

**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ATOMIC SAFETY AND LICENSING BOARD**

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In re:

Docket Nos. 50-247-LR; 50-286-LR

License Renewal Application Submitted by

ASLBP No. 07-858-03-LR-BD01

Entergy Nuclear Indian Point 2, LLC,  
Entergy Nuclear Indian Point 3, LLC, and  
Entergy Nuclear Operations, Inc.

DPR-26, DPR-64

May 17, 2013

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**STATE OF NEW YORK MOTION SEEKING  
LEAVE TO FILE AN ADDITIONAL EXHIBIT AND  
SUPPLEMENTAL PROPOSED FINDINGS OF FACT AND  
CONCLUSIONS OF LAW ON CONTENTION NYS-16B**

Office of the Attorney General  
for the State of New York  
The Capitol  
State Street  
Albany, New York 12224

## **INTRODUCTION**

Consolidated Contention NYS-16B asserts that that Entergy and NRC Staff have underestimated the 2035 population within 50 miles of Indian Point by failing to account for census undercount and commuters in violation of the National Environmental Policy Act (“NEPA”). A central argument advanced by Entergy, and adopted by NRC Staff, is that the errors in Entergy’s population estimate identified by the State in NYS-16B are not “material” because accounting for census undercount and commuters alone does not render any additional Severe Accident Mitigation Alternative (“SAMA”) candidates cost-beneficial.

On May 7, 2013, Entergy submitted a letter to the Board attaching revisions to the Indian Point Unit 2 and Unit 3 SAMA cost-benefit analysis in a document titled NL-13-075. Entergy had not previously disclosed NL-13-075 to the State. Nonetheless, as a result of Entergy’s SAMA analysis revisions in NL-13-075, the increases in population set forth in NYS-16B would render at least two SAMA candidates cost-beneficial. Thus, NYS-16B is material even under Entergy’s and NRC Staff’s definition of that term. Consequently, pursuant to 10 C.F.R. § 2.323(2)(b), the State respectfully seeks leave to submit one additional New York Exhibit, NYS000476, containing an excerpt of NL-13-075, and narrowly-tailored supplemental Proposed Findings of Fact and Conclusions of Law (“Proposed Findings”) on NYS-16B addressing Entergy’s May 7, 2013 submission to the Board. The State’s supplemental Proposed Findings are attached hereto as Attachment 1.

The State of New York has consulted with Entergy, NRC Staff, Riverkeeper, and Clearwater pursuant to 10 C.F.R. § 2.323(b). Riverkeeper and Clearwater do not oppose this motion. Entergy and NRC Staff oppose the admission of the additional New York Exhibit and

the supplemental Proposed Findings. For the reasons described below, the State's proffered filing is timely and appropriate.

## **BACKGROUND**

### **A. Entergy's Purported Sensitivity Analysis**

In an effort to discount the population errors identified in NYS-16B, Entergy argues that adjusting the population used in the SAMA analysis for census undercount and commuters does not result in any additional cost-beneficial SAMAs. Entergy Proposed Findings of Fact and Conclusions of Law for Contention NYS-16B ("Entergy Proposed Findings") (Mar. 22, 2013) at 4, ¶5; 25, ¶48; and 98, ¶194. To support its conclusion that NYS-16B is therefore not material to the SAMA analysis, Entergy submitted a purported sensitivity analysis.<sup>1</sup> *See* ENT000589 (MACCS2 Sensitivity Analysis for NYS-16 Using Dr. Sheppard's Proposed Data, Oct. 9, 2012).

Entergy argued that taking into account the population errors identified by the State results in a 6.15% increase in the costs associated with a severe accident. ENT000589; Entergy Proposed Findings at 98, ¶194. Then, Entergy looked at how this 6.15% increase would affect the SAMA candidate with the smallest margin between its costs and benefits—approximately 11% for IP2 SAMA 025—concluding that the State's postulated population increases would not have any material impact on the SAMA analysis conclusions.<sup>2</sup> *Id.* The 11% difference comes

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<sup>1</sup> The State's expert, Dr. Sheppard, identified several flaws in the analysis Entergy submitted with its prefiled expert testimony. NYS000404 (Rebuttal Pre-filed Testimony of New York State Expert Dr. Stephen C. Sheppard, Ph.D. on Contention NYS-16B (June 29, 2012)) at 31:19-37:23. On the eve of the October evidentiary hearings, Entergy disclosed a second analysis that appears to be an attempt to address some, but not all, of the State's criticisms of the first analysis. *See* ENT000589. This motion addresses only Entergy's second analysis. For a discussion of Entergy's first analysis, the Board is referred to the State's March 22, 2013 Proposed Findings at 61-62, ¶¶147-148.

