

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

_____)	Docket Nos. 50-247-LR and
In the Matter of)	50-286-LR
ENTERGY NUCLEAR OPERATIONS, INC.)	
)	
(Indian Point Nuclear Generating Units 2 and 3))	
_____)	March 20, 2013

**JOINT DECLARATION OF NELSON AZEVEDO, ALAN COX, AND TED IVY
CONCERNING ENTERGY LETTER NL-13-037 AND RELATED UPDATES TO
ENTERGY'S TESTIMONY ON CONTENTION NYS-5 (BURIED PIPING)**

Nelson F. Azevedo, Alan B. Cox, and Ted S. Ivy state as follows under penalties of perjury:

1. My name is Nelson F. Azevedo ("NFA"). I am employed by Entergy Nuclear Operations, Inc. ("Entergy"), the Applicant in this matter, as Supervisor of Code Programs, at the Indian Point Entergy Center ("IPEC") in Buchanan, New York.

2. My name is Alan B. Cox ("ABC"). I am employed by Entergy as Technical Manager, License Renewal. My office is located at Entergy's Arkansas Nuclear One ("ANO") facility in Russellville, Arkansas.

3. My name is Ted S. Ivy ("TSI"). I am employed by Entergy as Manager, License Renewal. My office is located at Entergy's ANO facility in Russellville, Arkansas.

4. (NFA, ABC, TSI) We have previously submitted prefiled written testimony on behalf of Entergy in this proceeding concerning the issues raised in New York State ("NYS") Contention 5 ("NYS-5"), which alleges that Entergy lacks an adequate aging management program for managing potential aging effects caused by external corrosion of in-scope IPEC buried piping that contains or may contain radioactive fluids. The current version of that

testimony was submitted on December 6, 2012.¹ *See* Testimony of Applicant Witnesses Alan Cox, Ted Ivy, Nelson Azevedo, Robert Lee, Stephen Biagiotti, and Jon Cavallo Concerning Contention NYS-5 (Buried Piping and Tanks) (Dec. 6, 2012) (“Entergy NYS-5 Testimony”) (ENTR30373). We also provided oral testimony at the evidentiary hearing on NYS-5, which was held from December 10-11, 2012 in Tarrytown, New York. *See* Official Transcript of Proceedings, Indian Point Nuclear Generating Units 2 & 3 at 3274-3589 (Dec. 10, 2012) (“Dec. 10, 2012 Tr.”); Official Transcript of Proceedings, Indian Point Nuclear Generating Units 2 & 3 at 3590-3979 (Dec. 11, 2012) (“Dec. 11, 2012 Tr.”).

5. (NFA, ABC, TSI) Our professional and educational qualifications, as well as our respective roles in the IPEC license renewal process, are summarized in our prefiled testimony. *See* Entergy NYS-5 Testimony at 1-5 (A3 – A12).

6. (NFA, ABC, TSI) We have prepared this Joint Declaration to update certain limited statements in our prefiled testimony on NYS-5 (ENTR30373) and the December 11, 2012, hearing transcript. The relevant statements were true and accurate at the time they were proffered. They require updating due to Entergy’s filing of a letter (NL-13-037) with the Nuclear Regulatory Commission (“NRC”) Staff on March 5, 2013. *See* NL-13-037, Letter from F. Dacimo, Entergy, to NRC Document Control Desk, “Revision to the Response to Request for Additional Information (RAI) Aging Management Programs” (Mar. 5, 2013) (“NL-13-037”) (Proposed Exhibit ENT000606).

7. (NFA, ABC, TSI) NL-13-037 updates a March 28, 2011 Entergy letter that has been admitted into evidence as Exhibit NYS000151. *See* NL-11-032, Letter from F. Dacimo, Entergy, to NRC Document Control Desk, Response to Request for Additional Information

¹ Our former colleague, Mr. Robert Lee, also testified with respect to the issues discussed in this Joint Declaration. Mr. Lee retired from Entergy effective March 1, 2013.

