Entergy Nuclear Northeast
Indian Point Energy Center
450 Broadway, GSB
P.O. Box 249
Buchanan, NY 10511-0249
Tel 914 254 6700

John A. Ventosa
Site Vice President
Administration

NL-12-122

September 17, 2012

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Subject: Reply to Notices of Violation Regarding Unapproved III.G.2 Operator Manual Actions
Indian Point Nuclear Generating Unit Nos. 2 & 3
Docket Nos. 50-247, 50-286
License Nos. DPR-26, DPR-64

References:

1. NRC letter dated August 16, 2012, "Indian Point Nuclear Generating Units 2 and 3 – NRC Inspection Report 05000247/2012009 and 05000286/2012008 and Notices of Violation"

2. NRC letter dated February 1, 2012, "Indian Point Nuclear Generating Unit No. 2 – Exemption from the Requirements of 10 CFR Part 50, Appendix R, Paragraph III.G.2 (TAC No. ME0798)"

3. NRC letter dated February 1, 2012, "Indian Point Nuclear Generating Unit No. 3 – Exemption from the Requirements of 10 CFR Part 50, Appendix R, Paragraph III.G.2 (TAC No. ME0799)"

4. NRC letter dated February 1, 2012, "Indian Point Energy Center Units 2 & 3-Request for Additional Information Regarding Operator Manual Actions"

5. Entergy letter NL-12-041 dated March 1, 2012, "Response to Request for Additional Information Regarding Operator Manual Actions"

6. Entergy letter NL-12-093 dated July 11, 2012, "Revision to Response to Request for Additional Information Regarding Operator Manual Actions, Indian Point Nuclear Generating Unit 2

7. Entergy letter NL-12-114 dated September 5, 2012, "Revision to Response to Request for Additional Information Regarding Operator Manual Actions, Indian Point Nuclear Generating Unit No. 3

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Dear Sir or Madam:

By letter dated August 16, 2012 (Reference 1), violations for Indian Point Nuclear Generating Unit No. 2 (IP2) and Unit No. 3 (IP3) were issued for the use of unapproved operator manual actions (OMAs) to mitigate safe shutdown equipment malfunctions caused by a fire-induced single spurious actuation in lieu of protecting the equipment in accordance with 10 CFR Part 50 Appendix R, Paragraph III.G.2. The violations resulted from the denial of a number of OMAs in the Exemption transmitted by letters dated February 1, 2012 (References 2 and 3). In accordance with 10 CFR 2.201, Attachments 1, 2, and 3 to this letter provide the reply to the violations. Entergy Nuclear Operations, Inc. (Entergy) is not contesting the violations.

Note that in response to Reference 4, the planned resolutions to eliminate the need for the unapproved OMAs were provided in tables in Reference 5, which were subsequently updated in References 6 and 7. This reply to the notices of violation supersedes the information, including the commitment, previously transmitted in References 5, 6, and 7. The tables in References 6 and 7 have been provided in Attachments 2 and 3 of this reply with the following changes:

- For both units, the titles of the tables have been changed.

- For IP2 (Attachment 2), the changes in the description under Planned Resolution and Scheduled Completion Date for resolution of OMA 6 in Fire Area F, Fire Zones 5A, 6, and 22A is based on further engineering evaluation leading to the conclusion that modification of the safe-shutdown analysis and methodology only for these three zones within Fire Area F, with no other plant changes, would not be consistent with the existing licensing basis for III.G.2 compliance based on fire areas. Therefore, an integrated solution for OMA 6, encompassing all affected zones in Fire Area F – which involves the need for physical modification – will be implemented, consistent with the schedule shown for OMA 6 in Fire Zones 7A and 27A.

- For IP2 (Attachment 2), the change in Scheduled Completion Date for resolution of OMA 13 in Fire Area J, Fire Zone 43A is based on confirmation of the need to align the solution for this zone with that of adjoining Fire Zone 46A, such that the revised safe-shutdown methodology developed for Fire Zone 46A, scheduled for completion in Q4 2012, will also envelope that of the adjoining Fire Zone 43A.

As noted in Reference 5, given the substantial technical challenge imposed by the OMA resolution effort, and recognizing that the requisite engineering evaluations are in progress at this time, the presently conceptualized solutions may change, in that the scope of analyses and/or the nature and scope of plant physical modifications may require revision as the OMA resolutions are finalized. The target completion dates shown in the attachments represent Entergy's current informed projection, and any change in resolution concept and/or completion schedule that may be determined to be

necessary as an outcome of the engineering analysis and evaluation process will be communicated to NRC.

