

Chairman Diaz

FOR SIGNATURE OF : ** PRI ** CRC NO: 04-0412

Chairman Diaz

DESC:

ROUTING:

Indian Point Unit 2 Cable and Raceway System and
the Licensee - Entergy's Conduct Regarding
Concerns

Reyes
Norry
Virgilio
Kane
Collins
Dean
Burns/Cyr
Dyer, NRR

DATE: 07/06/04

ASSIGNED TO: CONTACT:
RI Miller

SPECIAL INSTRUCTIONS OR REMARKS:

OFFICE OF THE SECRETARY
CORRESPONDENCE CONTROL TICKET

Date Printed: Jul 02, 2004 16:31

PAPER NUMBER: LTR-04-0412 **LOGGING DATE:** 07/01/2004
ACTION OFFICE: EDO

AUTHOR: Mr. William Lemanski-Councilman,Town of Tuxedo
AFFILIATION: NY
ADDRESSEE: CHRM Nils Diaz
SUBJECT: Safety concerns pertaining to the Indian Point Unit 2 cable and raceway system and the licensee, i.e., Entergy's conduct in regard to these concerns

ACTION: Signature of Chairman
DISTRIBUTION: RF, SECY to Ack

LETTER DATE: 06/24/2004

ACKNOWLEDGED No
SPECIAL HANDLING: Made publicly available via SECY/EDO/DPC

NOTES: Commisison Correspondence..OCM #5378

FILE LOCATION: ADAMS

DATE DUE: 07/16/2004 **DATE SIGNED:**

EDO --G20040440



5378

CHAIRMAN RECORD

04 JUN 30 AM 10:09

One Temple Drive, Tuxedo Park, New York 10987

www.tuxedogov.org

Dr. Nils J. Diaz
Chairman
U.S. Nuclear Regulatory Commission
Washington, DC 20006

June 24, 2004

Dear Dr. Diaz

Four months have elapsed since I notified the Nuclear Regulatory Commission of my safety concerns pertaining to the Indian Point Unit 2 cable and raceway system and the licensee, i.e. Entergy's conduct in regard to these concerns. Although the NRC has provided me with the results of their quarterly inspection report, which include observational comments on the cable and raceway system, and which I much appreciate, I am troubled by the lack of any conclusive report, findings and/or actions by this point in time.

As I have stated in the past, Entergy has ignored and mischaracterized the issues I have raised for two years, and now, following my notification to the NRC and based upon the quarterly inspection, it appears that Entergy has decided to implement all of the action plan items that they have previously avoided. However, the quarterly inspection report does not provide any schedule for implementation of the action plan items, any logical rationale for some of the listed assumptions and, based upon the issues stated, clearly indicates as I have stated in the past: Entergy does not have configuration control of the plant cable and raceway system.

The elapsed time since I first raised these issues is now approaching two and a half years during which time the plant has been operating with the very real potential of some equipment/systems not being able to function as designed under certain adverse conditions. Additionally, during this time, an ongoing hodge-podge of poorly maintained and inaccurate data has been used for the installation and management of the plant cable system. I did not gain a sense from the quarterly inspection report that the gravity of these problems are being afforded the degree of concern and speedy attention that they deserve.

Area Code 845

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Fax — 351-2190

Building & Highway — 351-4421
Fax — 351-2190

Town Assessor — 351-5602
Fax — 351-2190

Town Court — 351-5655
Fax — 351-2018

Town Clerk — 351-4411
Fax — 351-5593

Highway Garage — 351-2594
Fax — 351-4147

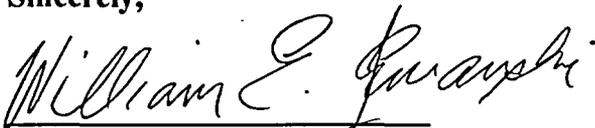
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In consideration of the foregoing issues (and with due appreciation for their complexity), I am requesting a formal and timely written response from the NRC addressing the concerns raised in my February letter. I have reviewed the NRC quarterly report section pertaining to the cable and raceway system and taken the liberty to attach my comments herewith for your consideration.

Thank you for your ongoing consideration of these issues.

Sincerely,



William E. Lemanski
Councilman,
Town of Tuxedo

cc: **Tuxedo Town Council**
Tuxedo Town Clerk
Jacobowitz & Gubits, LLP, attention Mr. R. DiNardo
Brian Holian, Deputy Director, Region I, Nuclear Regulatory Commission
Honorable Sue Kelly, Congresswoman

Enclosure:

Comments and Observations of the NRC Indian Point Unit 2 Integrated Inspection Report 05000247/2004002 by William E. Lemanski

*The Following are My Comments and Observations of the NRC Indian Point Unit 2
Integrated Inspection Report 05000247/2004002 as it Pertains to Cable and Raceway,
beginning on page 12 of the Report
W.E. Lemanski, 6/15/2004*

In General:

The report addresses mainly the issues relating to the cable and raceway computer programs: WARS and ECRIS and how Entergy is investigating data discrepancies therein. The NRC currently defers any commentary on my claims regarding the dysfunction of the Corrective Action Program and Entergy management's disregard of my concerns spanning 2.5 years, claiming these issues are still unresolved (bottom of page 16). Additionally, the NRC states nothing in regard to my claim that Entergy does not have configuration control over the plant cable and raceway system. Which in the aggregate, all these issues clearly indicate.

