

**UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION**

**BEFORE THE ATOMIC SAFETY AND LICENSING BOARD**

In the Matter of )	Docket Nos. 50-247-LR and
ENERGY NUCLEAR OPERATIONS, INC. )	50-286-LR
(Indian Point Nuclear Generating Units 2 and 3) )	
) )	July 22, 2013

**APPLICANT’S SUPPLEMENTAL FILING RELATED TO CONTENTION NYS-5**

**I. INTRODUCTION**

In accordance with the Atomic Safety and Licensing Board’s (“Board”) Order dated July 9, 2013,<sup>1</sup> Entergy Nuclear Operations, Inc. (“Entergy”) makes the following supplemental filing related to New York State (“New York”) Contention NYS-5, which challenges the adequacy of Entergy’s aging management program for buried piping containing or potentially containing radioactive fluids. In its Order, the Board granted Entergy’s request for leave to supplement the evidentiary record in light of the Board’s admission of new exhibits NYS000477, NYS000478, NYS000479, and NYS000480 into evidence.<sup>2</sup> The four exhibits submitted by New York comprise an Indian Point Energy Center (“IPEC”) condition report (“CR”) and three IPEC buried piping direct visual inspection reports recently disclosed by Entergy.

As stated previously, this submittal is intended to ensure a complete and balanced record with respect to the issues of buried piping coating and backfill quality.<sup>3</sup> Toward that end, Entergy

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<sup>1</sup> Licensing Board Order (Denying Motions for Reconsideration; Granting Entergy’s Motion) at 3-4 (July 9, 2013) (unpublished).

<sup>2</sup> *See id.* at 3 (“In lieu of granting Entergy’s and the NRC Staff’s motions, the Board will accept and consider the supplemental filing requested by Entergy and the NRC Staff’s answer to New York’s June 10, 2013 motion.”); Applicant’s Motion for Reconsideration of the Board’s Decision to Admit Additional New York Exhibits Concerning Contention NYS-5 at 9 (June 14, 2013) (“Entergy June 14, 2013 Motion”) (“If the Board declines to reverse its ruling, then Entergy intends to seek leave to supplement the evidentiary record to ensure a complete and balanced record.”). Consistent with the Board’s directive, Entergy has endeavored to keep this filing concise.

<sup>3</sup> Entergy June 14, 2013 Motion at 9.

(1) directs the Board’s attention to a number of previously-admitted exhibits; (2) proffers limited new exhibits for admission into evidence and provides some clarifying discussion concerning relevant IPEC operating experience; and (3) apprises the Board and parties of two other recent/forthcoming Entergy communications with the NRC Staff related to IPEC buried piping.

## **II. DISCUSSION**

1. New York’s Claim That the New Exhibits Provide Evidence of “Cracked Coating and Corrosion” Caused by Rocks in the Backfill Is Factually Incorrect

In submitting the four exhibits identified above, New York claimed that the exhibits support its expert’s testimony that rocks present in backfill at IPEC “contribute to cracked coating and corrosion, warranting the application of cathodic protection.”<sup>4</sup> That claim lacks factual merit. Exhibit NYS000477 is CR-IP2-2012-05324, which Entergy initiated during an excavation and opportunistic buried piping inspection in the 22 Main Transformer (MT) Moat Area. As stated therein, direct visual inspection of an approximately 4-foot segment of IP2 Service Water Line 463 revealed some coating degradation and surface corrosion (*i.e.*, rust).<sup>5</sup> However, the CR does *not* refer to rocks in the backfill or identify coating degradation as being caused by rocks in the backfill.

New York also ignored Entergy’s associated corrective actions, which are documented in the same exhibit and indicate that ultrasonic testing (“UT”) of Service Water Line 463 and two adjacent 8-inch City Water and Fire Protection lines confirmed that all three pipes had acceptable wall thicknesses.<sup>6</sup> The UT results are documented in UT report IP2-UT-12-030, which Entergy proffers for admission into evidence as proposed exhibit ENT000609.

Exhibits NYS000478, ENT000479, and ENT000480 are buried piping direct visual inspection reports. New York selectively quoted NYS000478 and NYS000479 as stating “Rocks

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<sup>4</sup> State of New York Motion for Leave to Submit Recently Disclosed Entergy Documents as Additional Exhibits Concerning Contention NYS-5 at 1 (June 10, 2013) (“June 10, 2013 New York Motion”).

