



**Entergy Nuclear**  
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

NL-13-072

May 2, 2013

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

**Subject:** Status of Planned Resolutions of the 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. Entergy letter NL-12-179 dated December 7, 2012, "Revision to the Reply to Notices of Violation Regarding Unapproved III.G.2 Operator Manual Actions"
2. Entergy letter NL-12-122 dated September 17, 2012, "Reply to Notices of Violation Regarding Unapproved III.G.2 Operator Manual Actions"
3. 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"
4. 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)"
5. 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)"

Dear Sir or Madam:

By letter dated September 17, 2012 (Reference 2), Entergy Nuclear Operations, Inc. (Entergy) replied to the violations issued in Reference 3 for Indian Point Nuclear Generating Unit No. 2 (IP2) and Unit No. 3 (IP3) 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

A.O.O.  
NRR

with 10 CFR Part 50 Appendix R, Paragraph III.G.2. The violations resulted from the denial of a number of OMAs in the Exemptions transmitted by letters dated February 1, 2012 (References 4 and 5). A revised response to the NOV was transmitted by letter dated December 7, 2012 (Reference 1).

Attachments 1 and 2 herein provide the status update of the Planned Resolutions for the unapproved OMAs, which were last provided in Attachments 2 and 3 in Reference 1, as follows:

- For IP2 (Attachment 1), the "Scheduled Completion Date" for OMAs 7, 12, 13, 14, 15 and 19 in all applicable Fire Areas/Fire Zones is now "Completed" (previously "Q4 2012") as the Planned Resolutions were completed in the fourth quarter of 2012. Note that the Planned Resolutions of all remaining IP2 unapproved OMAs require an outage to implement, which is currently scheduled for Spring 2014.
- For IP3 (Attachment 2), the Planned Resolution for OMA 9 in Fire Area ETN-4{1} Fire Zone 60A was to revise the Appendix R safe-shutdown analysis and methodology to credit existing separation within and/or independent of the fire area/zone, thereby eliminating this OMA. Although the evaluation was completed according to the original Scheduled Completion Date of "Q4 2012," the evaluation determined that the ability to eliminate this OMA was linked to planned Charging system modifications associated with OMA 10, which had a Scheduled Completion Date of "Q2 2013." As the modification has been installed during the recent 2013 refueling outage, the "Scheduled Completion Date" is now "Completed" for OMAs 9 and 10. Entergy committed in Reference 2 to inform the NRC of any changes in resolution concept and/or completion schedule that may be determined to be necessary as an outcome of the ongoing engineering analysis and evaluation process. This schedule change to OMA 9 was communicated via telecom to NRC Region I in January, 2013, at which time it was agreed to provide this status update letter after the recent IP3 refueling outage.
- For IP3, the "Scheduled Completion Date" for OMAs 12, 14, 15, 16, 17, 18, 19, 20, 21, 22, and 26 in all applicable Fire Areas/Fire Zones is now "Completed" (previously "Q4 2012") as the Planned Resolutions were completed in the fourth quarter of 2012.
- Note that the Planned Resolutions for all of the IP3 unapproved OMAs are now complete.

There are no new commitments contained in this letter. In the event of any questions, please contact Mr. Robert W. Walpole, Manager, Licensing at 914-254-6710.

Sincerely,

A handwritten signature in black ink, appearing to be 'JAV/gd', with a large loop at the start and a horizontal line extending to the right.

JAV/gd

Attachments:

1. Status of Resolution of Indian Point Unit 2 Unapproved III.G.2 OMAs (Revision of Attachment 2 from Entergy Letter NL-12-179 dated December 7, 2012)
2. Status of Resolution of Indian Point Unit 3 Unapproved III.G.2 OMAs (Revision of Attachment 3 from Entergy Letter NL-12-179 dated December 7, 2012)

cc: Mr. William Dean, Regional Administrator, NRC Region I  
Mr. Douglas V. Pickett, Senior Project Manager, NRC NRR DORL  
Ms. Bridget Frymire, New York State Department of Public Service  
Mr. Francis J. Murray, Jr., President and CEO, NYSERDA  
NRC Resident Inspectors

Attachment 1  
to  
NL-13-072

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

(Revision of Attachment 2 from Entergy Letter NL-12-179  
dated December 7, 2012)

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

<b>STATUS OF RESOLUTION OF INDIAN POINT UNIT 2 UNAPPROVED III.G.2 OMAS</b>			
<b>Fire Area / Zone</b>	<b>OMA No.<sup>1</sup></b>	<b>Planned Resolution</b>	<b>Scheduled Completion Date</b>
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	Completed
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	Completed
	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	Spring 2014 RFO
	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	Spring 2014 RFO
F/59A	5	As described for OMA 5, Fire Area F, Fire Zone 27A	Spring 2014 RFO
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	Completed