<sup>2</sup> As the State's March 22, 2013 Proposed Findings explain, even without (and before) NL-13-075, Entergy's materiality argument fails for several reasons including the fact that Entergy has

from the difference between the benefit with uncertainty of \$430,516 and the estimated cost of \$476,000 for IP2 SAMA 025, as determined by Entergy's December 2009 SAMA reanalysis. ENT000009 (NL-09-165, Letter from Fred Dacimo, Entergy, to NRC, "License Renewal Application - SAMA Reanalysis Using Alternate Meteorological Tower Data, Indian Point Nuclear Generating Units Nos. 2 and 3," Dec. 11, 2009) Attach. 1 at 30. According to Entergy, the 6.15% increase from the additional population does not render IP2 SAMA 025 cost-beneficial. Entergy Proposed Findings at 98, ¶194. Therefore, under Entergy's analysis and definition of materiality, NYS-16B is material only if the population increase changes a SAMA candidate from not cost-beneficial to cost-beneficial. Entergy Proposed Findings at 4, ¶5 and 38-40, ¶¶75-77.

B. Entergy's May 7, 2013 Filing

On May 7, 2013, after the parties submitted their post-hearing Proposed Findings, Entergy submitted a letter to the Board, attaching NL-13-075.<sup>3</sup> Entergy informed the Board that it "submitted this information to the NRC to support resolution of certain issues identified by the Board in its July 14, 2011 decision granting New York State's motion for summary disposition of Consolidated Contention NYS-35/36." May 7, 2013 letter at 1. Entergy does not explain why it has chosen to submit this letter now, almost two years after the Board's summary disposition of NYS-35/36. Entergy had not disclosed NL-13-075 to the State. Thus, the State was not aware

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not considered the combined impact of the deficiencies described in NYS-12C and the deficiencies described in NYS-16B. State Proposed Findings at 63-65, ¶¶152-155.

<sup>3</sup> See Letter, Kathryn M. Sutton, et al. to ASLB, Re: Notification of Entergy's Submission of the Results of Completed Engineering Project Cost Estimates for SAMAs Previously Identified as Potentially Cost-Beneficial (May 7, 2013) (ML13127A458) ("May 7, 2013 letter"); NL-13-075, License Renewal Application-Completed Engineering Project Cost Estimates for SAMAs Previously Identified as Potentially Cost-Beneficial (May 6, 2013) (ML13127A459) ("NL-13-075").

of its existence until May 7, 2013, when Entergy filed the document with the Board.

NL-13-075 includes, among other things, revised SAMA cost-benefit tables reclassifying previously cost-beneficial SAMA candidates as no longer cost-beneficial. NL-13-075, attach. 1 at 4-5. In NL-13-075, Entergy states that six SAMA candidates previously identified as cost-beneficial are no longer cost-beneficial. *Id.* at 5-7. Entergy's conclusion is based on revised engineering project cost estimates that Entergy completed, which result in increased costs of implementing SAMA candidates.<sup>4</sup> *Id.* at 4-5. In Entergy's revised SAMA table for Indian Point Unit 2, reproduced below, two of the SAMA candidates Entergy now contends are not cost-beneficial—IP2 SAMA 021 and IP2 SAMA 053—have small margins between the costs and benefits. *Id.* at 4. For IP2 SAMA 021, the difference between the benefit with uncertainty and the estimated cost is only 4.5%. For IP2 SAMA 053, the difference is only 5.7%. *Id.* Both of these margins are less than 6.15%—the impact Entergy found the errors identified in NYS-16B would have on the SAMA candidates' benefits. *See* ENT000589; Entergy Proposed Findings at 98, ¶194. Thus, based upon Entergy's SAMA revisions that it presented on May 7, 2013, the population errors described in NYS-16B are material, even under Entergy's definition of the term.