<sup>5</sup> CR-IP2-2012-05324, Condition Report Regarding Visual Inspection of 4 ft of Service Water Return Line at 1 (Sept. 11, 2012) (NYS000477).

<sup>6</sup> *See id.* at 1 (Corrective Action No. 2).

were in contact with the wrap ....” However, the relevant passages state in full: “Description: Oil containment MOAT Area. Rocks were in contact with the wrap but *no damage* was observed. The rocks were *small* (*i.e.*, < 2.0” in diameter). There were no large rocks in contact with the pipe.”<sup>7</sup> As further stated in both inspection reports (NYS000478 and NYS000479), direct visual inspections of 10-foot segments of the excavated pipes (an 8-inch Fire Protection line and an 8-inch City Water line) showed no signs of coating degradation.<sup>8</sup> Similarly, although NYS000480 notes that “some rocks were found in the backfill,” it further states that “[n]o rocks were observed to be in contact with the pipe.”<sup>9</sup> Further, as documented in report IP2-UT-13-006, which Entergy hereby submits as proposed exhibit ENT000610, the UT examination of the subject pipe confirmed the pipe’s wall thickness to be acceptable.

2. IPEC Operating Experience Does Not Support New York’s Claims That Rocks Present in Backfill Are Contributing to Cracked Coating and Corrosion

To date, Entergy has completed direct visual inspections of more than two dozen IPEC buried piping segments that are in-scope for license renewal (in addition to inspections of numerous other pipes that are not in-scope for license renewal but are managed under IPEC’s 10 C.F.R. Part 50 underground piping and tanks inspection program). The evidentiary record already contains exhibits associated with direct visual inspections of in-scope buried piping performed in November 2008; February, October, and November 2009; August, November, and December 2011; and October 2012 and December 2012.<sup>10</sup>

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<sup>7</sup> See NYS000478 at 1; NYS000479 at 1 (emphasis added).

<sup>8</sup> See NYS000478 at 1 (“The entire inspected length of piping had no signs of coating degradation. The coating was observed to be intact, with no voids in the coating, or blistering, peeling, flaking, separation, etc. Further, the coating was solid to the touch (no soft spots, air pockets.)”); NYS000479 at 1 (same).

<sup>9</sup> NYS000480 at 1.

<sup>10</sup> See Exhibits NYS000180, NYS-000170, NYS000179, ENT000434, ENT000435, ENT000436, ENT000437, ENT000438, ENT000439, ENT000440, ENT000430, ENT000431, NYS000478, NYS000479, and ENT000480.

Recently admitted exhibits NYS000478, NYS000479, and NYS000480 document certain inspections performed in October 2012 and December 2012. Most recently, in May 2013, Entergy completed eleven direct visual inspections of IPEC Unit 3 buried pipes, during which it did not identify any backfill-related issues. To ensure that the record is representative of the various inspections conducted to date, Entergy submits three inspection reports from the May 2013 inspections as additional illustrative examples:

- Underground Piping and Tanks General Visual Inspection, 6-inch Fire Protection Line (report issued June 7, 2013) (Proposed Exhibit ENT000611)
- Underground Piping and Tanks General Visual Inspection, 8-inch Fire Protection Line (report issued June 7, 2013) (Proposed Exhibit ENT000612)
- Underground Piping and Tanks General Visual Inspection, 3-SI-161-3, 3-SI-161-4/3-inch Safety Injection Line 161 (report issued June 7, 2013) (Proposed Exhibit ENT000613)

The direct visual inspections performed to date do not indicate that poor backfill quality or metal loss caused by external corrosion is a systemic issue at IPEC. There has been only one instance in which non-conforming backfill was determined to be the likely cause of significant metal loss in a buried pipe (*i.e.*, the 2009 leak from the IP2 CST return line).<sup>11</sup> Entergy has observed localized coating degradation during some inspections performed since February 2009 and taken appropriate corrective actions, including coating repairs and UT examinations, as necessary.<sup>12</sup> However, the numerous direct visual inspections performed since February 2009 have not revealed evidence of damage to pipe coatings caused by rocks or debris in the backfill or any backfill-related corrosion of the underlying pipe metal. Further, associated UT examinations have shown pipe wall thicknesses to be acceptable. Finally, if any areas of concern (*e.g.*, coating degradation or corrosion) are identified during future inspections or testing, then the issues will be placed into the

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<sup>11</sup> See Root Cause Analysis Report, CST Underground Recirc Line Leak, CR-IP2-2009-00666, Rev. 0 (May 14, 2009) (NYS000179).

