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June 16, 2015

NL-15-067

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
11555 Rockville Pike, OWFN-2 F1
Rockville, MD 20852-2738

SUBJECT: License Amendment Request – Cyber Security Plan Implementation Schedule (TAC Nos. ME8885, ME8886, AND ME8887)
Indian Point Unit Numbers 1, 2, and 3
Docket Nos. 50-003, 50-247 and 50-286
License Nos. DPR-5, DPR-26 and DPR-64

REFERENCES:
1. NRC Internal Memorandum to Barry Westreich from Russell Felts, Review Criteria for 10 CFR 73.54, Cyber Security Implementation Schedule Milestone 8 License Amendment Requests, dated October 24, 2013 (ML13295A467)
2. NRC letter to Entergy, Issuance of Amendments Re: License Amendment Request - Cyber Security Plan, dated August 2, 2011 (ML11152A027)
3. NRC letter to Entergy, Issuance of Amendments Re: Cyber Security Plan Implementation Schedule Milestones, dated November 28, 2012 (ML12258A268)
4. NRC letter to Entergy, Issuance of Amendments - Cyber Security Plan Implementation Schedule, dated December11, 2014 (ML14316A526)

Dear Sir or Madam:

Pursuant to 10 CFR 50.4 and 10 CFR 50.90, Entergy Nuclear Operations, Inc. (Entergy) hereby requests a License Amendment for Indian Point Unit No. 1 (IP1), Operating License DPR-5, Docket No. 50-003, for Indian Point No. 2 (IP2), Operating License DPR-26, Docket No. 50-247, and for Indian Point No. 3 (IP3), Operating License DPR-64, Docket No. 50-286. In accordance with the guidelines provided by Reference 1, this request proposes a change to the Indian Point Energy Center (IPEC) Cyber Security Plan Milestone 8 full implementation date as set forth in the Cyber Security Plan Implementation Schedule approved by Reference 2 and amended by References 3 and 4.

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NRR

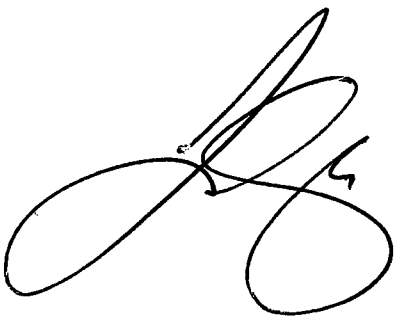
The proposed changes have been evaluated in accordance with 10 CFR 50.91(a)(1) using criteria in 10 CFR 50.92(c), and it has been determined that the changes involve no significant hazards consideration. The bases for these determinations are included in Attachment 1. The proposed License Amendment requires no revised operating license pages (other than the Amendment No.) because of the current wording "The ENO CSP was approved by License Amendment No. [55, 266, and 243 for IP1, IP2 and IP3, respectively] and supplemental Amendments." However the License amendment is required because the NRC SER, Reference 2, stated that "All subsequent changes to the NRC-approved CSP implementation schedule will require prior NRC approval pursuant to 10 CFR 50.90." Attachment 2 contains a change to the date of Implementation Milestone 8 for the Cyber Security Plan Implementation Schedule.

Entergy requests this license amendment be effective as of its date of issuance. Your review and approval is requested prior to June 30, 2016. A copy of this request and the associated Attachments is being submitted to the designated New York State official in accordance with 10 CFR 50.91.

A revised commitment is contained in Attachment for 3 for the revised schedule. Should you have any questions concerning this letter, or require additional information, please contact Robert Walpole, Manager, Regulatory Assurance at (914) 254-6710.