Specific Points:

1. Page 12 states that the NRC reviewed the operability evaluations associated with condition reports CR-IP2-2002-07454 and CR-IP2-2003-02665. I do not think this is correct. I wrote these two CR's and no operability or reportability evaluations were prepared when, I believe they should have been.
2. Page 13: the first paragraph places a favorable spin on the data discrepancy report (numbering 329 pages) by referring to the expectation of data anomalies. However, they make no mention or concern of the *unexpected* large volume of discrepancies numbering in the tens of thousands. Second paragraph refers to "potential anomalies". These weren't *potential* ! *They were in fact real data anomalies (a.k.a. errors)*! Or, are a worse-case representation of real physical problems in the plant, which are as of today, yet to be determined.
3. No where on pages 13 and 14 in recounting the history of this condition does the NRC mention the many meetings, discussions and phone calls made by me to reinforce the concern and questionable safety of managing the plant with all of this erroneous (or accurate but unsubstantiated ?) data. Has the NRC investigated to the depth necessary to ascertain *all* of the facts and details?
4. Page 14 second paragraph mentions ".....an assortment of analysis, evaluations, regulatory reviews, and field variations". It continues to reference the 1989 to 1995 individual cable walk downs. It does note, however, the absence of any investigation in the Cable Spreading Room. The WARS database, circa 1982 was updated. *However*, the report totally neglects the following:

- The referenced walk downs were not completed, data checked, verified or

approved. The historical documents for the walk downs were never entered into the plant document management system and were in an uncontrolled state for a dozen years. Therefore, this information is not comprehensive and is questionably accurate and should not be considered conclusive or of any substantial value. Unfortunately, Entergy has been using this information for the development of their new cable and raceway design basis in addition to verification of the raceway system. I provided the NRC with evidence of the poor condition of this documentation (from an Entergy source document) in a letter to Mr. David J. Vito, dated April 2, 2004. The NRC has yet to respond to this.

- The Cable Spreading Room is the large space below the plant Control Room where all of the control and signal cable converge and enter into the numerous control panels and cabinets above. This is a very congested and critical location containing thousands of cables. This area has the highest probability of cable separation violations and it was never checked or investigated.
- The archaic WARS program that plant personnel relied upon was never documented, properly tested or maintained in a tight controlled manner. The user community was never formally trained in its use.

Considering the foregoing (bulleted) problems, the NRC in this report states that Entergy used this as justification for the operability determination which is clearly a poor and reckless conclusion!

5. The third paragraph on page 14 states that "According to Entergy, plant upgrades since 1995 were controlled by the modification process for installing new cables and controlling the design of these new configurations." Furthermore, they supposedly didn't rely on WARS or ECRIS but rather manually (humanly, not automated) engineered/designed new cable installations. This completely conflicts with all of the statements that were related to me in numerous discussions I had with plant engineering staff before my retirement. In fact many engineers told me that they had no idea how to manually route cable in the plant because of the convoluted and ill-defined separation criteria and confusing cable and raceway design basis. Consequently, they relied upon WARS for defining/confirming all cable routes. Furthermore, certainly ECRIS (and perhaps WARS) is used for other types of important plant activities:

-Appendix "R" Safe Shutdown Analysis

-Cable Tray weight loading calculations

-Voltage Drop, impedance calculations and power system analysis

-Et Cetera

Given the questionable data in WARS and known troubling data in ECRIS (based upon 329 pages of data anomalies) heightened consideration should be given for the other critical plant uses this bogus data has been subjected to besides only cable routes.

One of the Entergy interoffice E-mails that I submitted to the NRC that I received from Bill Mahlmeister, a plant person *very* knowledgeable about both IP2 cabling and its history, states that many designers were scheduling and installing all cables as color coded black simply because they had no idea how to route them otherwise! He additionally stated that many of the plant cable trays are not physically marked and a number of the cable tray drawings are in error. E-mail correspondence between engineering personnel discuss and underscore these deficiencies.

Also in the third paragraph Entergy conducted a "limited review" of modifications for 300 of 2400 cables altered since 1995. This supposedly was used as a confidence builder. Considering all of the foregoing a very rigorous, detailed and comprehensive check of all modifications and cable changes should be conducted before anyone has any confidence. The NRC should carefully audit this to ensure that it is thorough and accurate....Entergy's confidence is clearly without basis.