<sup>12</sup> See, *e.g.*, CR-IP2-2012-05324, Condition Report Regarding Visual Inspection of 4 ft of Service Water Return Line (Aug. 22, 2012) (NYS000477); Report No. IP2-UT-12-030 (Aug. 29, 2013) (Proposed Exhibit ENT000609); Report No. IP3-UT-13-006 (Jan. 17, 2013) (Proposed Exhibit ENT000610).

IPEC corrective action program and appropriately evaluated in accordance with the applicable NRC requirements and Entergy procedures.<sup>13</sup>

3. Recent and Forthcoming Entergy Submissions Related to IPEC Buried Piping

Entergy also wishes to apprise the Board and parties of a recent letter and forthcoming submission related to IPEC buried piping. On July 15, 2013, Entergy submitted NL-13-093, which corrects the response provided in Entergy communication NL-12-123 (ENT000580). As stated in NL-13-093, during its review of recent buried piping inspections, Entergy determined that a portion of the Unit 2 Instrument Air System (which was previously credited for performing functions in the scope of license renewal and identified as subject to aging management review) is buried in soil but was not identified as buried in the referenced letter. The Instrument Air System does not contain or transmit any fluids (radioactive or non-radioactive) and therefore, is not within the scope of NYS-5. Entergy proffers NL-13-093 as proposed exhibit ENT000614.

Additionally, this week, Entergy will submit, as Entergy letter NL-13-098, its responses to NRC Staff requests for additional information (“RAIs”) issued in June 2013 concerning cathodic protection surveys and acceptance criteria at IPEC.<sup>14</sup> Upon filing NL-13-098, Entergy will forward a copy of that communication to the Board and parties under separate cover.

**IV. CONCLUSION**

For the reasons set forth above, Entergy respectfully requests that the Board consider the information provided in this supplemental filing and admit newly-proposed exhibits ENT000609 through ENT000614 into evidence.

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<sup>13</sup> See Testimony of Entergy Witnesses Alan Cox, Ted Ivy, Nelson Azevedo, Robert Lee, Stephen Biagiotti, and Jon Cavallo Concerning Contention NYS-5 (Buried Piping and Tanks) at 85 (A104) (Dec. 6, 2012) (ENTR30373).

<sup>14</sup> See Letter from Y. Diaz-Sanbaria, NRC, to Vice President, Operations, IPEC, “Request for Additional Information for the Review of the Indian Point Nuclear Generating Unit Nos. 2 and 3, License Renewal Application, SET 2013-02” (June 12, 2013), available at ADAMS Accession No. ML13162A606; see also Letter from S. Turk, NRC Staff Counsel to Administrative Judges (June 21, 2013) (forwarding copy of June 12, 2013 RAIs concerning cathodic protection to the Board and parties).

Respectfully submitted,

*Signed electronically by Martin J. O'Neill*

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Dated at Washington, DC  
this 22nd day of July 2013

**UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION**

**BEFORE THE ATOMIC SAFETY AND LICENSING BOARD**

In the Matter of	)	Docket Nos. 50-247-LR and
	)	50-286-LR
ENTERGY NUCLEAR OPERATIONS, INC.	)	
	)	
(Indian Point Nuclear Generating Units 2 and 3)	)	July 22, 2013
	)	

**CERTIFICATE OF SERVICE**

Pursuant to 10 C.F.R. § 2.305 (as revised), I certify that, on this date, copies of “Applicant’s Supplemental Filing Related to Contention NYS-5,” and Exhibits ENT000609 through ENT000614 were served upon the Electronic Information Exchange (the NRC’s E-Filing System), in the above-captioned proceeding.

*Signed (electronically) by Lance A. Escher*

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