I declare under penalty of perjury that the foregoing is true and correct. Executed on June 16, 2015

Sincerely,



LC/sp

Attachments:
1. Analysis of Proposed Operating License Change
2. Revised Cyber Security Plan Implementation Schedule
3. List of Regulatory Commitments

cc: Mr. Douglas Picket, Senior Project Manager, NRC NRR DORL
Ms. Kimberly A. Conway, Project Manager, NRC FSME DWMEP DURLD
Mr. Daniel H. Dorman, Regional Administrator, NRC Region 1
NRC Resident Inspector's Office
Mr. Francis J. Murray, Jr., President and CEO, NYSERDA
Ms. Bridget Frymire, New York State Dept. of Public Service

ATTACHMENT 1 TO NL-15-067

ANALYSIS OF PROPOSED OPERATING LICENSE CHANGE

ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT NUCLEAR GENERATING UNITS NO. 1, 2 and 3
DOCKET NOs. 50-003, 50-247, and 50-286

1.0 SUMMARY DESCRIPTION

This license amendment request (LAR) includes a proposed change to the Indian Point Energy Center (IPEC) Cyber Security Plan (CSP) Implementation Schedule Milestone 8 full implementation date and a proposed revision to the existing operating license Physical Protection license condition.

2.0 DETAILED DESCRIPTION

In Reference 1, the NRC provided criteria to be used for evaluation of a license amendment request to revise the Cyber Security Implementation Schedule Milestone 8 date. In Reference 2, the NRC issued license amendments that approved the IPEC CSP and associated implementation milestone schedule. The CSP Implementation Schedule approved by Reference 2 was utilized as a portion of the basis for the NRC's safety evaluation report provided in Reference 2. In References 3 and 4, the NRC issued license amendments that approved a revised implementation milestone schedule. Entergy Operations, Inc. (Entergy) is now proposing a change to the Milestone 8 date from June 30, 2016, to December 31, 2017, for full implementation of the CSP for all applicable safety, security, and emergency preparedness (SSEP) functions.

3.0 TECHNICAL EVALUATION

In November 2009, in accordance with 10 CFR 73.54 (nuclear cyber security rule), each Entergy licensee submitted a proposed schedule for achieving full compliance with the rule. The schedule was approved (Reference 2) and consists of eight milestones, with interim Milestones 1 through 7 being completed by December 31, 2012, and Milestone 8 (full compliance) to be completed by December 15, 2014. During the process of accomplishing Interim Milestones 1 through 7 and commencing Milestone 8 work, it became evident to Entergy that additional time would be required, and a schedule extension request for Milestone 8 to June 30, 2016, was submitted and approved by the NRC (Reference 4). However, it has subsequently become evident that an additional extension is necessary. The extension requested herein is for a Milestone 8 date of December 31, 2017.

Below is Entergy's discussion of the eight evaluation criteria provided by Reference 1.

1. **Identification of the specific requirement or requirements of the CSP that the licensee needs additional time to implement.**

   The CSP Sections 3 and 4 describe requirements for application and maintenance of cyber security controls listed in Nuclear Energy Institute (NEI) 08-09, Revision 6, *Cyber Security Plan for Nuclear power Reactors*, Appendices D and E. Application of the controls is accomplished after completion of detailed analyses (the cyber security assessment process) that identify "gaps," or the difference between current configuration and a configuration that satisfies each cyber security control. Gap closure can require any combination of physical, logical (software-related), or programmatic/procedural changes.

2. Detailed justification that describes the reason additional time is required to implement the specific requirement or requirements identified.

a. Entergy hosted a "pilot" Milestone 8 inspection at the Indian Point site in March 2014. During the pilot, insight was gained into NRC interpretation on how to apply the cyber security controls listed in NEI 08-09, Revision 6. These interpretations were not previously available. During the pilot inspection, the NRC team reviewed several examples of critical digital assets (CDAs) with Entergy and indicated the level of detail and depth expected for the technical analyses against cyber security controls referenced in NEI 08-09. Based on this review, it is evident to Entergy that the detail and depth of the technical analysis exceeds Entergy's prior understanding and requires a considerably greater effort to achieve than initially anticipated.

b. During 2015, each operating Entergy licensee has an inspection of compliance with interim Milestones 1 through 7. The preparation for and support of these inspections has required a significant commitment of time from Entergy's most knowledgeable subject matter experts on nuclear cyber security. These effects have exceeded the estimate previously developed and has drawn those resources away from Milestone 8 implementation activities.