6. The first paragraph on page 15 indicates the NRC is confident that no operability or immediate safety issues exist. Considering all of my comments listed above, there are no grounds for a conclusive and accurate decision. Therefore, I cannot agree or understand how the NRC can state that no operability or degraded conditions exist. This is neither a reasonable or conservative conclusion.

7. The second paragraph discusses the use of double fusing in lieu of physical separation to satisfy the segregation of redundant cables. The NRC rightly appears to question this.

The basic concept of separation is to physically isolate the redundant cables that support primary and backup functions for safety related equipment and systems to ensure that failure of one will not effect the other. At IP2 actual physical separation has been violated numerous times in the past. To mitigate this problem, rather than remove all of the offending cables and install isolated replacements, which would be enormously expensive and perhaps not feasible for business and cost purposes, one of Con Ed's solutions in the past (and Entergy's currently) has been to install duplicate fuses (in series) in the offending circuit(s). The rationale is that if for example a backup system cable is routed in violation in the same raceway with a redundant primary cable, double fusing will ensure that if the backup cable faults (i.e. shorts out) and one fuse does not function the second one will clear the fault without a resulting cable fire that could destroy both circuits. This way the reliability of the circuit protection is increased and the potential for a common failure to both primary and secondary (or backup) due to a cable overload fire is reduced considerably.

However, the reliability of this to completely equal the benefits of physical separation does not exist, I'm not surprised the NRC may have concern. This is a

bogus approach that will not protect against a pipe rupture, earthquake or fire that does not originate with the subject cables.

-For example, another scenario: Aside from fire, if a seismic (earthquake) event or pipe rupture shakes a pipe loose that becomes a missile and destroys the cable tray with both redundant cables the double fusing will be irrelevant. Once again, physical separation under this circumstance perhaps would protect the one of the cables.

The point is that electrical independence in lieu of physical separation for cables mentioned on page 15 may very well reduce the reliability of redundant systems and be an inferior method. This also should be considered for the other questionable mitigating approaches for offending cables in use at Unit 2: cable fire wraps and engineering analysis that is used to “paper away” low-level energy cables that are in violation. These techniques also would be useless under the above postulated events.

8. The balance of page 15 and the first paragraph of page 16 cover for the most part all of the activities that Entergy will be performing in the coming months/years to investigate and validate the adequacy of the plant cable system and the organization and the configuration management of the same. These are all items that I have suggested and complained about not being done during the past two and a half years.

9. The balance of page 16 covers the areas that the NRC will investigate and oversee going forward. A few thoughts on this:

- I am concerned that the big picture may be eluded by the NRC on this, i.e. that Entergy *does not* have configuration control over the plant cable system and has been operating the plant in a blind state vis-à-vis the plant cable system since they acquired the plant (not to mention many years of operation by Con Ed). All of the individual areas of concern and investigation if combined in common context will clearly indicate a long-term, mismanaged and poorly understood complex system.**
- The IP2 plant, no matter how much they back fit policies and procedures will not adhere to the requirements imposed on newer plants that were developed based upon knowledge gained from various events through the years, e.g. Browns Ferry, Three Mile Island, etc. For example, it is my understanding that cables within the Cable Spreading Room that terminate in panels and cabinets above in the Control Room pass through common floor openings, i.e. both primary and backup cables. This completely undermines any segregation theory and is probably impossible to change from a cost standpoint.**
- It is questionable why we should impose stringent safety requirements on some nuclear plants on the premise that it is vitally necessary for safe operation of a**

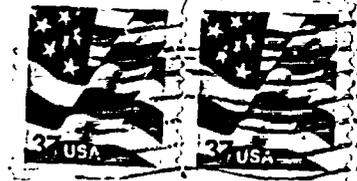
high-risk technology and then grandfather the older plants and relieve them with a free pass based upon cost restrictions.

- On the topic of level "A", safety related software:

The nuclear industry self employs very rigorous requirements on the development and management of level "A", safety related software. Only in the past dozen years or so the industry has recognized the major role that computer software plays in the safe operation of nuclear plants and has taken steps to improve software management and reliability. In fact, an industry organization, the Nuclear Utilities Software Management Group (NUSMG) has evolved to provide guidance in this area. Yet, all of the years that I have been in this industry I have never once been aware of the NRC conducting a major audit in this area. Additionally, although we pay much attention to the quality of the software, little concern is spent on the quality of the data. A good example of this is with the WARS and ECRIS cable and raceway programs at IP2. In their inspection report, the NRC seems little concerned about investigating the unreliable history of WARS, its questionable data or the management of ECRIS.



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