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<sup>4</sup> NL-13-075 provides only a general description of the revised cost estimates and does not contain Entergy's revised cost calculations or analysis. As a result of recent communications between counsel for the State and Entergy, Entergy has agreed to disclose these documents to the State pursuant to the State's request. The State withholds judgment of whether those cost estimates are reasonable until it examines the underlying calculations.

**TABLE 1**  
**Results of Cost Benefit Analysis of IP2 SAMA Candidates**

<b>IP2 Phase II SAMA</b>	<b>Benefit</b>	<b>Benefit with Uncertainty</b>	<b>Estimated Cost</b>	<b>Conclusion<sup>1</sup></b>
009 – Create a reactor cavity flooding system.	\$6,347,528	\$13,363,217	\$1,738,982	Cost Beneficial (Deferred)
021 – Install additional pressure or leak monitoring instrumentation for inter-system loss of coolant accident (ISLOCAs).	\$2,093,852	\$4,408,109	\$4,607,051	Not Cost Beneficial
022 – Add redundant and diverse limit switches to each containment isolation valve.	\$1,071,465	\$2,255,716	\$7,685,460	Not Cost Beneficial
028 – Provide a portable diesel-driven battery charger.	\$1,357,046	\$2,856,939	\$2,137,804	Cost Beneficial (Deferred)
044 – Use fire water system as backup for steam generator inventory.	\$2,350,530	\$4,948,485	\$3,046,418	Cost Beneficial (Deferred)
053 – Keep both pressurizer power-operated relief valves (PORV) block valves open.	\$659,715	\$1,388,873	\$1,467,848	Not Cost Beneficial
054 – Install flood alarm in the 480V switchgear room.	\$5,591,781	\$11,772,170	\$456,985	Cost Beneficial (Deferred)
056 – Keep residual heat removal (RHR) heat exchanger discharge motor operated valves (MOV) normally open.	\$48,723	\$102,574	\$1,705,367	Not Cost Beneficial
060 – Provide added protection against flood propagation from stairwell 4 into the 480V switchgear room.	\$1,275,337	\$2,684,920	\$715,145	Cost Beneficial (Deferred)
061 – Provide added protection against flood propagation from the deluge room into the 480V switchgear room.	\$2,754,991	\$5,799,982	\$933,981	Cost Beneficial (Deferred)
062 – Provide a hard-wired connection to an SI pump from alternate safe shutdown system (ASSS) power supply.	\$850,165	\$1,789,822	\$1,624,840	Cost Beneficial (Deferred)
065 – Upgrade the ASSS to allow timely restoration of seal injection and cooling.	\$5,591,781	\$11,772,170	\$1,789,771	Cost Beneficial (Deferred)
IP2-GAG	N/A	\$13,000,000	\$458,617	Cost Beneficial (To Be Implemented)

Source: NL-13-075, Attach. 1 at 4, Table 1 (May 6, 2013) (submitted to ASLB and the State on May 7, 2013).

## **ARGUMENT**

Good cause exists for the Board to grant the State's request for leave to submit an additional exhibit and supplemental Proposed Findings based upon Entergy's May 7, 2013 letter to the Board. The State was not aware of Entergy's SAMA analysis revisions until after the parties had submitted their post-hearing Proposed Findings on March 22 and May 3, 2013. Information in NL-13-075 directly refutes Entergy's materiality argument, which has also been adopted by NRC Staff, by showing that NYS-16B is material, even under Entergy's definition of materiality. Furthermore, the decreasing margins between the costs and benefits of the SAMA

candidates provide further support for the State’s argument that all MACCS2 code deficiencies, including those identified in NYS-12C and NYS-16B, should be examined together in a supplement to the Final Supplemental Environmental Impact Statement (“FSEIS”) to determine a complete list of cost-beneficial SAMAs. *See* State Proposed Findings at 85, ¶198 and 88, ¶204. It also supports the State’s argument that the small margins here distinguish the Indian Point SAMA analysis from those in other case-specific relicensing proceedings such as *Pilgrim*. *See* State Proposed Findings at 76-77, ¶¶181-183.

Moreover, Entergy’s May 2013 revised SAMA cost-benefit analysis should be included in the record and relied upon by the Board in ruling on Contention NYS-16B because it shows that the population omissions described in NYS-16B would change the cost-benefit conclusions ultimately reached in Entergy’s SAMA analysis, and therefore, are material to that analysis under Entergy’s definition of the term.