(RAI) Aging Management Programs” (Mar. 28, 2011) (NYS000151). Specifically, NL-13-037 revises Entergy’s March 28, 2011 responses to parts la, 1b and 1c of NRC Staff request for additional information (“RAI”) 3.0.3.1.2-1, as contained in NL-11-032. The revisions make those RAI responses consistent with recommendations in Final License Renewal Interim Staff Guidance, LR-ISG-2011-03, “Changes to GALL Report Revision 2 Aging Management Program (AMP) XI.M41, ‘Buried and Underground Piping and Tanks’” (Aug. 2012) (“Final LR-ISG-2011-03”) (NRC000162). As explained in NL-13-037, Entergy’s March 28, 2011 RAI responses reflected recommendations contained in the December 2010 version of NUREG-1801, Rev. 2 Section XI.M41, Table 4a (NYS00147D), which distinguished between “code class/safety-related” and “hazardous material” (or “hazmat”) buried piping in specifying the numbers of recommended direct visual inspections. In its August 2012 Final LR-ISG-2011-03, the Staff revised NUREG-1801, Rev. 2, Section XI.M41, Table 4a (NRC000162) to combine the code class/safety-related and hazmat categories into a single category (“in-scope piping”) to allow licensees to select inspection locations based on plant-specific risk ranking rather than piping categories.²

8. (NFA, ABC, TSI) As stated in NL-13-037, the revised RAI responses do not affect the Buried Piping and Tanks Inspection Program (“BPTIP”) descriptions provided in the Updated Final Safety Analysis Report (“UFSAR”) Supplements for IPEC Units 2 and 3, as contained in Sections A.2.1.5 and A.3.1.5 of the license renewal application. They also do not affect any related Entergy commitments (Commitment Nos. 3 and 48) reflected in those LRA sections and Entergy’s List of Regulatory Commitments. *See* NL-12-174, Letter from Fred

² Appendix A to Final LR-ISG-2011-03 contains the revised (and current) version of NUREG-1801, Rev. 2, Section XI.M41, which supersedes the version of Section XI.M41 issued in December 2010. *See* Final LR-ISG-2011-03 at 10 (NRC000162) (“The guidance described in this final LR-ISG supersedes the affected sections of the SRP-LR and GALL Report and is approved for use by the NRC staff and stakeholders.”).

Dacimo, Vice President, IPEC, to NRC Document Control Desk, “Additional Clarification of Underground Piping Information Provided in Letter NL-12-149 Regarding the License Renewal Application Indian Point Nuclear Generating Unit Nos. 2 & 3,” Attachs. 1 & 2 (Nov. 29, 2012) (ENT000597).

9. (NFA, ABC, TSI) There also is no change to the total number of excavated direct visual inspections that Entergy has committed to perform before and during the period of extended operation (“PEO”), or to Entergy’s use of the risk-ranking process described in the UFSAR Supplements (NL-12-174, Attach. 2 (ENT000597)) and CEP-UPT-0100, Rev. 1, Underground Piping and Tanks Inspection and Monitoring (Nov. 30, 2012) (ENT000598). There also is no effect on the Staff’s conclusion in Safety Evaluation Report Supplement 1 (NYS000160) that Entergy is performing a sufficient number of risk-informed inspections.

10. (NFA, ABC, TSI) The filing of NL-13-037 warrants some minor updates to our prefiled written testimony on NYS-5. These updates, which are provided below, reflect the NRC Staff’s elimination of the distinction between code class/safety-related and hazmat piping inspection and Entergy’s adherence to the NRC Staff’s related inspection recommendations in NUREG-1801, Rev. 2 Section XI.M41, Table 4a, as modified by Final LR-ISG-2011-03.