c. Development of an endorsed written standard for interpreting and applying the NEI 08-09 cyber security controls has continued to be a work-in-progress over the past five years. NEI 13-10, Revision 2, a guideline intended to provide some reduction of controls implementation based on equipment safety significance, has been endorsed. However, an initial screening of Entergy CDAs using this guideline indicates the reduction in both analytical work and actual application of controls would not be significant.

d. In June 2014, NEI submitted a petition for rulemaking to the Commission. The petition proposes a change to the rule to more precisely align the scope of the rule with the underlying objective of preventing radiological sabotage, which NEI estimates could potentially result in a reduction in the scope of cyber security implementation. While Entergy does not intend to suspend any implementation work in anticipation of the petition being approved, the petition being submitted is indicative that the final process for implementing the rule has not stabilized, and therefore, Entergy requires additional time to receive any implementation benefit from such rulemaking.

e. Benchmarking data gathered on Milestone 8 implementation schedules for non-Entergy licensees indicates that a significant number of licensees have either gained approval for a new Milestone 8 date or submitted an extension request beyond Entergy's current due date; therefore, Entergy's request is consistent with the industry.

3. Proposed completion date for Milestone 8 consistent with the remaining scope of work to be conducted and the resources available.

The proposed completion date for Milestone 8 is December 31, 2017.

4. Evaluation of the impact that the additional time to implement the requirements will have on the effectiveness of the overall cyber security program in the context of milestones already completed.

The impact of the requested additional implementation time on the effectiveness of the overall cyber security program is considered to be very low, because the Interim Milestones already completed have resulted in a high degree of protection of safety-related, important-to-safety, and security CDAs against threat vectors associated with external connectivity (both wired and wireless), and portable digital media and devices. Additionally, extensive physical and administrative measures are already in place for CDAs pursuant to the IPEC Security Plan and Technical Specification requirements. In the context of cyber security milestones already completed, the following is noted:

a. An Entergy Cyber Security Assessment Team (CSAT) has been implemented consisting of highly experienced personnel knowledgeable in reactor and balance-of-plant design, licensing, safety, security, emergency preparedness, information technology, and cyber security. The CSAT is provided with the authority, via written procedure, to perform the analyses and oversight activities described in the CSP. Entergy employs a single overall fleet-wide CSAT to ensure consistency of results among the fleet.

b. Critical systems and CDAs have been identified, documented, and entered in a controlled database.

c. The plant process computer network and the plant security computer network have been deterministically isolated per the requirements of cyber security Interim Milestone 3.

d. Safety-related, important-to-safety, and security CDAs have been extensively reviewed and verified (or modified) to be deterministically isolated and not to employ wireless network technology.

e. Procedures have been implemented for portable digital media and devices periodically connected to CDAs, per NEI 08-09, Revision 6, Appendix D, Section 1.19.

f. CDAs associated with physical security target sets have been analyzed per the requirements of the CSP Section 3.1.6 and either (1) verified to satisfy the Technical Cyber Security Controls described in NEI 08-09, Revision 6, Appendix D or (2) actions required to satisfy the Technical Cyber Security Controls described in NEI 08-09, Revision 6, Appendix D, are captured in the Corrective Action Program (CAP).

g. Employees have been provided with training on cyber security awareness, tampering, and control of portable digital media and devices periodically connected to CDAs.

h. Entergy has transitioned from the previous cyber security program described by NEI 04-04. Revisions have been made to procedures that control plant modifications, planning, and maintenance, establishing ties to cyber security procedures for CDA analysis and control of portable digital media and devices periodically connected to CDAs.