Regulatory commitments made in this submittal are identified in Attachment 4 to this letter.

In the event of any questions, please contact Mr. Robert W. Walpole, Manager, Licensing at 914-254-6710.

Sincerely,

Peter W. Conroy acting for John A. Ventosa

JAV/gd

Attachments:

1. Reply to Notices of Violation Regarding Unapproved III.G.2 Operator Manual Actions
2. Resolution of Indian Point Unit 2 Unapproved III.G.2 OMAs
3. Resolution of Indian Point Unit 3 Unapproved III.G.2 OMAs
4. List of Regulatory Commitments

cc: Mr. Douglas V. Pickett, Senior Project Manager, NRC NRR DORL
U.S. Nuclear Regulatory Commission Document Control Desk
NRC Resident Inspectors
Mr. Francis J. Murray, Jr., President and CEO, NYSERDA
Ms. Bridget Frymire, New York State Department of Public Service

Attachment 1
to
NL-12-122

Reply to Notices of Violation
Regarding Unapproved III.G.2 Operator Manual Actions

ENTERGY NUCLEAR OPERATIONS, INC.
Indian Point Nuclear Generating Unit Nos. 2 & 3
Docket Nos. 50-247 & 50-286
License Nos. DPR-26 & DPR-64

Reply to Notices of Violation
Regarding Unapproved III.G.2 Operator Manual Actions

As transmitted by letters dated February 1, 2012[1], exemptions from the requirements of 10 CFR 50, Appendix R, Paragraph III.G.2 for the use of operator manual actions (OMAs) were granted in part and denied in part for Indian Point Unit 2 (IP2) and Unit 3 (IP3). As a result, a violation was issued for each unit for the use of OMAs without prior NRC approval. The reply provided herein together with Attachments 2 and 3 to this letter address both violations.

Unit 2 Violation

License Condition 2.K specifies, in part, that Entergy Nuclear Operations, Inc., (ENO) shall implement and maintain in effect all provisions of the NRC-approved fire protection program as described in the Updated Final Safety Analysis Report.

The Updated Final Safety Analysis Report, Section 9.6 specifies that ENO will meet the requirements of 10 CFR Part 50, Appendix R, Section III.G.2, which requires, in part, except as provided for in paragraph G.3 of this section, where cables or equipment, including associated non-safety circuits that could prevent operation or cause maloperation due to hot shorts, open circuits, or shorts to ground, of redundant trains of systems necessary to achieve and maintain hot shutdown conditions are located within the same fire area, one of the means of ensuring that one of the redundant trains is free of fire damage shall be provided, per the requirements in G.2.a - G.2.f.

Contrary to the above, between June 30, 2006, and April 26, 2012, ENO failed to implement all provisions of the approved fire protection program. Specifically, the safe shutdown strategy for Indian Point Unit 2 relied upon unapproved operator manual actions to mitigate post-fire safe shutdown equipment malfunctions caused by a single spurious actuation, in lieu of protecting the equipment in accordance with 10 CFR Part 50 Appendix R, Section III.G.2, per the requirements in G.2.a - G.2.f . The specific operator manual actions and fire areas and fire zones that are in violation of Appendix R, Section III.G.2 are listed in the Indian Point Unit 2 Denied OMA Summary Table of NRC Inspection Report 05000247/2012009 and 05000286/2012008. The use of manual actions in lieu of providing the required protection requires prior NRC approval.

Unit 3 Violation

License Condition 2.H specifies, in part, that Entergy Nuclear Operations, Inc., (ENO) shall implement and maintain in effect all provisions of the approved Fire Protection Program as described in the Final Safety Analysis Report.

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[1] NRC letter dated February 1, 2012, "Indian Point Nuclear Generating Unit No. 2 – Exemption from the Requirements of 10 CFR Part 50, Appendix R, Paragraph III.G.2 (TAC No. ME0798)" and NRC letter dated February 1, 2012, "Indian Point Nuclear Generating Unit No. 3 – Exemption from the Requirements of 10 CFR Part 50, Appendix R, Paragraph III.G.2 (TAC No. ME0799)"

The Final Safety Analysis Report, Section 9.6.2 specifies that ENO will meet the requirements of 10 CFR Part 50, Appendix R, Section III.G.2, which requires, in part, except as provided for in paragraph G.3 of this section, where cables or equipment, including associated non-safety circuits that could prevent operation or cause maloperation due to hot shorts, open circuits, or shorts to ground, of redundant trains of systems necessary to achieve and maintain hot shutdown conditions are located within the same fire area, one of the means of ensuring that one of the redundant trains is free of fire damage shall be provided, per the requirements in G.2.a - G.2.f.