The Board should grant the State’s request to ensure that the ultimate decision on relicensing is sound. It is of the utmost importance that the Board have a full record of all material and relevant evidence when rendering its relicensing decision. *See Pacific Gas & Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 & 2), ALAB-580, 11 N.R.C. 227, 230 (Appeal Board 1980) (“No conceivable good is served by making empty findings in the absence of essential evidence.”). In addition to being relevant, the State’s new exhibit and supplemental Proposed Findings regarding NL-13-075 are both material and materially different from any evidence offered in this proceeding. Consequently, good cause exists to allow the State to file the exhibit and present limited supplemental Proposed Findings based on NL-13-075.

Furthermore, the equities weigh in favor of the State’s request. It was Entergy who chose to wait almost two years after the Board’s July 2011 grant of summary disposition on NYS-

35/36,<sup>5</sup> to wait over six months after the evidentiary hearing on NYS-16B, and to let the deadline for Proposed Findings pass before submitting this information to the Board and the State. Just as the Commission found in *Crow Butte* that “neither [the applicant] nor the Staff can claim that they were unfairly surprised by the introduction of Exhibit B, as both were in possession of the document for approximately 2 months prior to the time [p]etitioners learned of its existence,” here Entergy cannot be prejudiced by information that it has prepared and has been in its possession. *Crow Butte Res., Inc.* (North Trend Expansion Area), 40-8943-MLA, 69 N.R.C. 535, 549-50 (June 25, 2009). In sum, the State should not be prejudiced by the timing of NL-13-075 and should be allowed to present narrowly-tailored supplemental Proposed Findings based on this new evidence.

Lastly, the timeliness of the State’s submission of an additional exhibit and supplemental Proposed Findings supports allowing it to supplement the record. The State is submitting this motion a week and a half (within 10 days) after becoming aware of NL-13-075. Given the time required to review and analyze the document as well as prepare supplemental Proposed Findings, draft this motion, and consult with other parties on this motion, the State’s submission is timely and shows good faith on the part of the State.

## CONCLUSION

For the above reasons, the State respectfully requests that the Board grant the State of New York leave to file one additional New York Exhibit, NYS000476, containing an excerpt of NL-13-075, as well as the attached supplemental Proposed Findings on NYS-16B, to address Entergy’s May 7, 2013 submission to the Board. To the extent that Entergy and NRC Staff

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<sup>5</sup> *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 and 3), LBP-11-17, -- N.R.C. -- (July 14, 2011).



request an opportunity to submit supplemental Proposed Findings in response to the State's supplemental Proposed Findings, the State requests the opportunity to submit a brief reply, as there will not be simultaneous filings as provided by the Board's July 1, 2010 Scheduling Order (¶N), and fairness supports the State being permitted an opportunity to respond to whatever Entergy and NRC Staff may say in such Proposed Findings.

Respectfully submitted,

*Signed (electronically) by*

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*Signed (electronically) by*

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May 17, 2013

**Certificate Pursuant to 10 C.F.R. § 2.323**

In accordance with the Board's Scheduling Order of July 1, 2010 (at 8-9) and 10 C.F.R. § 2.323(b), the undersigned counsel hereby certifies that counsel for the State of New York has made a sincere effort to contact other parties in the proceeding and resolve the issues raised in the motion. The State of New York's efforts to resolve the issues with NRC Staff and Entergy have been unsuccessful, and NRC Staff and Entergy oppose this motion. Neither Riverkeeper nor Clearwater oppose the motion.

***Signed (electronically) by*** \_\_\_\_\_

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May 17, 2013

**ATTACHMENT 1**

**STATE OF NEW YORK'S SUPPLEMENTAL PROPOSED  
FINDINGS OF FACT AND CONCLUSIONS OF LAW  
FOR CONTENTION NYS-16/16A/16B ("NYS-16B")**

**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ATOMIC SAFETY AND LICENSING BOARD**

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In re:	Docket Nos. 50-247-LR; 50-286-LR
License Renewal Application Submitted by	ASLBP No. 07-858-03-LR-BD01
Entergy Nuclear Indian Point 2, LLC,	DPR-26, DPR-64
Entergy Nuclear Indian Point 3, LLC, and	
Entergy Nuclear Operations, Inc.	May 17, 2013
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**STATE OF NEW YORK'S SUPPLEMENTAL PROPOSED  
FINDINGS OF FACT AND CONCLUSIONS OF LAW  
FOR CONTENTION NYS-16/16A/16B ("NYS-16B")**