11. (NFA, ABC, TSI) Tables 3 and 4 of Entergy’s prefiled testimony were based on tables contained in RAI Response 3.0.3.1.2-1, parts 1a, 1b and 1c, as contained in NL-11-032. *See* Entergy NYS-5 Testimony at 62 (A81 – Tbl. 3), 63 (A82 – Tbl. 4). NL-13-037 revised the tables contained in RAI Response 3.0.3.1.2-1, parts 1a, 1b and 1c to combine the code class/safety-related and hazmat categories into a single category (Code/SR/Hazmat). Therefore, to reflect those revisions, we provide the following updated versions of Tables 3 and 4 in our prefiled testimony (ENTR30373).

Table 3. Number of IP2 and IP3 Direct Visual Inspections to be Completed Before Each Unit’s Period of Extended Operation (“Pre-PEO Inspections”)

Piping Material	Piping Category	Number of IP2 Pre-PEO Inspections (Total/Direct)	Number of IP3 Pre-PEO Inspections (Total/Direct)
Carbon steel	Code/SR/Hazmat	26/20	19/11
Stainless steel	Code/SR/Hazmat	Not Applicable	6/3

Source: NL-13-037, Attach. 1 at 1 (Proposed Exhibit ENT000606)

Table 4. Number of IP2 and IP3 Excavated Direct Visual Inspections to be Completed During Each 10-year Interval of the Units’ 20-Year Extended Operating Periods

Material	Category	IP2 Inspections (Direct Visual) (for each <u>10-year interval</u> of the PEO)	IP3 Inspections (Direct Visual) (for each <u>10-year interval</u> of the PEO)
Carbon steel	Code/SR/Hazmat	14	14
Stainless steel	Code/SR/Hazmat	Not Applicable	2

Source: NL-13-037, Attach. 1 at 2 (Proposed Exhibit ENT000606)

12. (NFA, ABC, TSI) On page 63 (A83) of our prefiled testimony, we stated: “If soil sample results indicate that the soil is corrosive, then the number of inspections for carbon steel code/safety-related piping shown in Table 4 above will be increased to eight, and the number of inspections for carbon steel hazmat piping shown in Table 4 will be increased to twelve. *See* NL-11-032, Attach. 1 at 4-5 (NYS000151).” This statement is updated to be consistent with NL-13-037 and read as follows: “If soil sample results indicate that the soil is corrosive, then the number of inspections for carbon steel code/safety-related/hazmat piping shown in Table 4 above will be increased to 20.” *See* NL-13-037, Attach. 1 at 2 (ENT000606).

13. (NFA, ABC, TSI) During the December 11, 2012 hearing session, Mr. Azevedo and Mr. Lee briefly discussed the then-ongoing Unit 2 transformer yard excavation and associated buried piping inspections. *See* Dec. 11, 2012 Tr. at 3798:13-3799:23, 3806:1-8,

3864:3-20. Since the hearing in December 2012, Entergy has completed six excavated direct visual inspections of buried piping within the scope of license renewal in the IPEC Unit 2 transformer yard. The inspected piping is code class/safety-related piping.

14. (NFA) During the December 11, 2012 evidentiary hearing, Mr. Azevedo stated: “For Unit 2, we have completed 14 of the 20 committed [excavated direct visual inspections] prior to the PEO.” Dec. 11, 2012 Tr. at 3869:4-5 (Azevedo). With the recently completed inspections in the Unit 2 transformer yard, Entergy has now completed all 20 of the excavated direct visual inspections of Unit 2 in-scope buried piping that are required before entering the period of extended operation. Entergy has not completed any additional direct visual inspections of Unit 3 in-scope buried piping since the December 2012 hearing on NYS-5. *See* Dec. 11, 2012 Tr. at 3869:7-8 (Azevedo) (“For Unit 3, we have completed 4 of 14 prior to the PEO.”).

15. In accordance with 28 U.S.C. § 1746, we declare under penalty of perjury that the foregoing is true and correct.

Executed on March 20, 2013.

Executed in accord with 10 C.F.R. § 2.304(d)

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