Contrary to the above, between June 30, 2006 and April 26, 2012, ENO failed to implement all provisions of the approved fire protection program. Specifically, the safe shutdown strategy for Indian Point Unit 3 relied upon unapproved manual operator actions to mitigate post-fire safe shutdown equipment malfunctions caused by a single spurious actuation, in lieu of protecting the equipment in accordance with 10 CFR Part 50 Appendix R, Section III.G.2, per the requirements in G.2.a - G.2.f . The specific operator manual actions and fire areas and fire zones that are in violation of Appendix R, Section III.G.2 are listed in the Indian Point Unit 3 Denied OMA Summary Table of NRC Inspection Report 05000247/2012009 and 05000286/2012008. The use of manual actions in lieu of providing the required protection requires prior NRC approval.

Reason for the Violations

10 CFR 50, Appendix R, Paragraph III.G.2 requires the following:

> Except as provided for in paragraph G.3 of this section, where cables or equipment, including associated non-safety circuits that could prevent operation or cause maloperation due to hot shorts, open circuits, or shorts to ground, of redundant trains of systems necessary to achieve and maintain hot shutdown conditions are located within the same fire area outside of primary containment, one of the following means of ensuring that one of the redundant trains is free of fire damage shall be provided:
>
> a. Separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating. Structural steel forming a part of or supporting such fire barriers shall be protected to provide fire resistance equivalent to that required of the barrier;
>
> b. Separation of cables and equipment and associated non-safety circuits of redundant trains by a horizontal distance of more than 20 feet with no intervening combustible or fire hazards. In addition, fire detectors and an automatic fire suppression system shall be installed in the fire area; or
>
> c. Enclosure of cable and equipment and associated non-safety circuits of one redundant train in a fire barrier having a 1-hour rating, In addition, fire detectors and an automatic fire suppression system shall be installed in the fire area;

Inside noninerted containments one of the fire protection means specified above or one of the following fire protection means shall be provided:

d. Separation of cables and equipment and associated non-safety circuits of redundant trains by a horizontal distance of more than 20 feet with no intervening combustibles or fire hazards;

e. Installation of fire detectors and an automatic fire suppression system in the fire area; or

f. Separation of cables and equipment and associated non-safety circuits of redundant trains by a noncombustible radiant energy shield.

As discussed in the Exemptions transmitted by the February 1, 2012 NRC letters, the NRC staff denied a number of the requested exemptions based on the lack of fire protection defense-in-depth, particularly detection or automatic suppression, or lack of adequate time margin available to complete the OMA.

Entergy requested exemptions because the criteria of III.G.2 were not met, including the lack of detection and/or automatic fire suppression in many of the areas. The areas lacking detection and/or automatic fire suppression were identified in the various submittals, and it was Entergy's belief that the lack of detection/suppression was acceptable as long as the OMAs were demonstrated to be reliable and feasible. Entergy misjudged the significance that the lack of detection/suppression has on the acceptability of using the unapproved OMAs in lieu of meeting the requirements of III.G.2.

For those OMAs that were denied due to inadequate time margin to complete the action, it was Entergy's judgment that the time margins available were adequate, which made the OMAs feasible. This is supported by the determination during inspections performed in May 2011 and again in April 2012 by Region I that the OMAs (except for an IP3 OMA involving service water strainers) are adequate as interim compensatory actions and are feasible. However, considering the scope or complexity of the actions that had to be performed, it was determined by the NRC staff that the OMAs could not be performed with adequate time margin to be acceptable for compliance with Appendix R.

Entergy understands the positions established by the NRC staff and does not contest the violations. Note that the condition reports tracking the resolution of these issues are CR-IP2-2011-02417 and CR-IP3-2011-02853 for IP2 and IP3, respectively.

Regarding the aspect of the IP2 violation where Entergy failed to identify and request exemptions for two OMAs associated with the operation of 21 Charging Pump (operating the pump from the emergency control station in the 480V Switchgear Room and using the scoop tube in the pump room) that were being relied upon to achieve and maintain safe shutdown in the event of a fire impacting Fire Zone 7A in Fire Area F, the following has been determined:

- A screening report that identified all the OMAs that required an exemption correctly identified that certain actions associated with 21 Charging Pump would require an exemption, but did not explicitly identify the two OMAs of concern. The input to the engineering report was the IP2 Appendix R Analysis and associated database. The database and document did not correctly record and code the actions for the pump as manual actions. Specifically, non-standard nomenclature was used in the IP2 Appendix R Analysis and multiple protective actions were grouped as a single entry for the pump instead of individually. The use of non-standard nomenclature and presentation method resulted in an error of omission in transcribing OMAs from the screening report to the exemption request submitted in March 2009.