<sup>1</sup> 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



<b>STATUS OF RESOLUTION OF INDIAN POINT <u>UNIT 2</u> UNAPPROVED III.G.2 OMAS</b>			
<b>Fire Area / Zone</b>	<b>OMA No.<sup>1</sup></b>	<b>Planned Resolution</b>	<b>Scheduled Completion Date</b>
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	Completed
	9,10	Implement modification to protect circuits of concern, thereby eliminating these OMAs	Spring 2014 RFO
H/77A	8	As described for OMA 8, Fire Area H, Fire Zone 72A	Completed
	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	Completed
H/85A	8	As described for OMA 8, Fire Area H, Fire Zone 72A	Completed
H/87A	8	As described for OMA 8, Fire Area H, Fire Zone 72A	Completed
	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	Completed
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	Completed
J/39A	11	As described for OMA 11, Fire Area J, Fire Zone 19	Completed
	12	As described for OMA 12, Fire Area J, Fire Zone 25	Completed
J/43A	11	As described for OMA 11, Fire Area J, Fire Zone 19	Completed
	12	As described for OMA 12, Fire Area J, Fire Zone 25	Completed
	13	Revise Appendix R safe-shutdown analysis and methodology to credit equipment train independent of the fire area/zone, thereby eliminating this OMA	Completed
J/45A	11	As described for OMA 11, Fire Area J, Fire Zone 19	Completed
J/46A	11	As described for OMA 11, Fire Area J, Fire Zone 19	Completed
	12	As described for OMA 12, Fire Area J, Fire Zone 25	Completed
	13	As described for OMA 13, Fire Area J, Fire Zone 43A	Completed
J/47A	11	As described for OMA 11, Fire Area J, Fire Zone 19	Completed
J/50A	11	As described for OMA 11, Fire Area J, Fire Zone 19	Completed
	12	As described for OMA 12, Fire Area J, Fire Zone 25	Completed



STATUS OF RESOLUTION OF INDIAN POINT <u>UNIT 2</u> UNAPPROVED III.G.2 OMAS			
Fire Area / Zone	OMA No. <sup>1</sup>	Planned Resolution	Scheduled Completion Date
J/270	12	As described for OMA 12, Fire Area J, Fire Zone 25	Completed
K/60A	14	Implement modification to protect circuits of concern, thereby eliminating this OMA	Completed
	15	Implement modification to protect circuits of concern, thereby eliminating this OMA	Completed
	19	Implement modification to protect circuits of concern, thereby eliminating this OMA (see Note on page 4)	Completed
K/65A	14	As described for OMA 14, Fire Area K, Fire Zone 60A	Completed
	15	As described for OMA 15, Fire Area K, Fire Zone 60A	Completed
	19	As described for OMA 19, Fire Area K, Fire Zone 60A	Completed

### 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 2  
to  
NL-13-072**

**Status of Resolution of Indian Point Unit 3 Unapproved III.G.2 OMAs  
(Revision of Attachment 3 from Entergy Letter NL-12-179  
dated December 7, 2012)**

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



STATUS OF RESOLUTION OF INDIAN POINT <u>UNIT 3</u> UNAPPROVED III.G.2 OMAS			
Fire Area / Zone	OMA No. <sup>2</sup>	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	Completed
	10	Implement modification to protect circuits of concern for valves LCV-112B and LCV-112C, thereby eliminating this OMA	Completed
	11	Revise Appendix R safe-shutdown analysis and methodology to credit existing separation within the fire area/zone, thereby eliminating this OMA	Completed

<sup>2</sup> 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)"



STATUS OF RESOLUTION OF INDIAN POINT <u>UNIT 3</u> UNAPPROVED III.G.2 OMAS			
Fire Area / Zone	OMA No. <sup>2</sup>	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	Completed
	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	Completed
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	Completed
	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	Completed
	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	Completed
	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	Completed
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	Completed
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	Completed
	20	Revise Appendix R safe-shutdown analysis and methodology to credit equipment train independent of the fire area/zone, thereby eliminating this OMA	Completed
	22	Revise Appendix R safe-shutdown analysis and methodology to credit equipment train independent of the fire area/zone, thereby eliminating this OMA	Completed
PAB-2{5} / 19A	19	As described for OMA 19, Fire Area PAB-2{5}, Fire Zone 17A	Completed
	20	As described for OMA 20, Fire Area PAB-2{5}, Fire Zone 17A	Completed
PAB-2{5} / 20A	22	As described for OMA 22, Fire Area PAB-2{5}, Fire Zone 17A	Completed
PAB-2{5} / 27A	22	As described for OMA 22, Fire Area PAB-2{5}, Fire Zone 17A	Completed



STATUS OF RESOLUTION OF INDIAN POINT <u>UNIT 3</u> UNAPPROVED III.G.2 OMAS			
Fire Area / Zone	OMA No. <sup>2</sup>	Planned Resolution	Scheduled Completion Date
PAB-2{5} / 30A	22	As described for OMA 22, Fire Area PAB-2{5} / 17A	Completed
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	Completed
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	Completed
TBL-5 / 38A	25	As described for OMA 25, Fire Area TBL-5, Fire Zone 37A	Completed
TBL-5 / 43A	25	As described for OMA 25, Fire Area TBL-5, Fire Zone 37A	Completed
TBL-5 / 44A	25	As described for OMA 25, Fire Area TBL-5, Fire Zone 37A	Completed
TBL-5 / 52A	23	Implement modification to protect affected circuits in this zone, thereby eliminating this OMA	Completed
	24	Implement modification to protect affected circuits in this zone, thereby eliminating this OMA	Completed
TBL-5 / 54A	24	As described for OMA 24, Fire Area TBL-5, Fire Zone 52A	Completed
YARD-7 / 22	26	Reevaluate Appendix R safe-shutdown analysis, methodology, and fire protection licensing basis to validate whether the OMA may be eliminated	Completed
	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	Completed
YARD-7 / 222	27	As described for OMA 27, Fire Area YARD-7, Fire Zone 22	Completed

### 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)