5. **Description of the methodology for prioritizing completion of work for CDAs associated with significant SSEP consequences and with reactivity effects in the balance of plant.**

   Because CDAs are plant components, prioritization follows the normal work management process that places the highest priority on apparent conditions adverse to quality in system, structure, and component design function and related factors such as safety risk and nuclear defense-in-depth, as well as threats to continuity of electric power generation in the balance-of-plant (BOP). Further, in regard to deterministic isolation and control of portable media devices (PMD) for safety-related, important-to-safety (including BOP), and security CDAs, maintenance of one-way or air-gapped configurations and implementation of control of PMD remains high priority. This prioritization enabled completion of cyber security Interim Milestones 3 and 4. High focus continues to be maintained on prompt attention to any emergent issue with these CDAs that would potentially challenge the established cyber protective barriers. Additionally it should be noted that these CDAs encompass those associated with physical security target sets.

6. **Discussion of the cyber security program performance up to the date of the license amendment request.**

   No compromise of SSEP function by cyber means has been identified. Additionally, a Quality Assurance (QA) audit was conducted in the fourth quarter of 2014 pursuant to the physical security program review required by 10 CFR 73.55(m). The QA audit included review of cyber security program implementation. There were no significant findings related to overall cyber security program performance and effectiveness.

7. **Discussion of cyber security issues pending in the CAP.**

   No significant (with 'significant' meaning constituting a threat to a CDA via cyber means or calling into question program effectiveness) nuclear cyber security issues are currently pending in the CAP. Several non-significant issues identified during the QA audit described above and identified during NRC inspections of compliance with nuclear cyber security Interim Milestones 1 through 7 have been entered into CAP. When the Reference 5 internal NRC memorandum was shared with Entergy, the actions described regarding cyber security Interim Milestone 4 were entered into CAP for evaluation by the CSAT and have been closed.

8. **Discussion of modifications completed to support the cyber security program and a discussion of pending cyber security modifications.**

   Modifications completed include those required to deterministically isolate the Level 3 and 4 CDAs, as required by Interim Milestone 3, by data diode or air gap. Potential modifications not yet implemented include automated security information event monitoring systems for monitoring activity on networks of CDAs, pursuant to NEI 08-09, Revision 6, Appendix D-2 (Audit and Accountability), and Appendices E-3.4 (Monitoring Tools and Techniques), 3.5 (Security Alerts and Advisories), and 4.3 (Personnel Performing maintenance and Testing Activities), and additional physical controls for CDAs outside the Protected Area pursuant to NEI 08-09, Revision 6, Appendix E-5.1 (Physical and Operational Environment Protection Policies and Procedures).

This LAR includes no specific proposed changes to the existing operating license for IP-1, IP-2, and IP-3, respectively as discussed in Section 4.1. This LAR contains the proposed Revised CSP Implementation Schedule (Attachment 2) and provides a revised list of regulatory commitments (Attachment 3).

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

10 CFR 73.54 requires licensees to maintain and implement a cyber security plan (CSP). Indian Point Generating Units No. 1, 2, and 3, Operating Licenses DPR-5, DPR-26, and DPR-64, respectively, include a Physical Protection license condition "ENO shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The ENO CSP was approved by License Amendment No. [55, 266, and 243 for IP1, IP2 and IP3, respectively] and supplemental amendments." The NRC approval of this license condition, Reference 2, stated that "All subsequent changes to the NRC-approved CSP implementation schedule will require prior NRC approval pursuant to 10 CFR 50.90." This License Amendment requests a change to milestone 8 in the CSP.

4.2 Significant Safety Hazards Consideration

Entergy is requesting an amendment to the IP 1, 2 and 3 Facility Operating Licenses to revise Milestone 8 required by the Physical Protection license condition as it relates to the CSP. This change requires an Amendment to the IP 1, 2 and 3 Facility Operating Licenses to allow the proposed deviation. Specifically, Entergy is proposing a change to the Implementation Milestone 8 completion date.

Entergy has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of Amendment," as discussed below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

   Response: No.

   The proposed change to the CSP Implementation Schedule is administrative in nature. This change does not alter accident analysis assumptions, add any initiators, or affect the function of plant systems or the manner in which systems are operated, maintained, modified, tested, or inspected. The proposed change does not require any plant modifications which affect the performance capability of the structures, systems, and components relied upon to mitigate the consequences of postulated accidents and has no impact on the probability or consequences of an accident previously evaluated.

   Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

   Response: No.

   The proposed change to the CSP Implementation Schedule is administrative in nature. This proposed change does not alter accident analysis assumptions, add any initiators, or affect the function of plant systems or the manner in which systems are operated, maintained, modified, tested, or inspected. The proposed change does not require any plant modifications which affect the performance capability of the structures, systems, and components relied upon to mitigate the consequences of postulated accidents and does not create the possibility of a new or different kind of accident from any accident previously evaluated.

   Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

   Response: No.

   Plant safety margins are established through limiting conditions for operation, limiting safety system settings, and safety limits specified in the technical specifications. The proposed change to the CSP Implementation Schedule is administrative in nature. In addition, the milestone date delay for full implementation of the CSP has no substantive impact because other measures have been taken which provide adequate protection during this period of time. Because there is no change to established safety margins as a result of this change, the proposed change does not involve a significant reduction in a margin of safety.

   Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, Entergy concludes that the proposed change presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and accordingly, a finding of "no significant hazards consideration" is justified.

4.3 Conclusion

In conclusion, based on the considerations discussed above: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner; (2) such activities will be conducted in compliance with the Commission's regulations; and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

5.0 ENVIRONMENTAL CONSIDERATION

The proposed amendment provides a change to the CSP Implementation Schedule. The proposed amendment meets the eligibility criterion for a categorical exclusion set forth in 10 CFR 51.22(c)(12). Therefore, pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 REFERENCES

1. NRC Internal Memorandum to Barry Westreich from Russell Felts, Review Criteria for 10 CFR 73.54, Cyber Security Implementation Schedule Milestone 8 License Amendment Requests, dated October 24, 2013 (ML13295A467)

2. NRC letter to Entergy, Issuance of Amendments Re: License Amendment Request - Cyber Security Plan, dated August 2, 2011 (ML11152A027)

3. NRC letter to Entergy, Issuance of Amendments Re: Cyber Security Plan Implementation Schedule Milestones, dated November 28, 2012 (ML12258A268)

4. NRC letter to Entergy, Issuance of Amendments - Cyber Security Plan Implementation Schedule, dated December 11, 2014 (ML14316A526)

5. NRC internal memorandum from the Director Cyber Security Directorate, Office of Nuclear Security and Incident Response, to the Region I through IV Directors of Reactor Safety, Enhanced Guidance for Licensee Near-Term Corrective Actions to Address Cyber Security Inspection Findings and Licensee Eligibility for "Good-Faith" Attempt Discretion, Enclosure 2, Milestone 4 Resolution Actions, dated July 1, 2013 (ML13178A203)

ATTACHMENT 2 TO NL-15-067

REVISED CYBER SECURITY PLAN IMPLEMENTATION SCHEDULE

ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT NUCLEAR GENERATING UNITS NO. 1, 2 and 3
DOCKET NOs. 50-003, 50-247, and 50-286

Revised Cyber Security Plan Implementation Schedule

#	Implementation Milestone	Completion Date	Basis
8	Full implementation of IPEC Cyber Security Plan for all safety, security, and emergency preparedness (SSEP) functions will be achieved.	December 31, 2017	By the completion date, the IPEC Cyber Security Plan will be fully implemented for all SSEP functions in accordance with 10 CFR 73.54. This date also bounds the completion of all individual asset security control design remediation actions including those that require a refueling outage for implementation.

ATTACHMENT 3 TO NL-15-067

LIST OF REGULATORY COMMITMENTS

ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT NUCLEAR GENERATING UNITS NO. 1, 2 and 3
DOCKET NOs. 50-003, 50-247, and 50-286

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	TYPE (Check One)		SCHEDULED COMPLETION DATE (If Required)
	ONE-TIME ACTION	CONTINUING COMPLIANCE	
Full implementation of IPEC Cyber Security Plan for all safety, security, and emergency preparedness functions will be achieved.	X		December 31, 2017