- The personnel responsible for preparing the IP2 Appendix R Analysis database did not exhibit a heightened awareness of the importance of maintaining the convention of the database. The erroneous database entries were obviously different from other entries in the database and should have been questioned before becoming part of the permanent record.

Corrective Steps Taken and Results Achieved

Entergy was initially informed of the pending denial of a number of OMAs in May 2011 during the IP3 Triennial Fire Protection inspection. Following receipt of the verbal notification, the following actions were taken for IP2 and IP3:

- Hourly fire watch tours were implemented for all areas in which OMAs were credited, not only for areas in which the denied OMAs were credited. For OMAs in the IP2 Containment, a one hour log of containment average temperature was initiated. These actions will remain in effect for each unapproved OMA until the OMA is resolved.

- In May 2011 during the IP3 Triennial Fire Protection inspection, Region I inspectors assessed the feasibility (including time margins) of the IP2 and IP3 OMAs and determined they were adequate as interim compensatory actions pending final disposition of the exemption requests (except for an IP3 OMA involving service water strainers).

Resolution plans have been established for all of the unapproved OMAs. For IP2, planned resolutions to eliminate the need for the unapproved OMAs are scheduled to be completed as shown in Attachment 2. For IP3, planned resolutions to eliminate the need for the unapproved OMAs are scheduled to be completed as shown in Attachment 3; OMAs 2, 3, 4, 5, 6, 7, 8, and 11 have been resolved by revision of the Appendix R safe-shutdown analysis and methodology to credit existing separation within the fire area/zone, and they are shown as "Completed" in Attachment 3.

Regarding the aspect of the IP2 violation where Entergy failed to identify and request exemptions for the two OMAs associated with the operation of 21 Charging Pump , the following corrective actions as documented in CR-IP2-2012-03024 have been taken:

- Compensatory measures were verified to be established and adequate to address the OMAs for the operation of the pump, and Operations procedure 2-ONOP-FP-001 (Plant Fires) was revised to include the OMAs.

- The feasibility and reliability of the OMAs were validated with Operations and documented by engineering evaluation.

- All of the component protection remarks in the IP2 Appendix R Analysis and the IP3 Appendix R Analysis not coded using conventional nomenclature were reviewed and it was verified that there are no other "unaccounted for" manual actions identified in any of the remarks.

- Coaching was provided to applicable engineering staff to reinforce the critical nature of the Safe Shutdown Analysis and continued use of Human Performance tools; coaching was provided to the Programs & Components Engineering department to reinforce the use of Human Performance tools when relying on past reports as a basis for critical decisions.

Corrective Steps That Will be Taken

Planned resolutions to eliminate the need for the unapproved OMAs are scheduled to be completed as shown in Attachment 2 for IP2 and in Attachment 3 for IP3. As reflected in these attachments, full compliance with the requirements of Appendix R Paragraph III.G.2 will be accomplished by Spring 2014 RFO for IP2 and by Q2 2013 for IP3.

Regarding the aspect of the IP2 violation where Entergy failed to identify and request exemptions for two OMAs associated with the operation of 21 Charging Pump, a modification to protect circuits of concern is required (identified in Attachment 2 as OMAs 20 and 21).

Attachment 2
to
NL-12-122

Resolution of Indian Point Unit 2 Unapproved III.G.2 OMAs

ENTERGY NUCLEAR OPERATIONS, INC.
Indian Point Nuclear Generating Unit Nos. 2 & 3
Docket Nos. 50-247 & 50-286
License Nos. DPR-26 & DPR-64