Office of the Attorney General  
for the State of New York  
The Capitol  
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## TABLE OF CONTENTS

I.	INTRODUCTION .....	1
II.	FINDINGS OF FACT.....	1
A.	Entergy Revised the Indian Point SAMA Analysis and Concluded That Two Previously Cost-Beneficial SAMAs Are No Longer Cost-Beneficial .....	1
B.	Accounting For Commuters and Undercounted Minority Residents Will Render Indian Point Unit 2 SAMAs 021 and 053 Cost-Beneficial .....	4
III.	CONCLUSIONS OF LAW .....	5
A.	Correcting the Deficiencies Raised in Contention NYS-16B Will Materially Alter the Outcome of the SAMA Analysis by Rendering Two SAMA Candidates Cost-Beneficial.....	5

## **I. INTRODUCTION**

In accordance with 10 C.F.R. Section 2.1209 and the January 15, 2013 Order issued by the Atomic Safety and Licensing Board (“Board”), and the Board’s grant of the State of New York’s request for leave, the State submits these supplemental proposed Findings of Fact and Conclusions of Law (“Proposed Findings”) on the State’s admitted Contention 16/16A/16B (“NYS-16B”). These Proposed Findings address Entergy’s latest revision to its SAMA analysis contained in its May 7, 2013 letter to the Board, and supplement the sections of the State’s March 22, 2013 Proposed Findings discussing Entergy’s sensitivity analysis (pages 61-65, ¶¶147-155 and pages 75-78, ¶¶179-186).

## **II. FINDINGS OF FACT**

### **A. Entergy Revised the Indian Point SAMA Analysis and Concluded That Two Previously Cost-Beneficial SAMAs Are No Longer Cost-Beneficial**

206. During the recent evidentiary hearing on Contention NYS-16B, the parties’ testimony focused on Entergy’s December 2009 SAMA Reanalysis. ENT000009 (NL-09-165, Letter from Fred Dacimo, Entergy, to NRC, “License Renewal Application - SAMA Reanalysis Using Alternate Meteorological Tower Data, Indian Point Nuclear Generating Units Nos. 2 and 3,” Dec. 11, 2009). The December 2009 SAMA Reanalysis identified twenty-two potentially cost-beneficial SAMA candidates for Indian Point Unit 2 (“IP2”) and Indian Point Unit 3 (“IP3”). *Id.* Entergy and NRC Staff stated that potentially cost-beneficial SAMA candidates would also be submitted for engineering project cost-benefit analysis for more detailed examination of viability and implementation cost. *Id.* at 29 and 32; NRC000004/NYS00133I (Final Supplemental Environmental Impact Statement, Dec. 2010) at Appendix G, G-48. On March 22, 2013 and May 3, 2013, the parties submitted post-hearing Proposed Findings for the various admitted contentions including NYS-16B.

207. Following the submission of Proposed Findings by the parties in this proceeding, on May 7, 2013, Entergy filed a letter with the Board, notifying it that Entergy has completed and submitted to NRC Staff the revised cost estimates for the twenty-two potentially cost-beneficial SAMAs. Letter, Kathryn M. Sutton, et al. to ASLB, Re: Notification of Entergy's Submission of the Results of Completed Engineering Project Cost Estimates for SAMAs Previously Identified as Potentially Cost-Beneficial (May 7, 2013) (ML13127A458). This letter contains an attachment, labeled NL-13-075, which was sent to NRC Staff on May 6, 2013. NL-13-075, License Renewal Application-Completed Engineering Project Cost Estimates for SAMAs Previously Identified as Potentially Cost-Beneficial (May 6, 2013) (ML13127A459). The State became aware of NL-13-075 when it was submitted to the Board on May 7, 2013. Entergy had not disclosed NL-13-075 to the State.