RESOLUTION OF INDIAN POINT UNIT 2 UNAPPROVED III.G.2 OMAS			
Fire Area / Zone	**OMA No.[1]**	**Planned Resolution**	**Scheduled Completion Date**
F/5A	6	Revise Appendix R safe-shutdown analysis and methodology to credit equipment train independent of the fire area/zone and implement modification to establish separate fire area OR implement modification to protect circuits of concern, thereby eliminating this OMA	Spring 2014 RFO
F/6	6	As described for OMA 6, Fire Area F, Fire Zone 5A	Spring 2014 RFO
	7	Revise Appendix R safe-shutdown analysis and methodology to credit equipment train independent of the fire area/zone, thereby eliminating this OMA	Q4 2012
F/7A	6	Implement modification to protect circuits of concern, thereby eliminating this OMA	Spring 2014 RFO
	7	As described for OMA 7, Fire Area F, Fire Zone 6	Q4 2012
	20	Implement modification to protect circuits of concern, thereby eliminating this OMA (see Note on page 4)	Spring 2014 RFO
	21	Implement modification to protect circuits of concern, thereby eliminating this OMA (see Note on page 4)	Spring 2014 RFO
F/22A	6	As described for OMA 6, Fire Area F, Fire Zone 5A	Spring 2014 RFO
F/27A	5	Revise Appendix R safe-shutdown analysis and methodology to credit equipment train independent of the fire area/zone, thereby eliminating this OMA	Q3 2012
	6	As described for OMA 6, Fire Area F, Fire Zone 7A	Spring 2014 RFO
F/33A	5	As described for OMA 5, Fire Area F, Fire Zone 27A	Q3 2012
F/59A	5	As described for OMA 5, Fire Area F, Fire Zone 27A	Q3 2012
H/72A	8	Revise Appendix R safe-shutdown analysis and methodology to credit equipment train independent of the fire area/zone, thereby eliminating this OMA	Q3 2012
H/75A	8	Revise Appendix R safe-shutdown analysis and methodology to credit a train of equipment free of fire damage in the fire area/zone, thereby eliminating this OMA	Q3 2012
	9,10	Implement modification to protect circuits of concern, thereby eliminating these OMAs	Spring 2014 RFO

[1] As identified in table on pages 5 and 6 in Exemption transmitted by NRC letter dated February 1, 2012, "Indian Point Nuclear Generating Unit No. 2 – Exemption from the Requirements of 10 CFR Part 50, Appendix R, Paragraph III.G.2 (TAC No. ME0798)", with the exception of OMAs 19, 20 and 21 – see Note on page 4

RESOLUTION OF INDIAN POINT UNIT 2 UNAPPROVED III.G.2 OMAS			
Fire Area / Zone	**OMA No.[1]**	**Planned Resolution**	**Scheduled Completion Date**
H/77A	8	As described for OMA 8, Fire Area H, Fire Zone 72A	Q3 2012
	9,10	As described for OMAs 9,10, Fire Area H, Fire Zone 75A	Spring 2014 RFO
H/84A	8	As described for OMA 8, Fire Area H, Fire Zone 72A	Q3 2012
H/85A	8	As described for OMA 8, Fire Area H, Fire Zone 72A	Q3 2012
H/87A	8	As described for OMA 8, Fire Area H, Fire Zone 72A	Q3 2012
	9,10	As described for OMAs 9,10, Fire Area H, Fire Zone 75A	Spring 2014 RFO
J/19	11	Reassess electrical circuit and power supply loading analyses and revise Appendix R safe-shutdown analysis and methodology to provide the basis for elimination of this OMA	Q3 2012
J/25	12	Revise Appendix R safe-shutdown analysis and methodology to credit equipment train independent of the fire area/zone, thereby eliminating this OMA	Q4 2012
J/39A	11	As described for OMA 11, Fire Area J, Fire Zone 19	Q3 2012
	12	As described for OMA 12, Fire Area J, Fire Zone 25	Q4 2012
J/43A	11	As described for OMA 11, Fire Area J, Fire Zone 19	Q3 2012
	12	As described for OMA 12, Fire Area J, Fire Zone 25	Q4 2012
	13	Revise Appendix R safe-shutdown analysis and methodology to credit equipment train independent of the fire area/zone, thereby eliminating this OMA	Q4 2012
J/45A	11	As described for OMA 11, Fire Area J, Fire Zone 19	Q3 2012
J/46A	11	As described for OMA 11, Fire Area J, Fire Zone 19	Q3 2012
	12	As described for OMA 12, Fire Area J, Fire Zone 25	Q4 2012
	13	As described for OMA 13, Fire Area J, Fire Zone 43A	Q4 2012
J/47A	11	As described for OMA 11, Fire Area J, Fire Zone 19	Q3 2012
J/50A	11	As described for OMA 11, Fire Area J, Fire Zone 19	Q3 2012
	12	As described for OMA 12, Fire Area J, Fire Zone 25	Q4 2012
J/270	12	As described for OMA 12, Fire Area J, Fire Zone 25	Q4 2012

RESOLUTION OF INDIAN POINT UNIT 2 UNAPPROVED III.G.2 OMAS			
Fire Area / Zone	**OMA No.[1]**	**Planned Resolution**	**Scheduled Completion Date**
K/60A	14	Implement modification to protect circuits of concern, thereby eliminating this OMA	Q4 2012
	15	Implement modification to protect circuits of concern, thereby eliminating this OMA	Q4 2012
	19	Implement modification to protect circuits of concern, thereby eliminating this OMA (see Note on page 4)	Q4 2012
K/65A	14	As described for OMA 14, Fire Area K, Fire Zone 60A	Q4 2012
	15	As described for OMA 15, Fire Area K, Fire Zone 60A	Q4 2012
	19	As described for OMA 19, Fire Area K, Fire Zone 60A	Q4 2012

Description of Unit 2 Unapproved OMAs

5. Open HCV-142 bypass valve 227 to align charging pump makeup path to the Reactor Coolant System (RCS)

6. Align charging pump suction source to the Refueling Water Storage Tank (RWST)

7. Transfer instrument buses 23 and 23A to alternate power

8. Fail open valves 204A (charging flow to Loop 2 hot leg) and 204B (charging flow to Loop 1 cold leg) to align charging pump makeup path to the RCS

9. Activate or enable Alternate Safe Shutdown System pneumatic instruments (steam generator level, pressurizer pressure and level) at Fan House local control panel

10. Enable Alternate Safe-Shutdown System source-range channel and Loop 21 and 22 hot leg (T_h) and cold leg (T_c) temperature channels

11. Trip breakers 52/5A and 52-SAC on Bus 5A and 52/6A and 52/TAO at Bus 6A and remove control power fuses

12. Transfer Instrument Buses 23 and 23A to emergency power source

13. Align charging pump suction to RWST

14. Operate transfer switch EDC5 and close supply breaker at substation 12FD3 to transfer 21 AFW Pump to Alternate Safe Shutdown System power source

15. Open 21 AFW Pump recirculation bypass valve BFD-77

19. Operate 21 AFW Pump flow control valves to control AFW flow to Steam Generators 21 & 22

20. Locally operate 21 Charging Pump scoop tube positioner

21. Locally start 21 Charging Pump using the emergency control station located in the 480V Switchgear Room

NOTE: With the exception of OMAs 19, 20 and 21, the descriptions are copied from the table on pages 5 and 6 in Exemption transmitted by NRC letter dated February 1, 2012, "Indian Point Nuclear Generating Unit No. 2 – Exemption from the Requirements of 10 CFR Part 50, Appendix R, Paragraph III.G.2 (TAC No. ME0798)". OMA 19 was not addressed in the Exemption transmitted by that letter. OMAs 20 and 21 were inadvertently omitted from the exemption request process, and are therefore unapproved OMAs. The three OMAs have been given the next sequential numbers.

Attachment 3
to
NL-12-122

Resolution of Indian Point Unit 3 Unapproved III.G.2 OMAs

ENTERGY NUCLEAR OPERATIONS, INC.
Indian Point Nuclear Generating Unit Nos. 2 & 3
Docket Nos. 50-247 & 50-286
License Nos. DPR-26 & DPR-64

RESOLUTION OF INDIAN POINT UNIT 3 UNAPPROVED III.G.2 OMAS			
Fire Area / Zone	**OMA No.[1]**	**Planned Resolution**	**Scheduled Completion Date**
ETN-4{1} / 7A	2	Revise Appendix R safe-shutdown analysis and methodology to credit existing separation within the fire area/zone, thereby eliminating this OMA	Completed
	3	Revise Appendix R safe-shutdown analysis and methodology to credit existing separation within the fire area/zone, thereby eliminating this OMA	Completed
	4	Revise Appendix R safe-shutdown analysis and methodology to credit existing separation within the fire area/zone, thereby eliminating this OMA	Completed
	6	Revise Appendix R safe-shutdown analysis and methodology to credit existing separation within the fire area/zone, thereby eliminating this OMA	Completed
	7	Revise Appendix R safe-shutdown analysis and methodology to credit existing separation within the fire area/zone, thereby eliminating this OMA	Completed
	8	Revise Appendix R safe-shutdown analysis and methodology to credit existing separation within the fire area/zone, thereby eliminating this OMA	Completed
ETN-4{1} / 60A	5	Revise Appendix R safe-shutdown analysis and methodology to credit existing separation within the fire area/zone, thereby eliminating this OMA	Completed
	6	As described for OMA 6, Fire Area ETN-4{1}, Fire Zone 7A	Completed
	7	As described for OMA 7, Fire Area ETN-4{1}, Fire Zone 7A	Completed
	8	As described for OMA 8, Fire Area ETN-4{1}, Fire Zone 7A	Completed
	9	Revise Appendix R safe-shutdown analysis and methodology to credit existing separation within and/or independent of the fire area/zone, thereby eliminating this OMA	Q4 2012
	10	Implement modification to protect circuits of concern for valves LCV-112B and LCV-112C, thereby eliminating this OMA	Q2 2013
	11	Revise Appendix R safe-shutdown analysis and methodology to credit existing separation within the fire area/zone, thereby eliminating this OMA	Completed

[1] As identified in table on pages 5 and 6 in Exemption transmitted by NRC letter dated February 1, 2012, "Indian Point Nuclear Generating Unit No. 3 – Exemption from the Requirements of 10 CFR Part 50, Appendix R, Paragraph III.G.2 (TAC No. ME0799)"

RESOLUTION OF INDIAN POINT UNIT 3 UNAPPROVED III.G.2 OMAS			
Fire Area / Zone	**OMA No.[1]**	**Planned Resolution**	**Scheduled Completion Date**
ETN-4{1} / 60A (continued)	12	Revise Appendix R safe-shutdown analysis and methodology to credit existing separation within and/or independent of the fire area/zone, thereby eliminating this OMA	Q4 2012
	13	Implement power/control circuit modification to ensure post-fire functionality of the Service Water strainers for III.G.2 fire scenarios, thereby eliminating this OMA	Q4 2012
ETN-4{3} / 73A	14	Revise Appendix R safe-shutdown analysis and methodology to credit existing separation within and/or independent of the fire area/zone, thereby eliminating this OMA	Q4 2012
	15	Revise Appendix R safe-shutdown analysis and methodology to credit existing separation within and/or independent of the fire area/zone, thereby eliminating this OMA	Q4 2012
	16	Revise Appendix R safe-shutdown analysis and methodology to credit existing separation within and/or independent of the fire area/zone, thereby eliminating this OMA	Q4 2012
	17	Revise Appendix R safe-shutdown analysis and methodology to credit existing separation within and/or independent of the fire area/zone, thereby eliminating this OMA	Q4 2012
PAB-2{3} / 6	18	Revise Appendix R safe-shutdown analysis and methodology to credit equipment train independent of the fire area/zone, thereby eliminating this OMA	Q4 2012
PAB-2{5} / 17A	19	Revise Appendix R safe-shutdown analysis and methodology to credit equipment train independent of the fire area/zone, thereby eliminating this OMA	Q4 2012
	20	Revise Appendix R safe-shutdown analysis and methodology to credit equipment train independent of the fire area/zone, thereby eliminating this OMA	Q4 2012
	22	Revise Appendix R safe-shutdown analysis and methodology to credit equipment train independent of the fire area/zone, thereby eliminating this OMA	Q4 2012
PAB-2{5} / 19A	19	As described for OMA 19, Fire Area PAB-2{5}, Fire Zone 17A	Q4 2012
	20	As described for OMA 20, Fire Area PAB-2{5}, Fire Zone 17A	Q4 2012
PAB-2{5} / 20A	22	As described for OMA 22, Fire Area PAB-2{5}, Fire Zone 17A	Q4 2012
PAB-2{5} / 27A	22	As described for OMA 22, Fire Area PAB-2{5}, Fire Zone 17A	Q4 2012

RESOLUTION OF INDIAN POINT UNIT 3 UNAPPROVED III.G.2 OMAS			
Fire Area / Zone	**OMA No.[1]**	**Planned Resolution**	**Scheduled Completion Date**
PAB-2{5} / 30A	22	As described for OMA 22, Fire Area PAB-2{5} / 17A	Q4 2012
PAB-2{5} / 59A	21	Revise Appendix R safe-shutdown analysis and methodology to credit equipment train independent of the fire area/zone, thereby eliminating this OMA	Q4 2012
TBL-5 / 37A	25	Implement power/control circuit modification to ensure post-fire functionality of the Service Water strainers for III.G.2 fire scenarios, thereby eliminating this OMA	Q4 2012
TBL-5 / 38A	25	As described for OMA 25, Fire Area TBL-5, Fire Zone 37A	Q4 2012
TBL-5 / 43A	25	As described for OMA 25, Fire Area TBL-5, Fire Zone 37A	Q4 2012
TBL-5 / 44A	25	As described for OMA 25, Fire Area TBL-5, Fire Zone 37A	Q4 2012
TBL-5 / 52A	23	Implement modification to protect affected circuits in this zone, thereby eliminating this OMA	Q4 2012
	24	Implement modification to protect affected circuits in this zone, thereby eliminating this OMA	Q4 2012
TBL-5 / 54A	24	As described for OMA 24, Fire Area TBL-5, Fire Zone 52A	Q4 2012
YARD-7 / 22	26	Reevaluate Appendix R safe-shutdown analysis, methodology, and fire protection licensing basis to validate whether the OMA may be eliminated	Q4 2012
	27	Implement power/control circuit modification to ensure post-fire functionality of the Service Water strainers for III.G.2 fire scenarios, thereby eliminating this OMA	Q4 2012
YARD-7 / 222	27	As described for OMA 27, Fire Area YARD-7, Fire Zone 22	Q4 2012

Description of Unit 3 Unapproved OMAs

2. Swap 32 Component Cooling Water (CCW) pump to alternate power supply or align city water to charging pumps

3. Operate 480V Bus 3A breaker locally to start 31 AFW Pump

4. Locally operate the bypass valve for Flow Control Valve (FCV)-1121 in support of use of 31 AFW pump

5. Operate HCV-1118 manually to control 32 AFW pump

6. Align Appendix R Diesel Generator (ARDG) to 480V Buses 2A, 3A, 5A, and 312

7. Swap 31 or 32 charging pump to alternate power supply

8. Locally operate FCV-405B, FCV-405D, or FCV-406B to control AFW flow to Steam Generators (SGs)

9. Locally open valve 227 to establish charging [previously "CVCS"] makeup flowpath to Reactor Coolant System (RCS)

10. Locally close Level Control Valve (LCV)-112C and open valve 288 to align charging pump suction to the Refueling Water Storage Tank (RWST)

11. Locally operate Pressure Control Valve PCV-1139 to ensure steam supply to 32 AFW Pump

12. Locally operate PCV-1310A and PCV-1310B to ensure steam supply to 32 AFW pump

13. Locally manually perform Service Water (SW) pump strainer backwash as required

14. Operate HCV-1118 manually to control 32 AFW pump

15. Locally operate PCV-1139 to ensure steam supply to 32 AFW pump

16. Locally operate 32 PCV-1310A, PCV-1310B to ensure steam supply to 32 AFW pump

17. Locally operate FCV-405C and FCV-405D to control AFW flow to SG

18. Locally close valve LCV-112C, and open valve 288 to align charging pump suction path to RWST

19. Locally close supply breaker for 32 Charging Pump [previously "CVCS"] Pump

20. Locally control 32 charging [previously "CVCS"] pump using scoop tube positioner

21. Open bypass valve 227 to establish charging flowpath to RCS around potentially failed closed HCV-142

22. Locally close valve LCV-112C and open bypass valve 288 to establish flowpath from RWST to charging pump suction

23. Locally operate [bypass valve for] FCV-1121 AFW pump recirculation valve during pump startup

24. Locally operate FCV-406A and FCV-406B to control AFW flow to SGs

25. Locally/manually backwash SW pump strainer as required if power to strainer associated with selected SW pump is lost (use one of STR PMP-31 through STR PMP-36)

26. Locally start ARDG to supply Motor Control Center (MCC) 312A in support of the use of SW pump 38

27. Locally/manually backwash SW pump strainer as required if power to strainer associated with selected SW pump is lost

NOTE: The descriptions are copied from the table on pages 5 and 6 in Exemption transmitted by NRC letter dated February 1, 2012, "Indian Point Nuclear Generating Unit No. 3 – Exemption from the Requirements of 10 CFR Part 50, Appendix R, Paragraph III.G.2 (TAC No. ME0799)"

Attachment 4
to
NL-12-122

List of Regulatory Commitments

ENTERGY NUCLEAR OPERATIONS, INC.
Indian Point Nuclear Generating Unit Nos. 2 & 3
Docket Nos. 50-247 & 50-286
License Nos. DPR-26 & DPR-64

List of Regulatory Commitments

The following table identifies those actions committed to by Entergy in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments.

#	COMMITMENT	IMPLEMENTATION SCHEDULE
1	Any change in resolution concept and/or completion schedule that may be determined to be necessary as an outcome of the engineering analysis and evaluation process will be communicated to NRC	Upon identification of any needed change(s)