208. NL-13-075 purports to provide "additional, more refined engineering project cost estimates for those SAMAs identified as potentially cost-beneficial in accordance with current plant processes for evaluating possible plant modifications." NL-13-075 at 2. Entergy's calculations resulted in increased implementation costs for most of the cost-beneficial SAMAs. *Compare* NL-13-075, Attach. 1 at 4-5 *with* ENT000009 at 10-28. Entergy compared the refined SAMA implementation cost estimates to the benefits previously calculated for those SAMAs identified as being potentially cost-beneficial. NL-13-075 at 2. According to Entergy: "Some of the previous potentially cost-beneficial SAMAs are no longer cost-beneficial based on the completed engineering project cost estimates and are identified in Table 1 of Attachment 1 as 'Not Cost Beneficial.'" *Id.*

209. NL-13-075, Attachment 1, Table 1 entitled "Results of Cost Benefit Analysis of IP2 SAMA Candidates," and reproduced below, shows that four of the thirteen SAMAs that

were previously identified as potentially cost-beneficial for IP2 have been rendered “not cost beneficial” because the new estimated cost exceeds the previously calculated benefit with uncertainty. These are IP2 SAMAs 021, 022, 053, and 056.

**TABLE 1**  
**Results of Cost Benefit Analysis of IP2 SAMA Candidates**

<b>IP2 Phase II SAMA</b>	<b>Benefit</b>	<b>Benefit with Uncertainty</b>	<b>Estimated Cost</b>	<b>Conclusion<sup>1</sup></b>
009 – Create a reactor cavity flooding system.	\$6,347,528	\$13,363,217	\$1,738,982	Cost Beneficial (Deferred)
021 – Install additional pressure or leak monitoring instrumentation for inter-system loss of coolant accident (ISLOCAs).	\$2,093,852	\$4,408,109	\$4,607,051	Not Cost Beneficial
022 – Add redundant and diverse limit switches to each containment isolation valve.	\$1,071,465	\$2,255,716	\$7,685,460	Not Cost Beneficial
028 – Provide a portable diesel-driven battery charger.	\$1,357,046	\$2,856,939	\$2,137,804	Cost Beneficial (Deferred)
044 – Use fire water system as backup for steam generator inventory.	\$2,350,530	\$4,948,485	\$3,046,418	Cost Beneficial (Deferred)
053 – Keep both pressurizer power-operated relief valves (PORV) block valves open.	\$659,715	\$1,388,873	\$1,467,848	Not Cost Beneficial
054 – Install flood alarm in the 480V switchgear room.	\$5,591,781	\$11,772,170	\$456,985	Cost Beneficial (Deferred)
056 – Keep residual heat removal (RHR) heat exchanger discharge motor operated valves (MOVs) normally open.	\$48,723	\$102,574	\$1,705,367	Not Cost Beneficial
060 – Provide added protection against flood propagation from stairwell 4 into the 480V switchgear room.	\$1,275,337	\$2,684,920	\$715,145	Cost Beneficial (Deferred)
061 – Provide added protection against flood propagation from the deluge room into the 480V switchgear room.	\$2,754,991	\$5,799,982	\$933,981	Cost Beneficial (Deferred)
062 – Provide a hard-wired connection to an SI pump from alternate safe shutdown system (ASSS) power supply.	\$850,165	\$1,789,822	\$1,624,840	Cost Beneficial (Deferred)
065 – Upgrade the ASSS to allow timely restoration of seal injection and cooling.	\$5,591,781	\$11,772,170	\$1,789,771	Cost Beneficial (Deferred)
IP2-GAG	N/A	\$13,000,000	\$458,617	Cost Beneficial (To Be Implemented)

Source: NL-13-075, Attach. 1 at 4, Table 1 (May 6, 2013) (submitted to ASLB and the State on May 7, 2013). New York State Exhibit NYS000476 is an excerpt from NL-13-075 containing Table 1, which includes results for both IP2 and IP3.

210. For IP2 SAMA 021, Entergy originally calculated the estimated cost to be \$3,200,000. ENT00009 at 13. This SAMA candidate was cost-beneficial because the benefit with uncertainty (\$4,408,109) exceeded the cost by over \$1.2 million. *Id.* Entergy’s revised



estimated cost, reported in NL-13-075, is \$4,607,051. NL-13-075, Attach. 1 at 4, Table 1. The benefit with uncertainty (\$4,408,109) does not exceed the new estimated cost, so Entergy designated this SAMA candidate as no longer cost-beneficial. *Id.*

211. For IP2 SAMA 053, Entergy originally calculated the estimated cost to be \$800,000. ENT00009 at 17. This SAMA candidate was cost-beneficial because the benefit with uncertainty (\$1,388,873) exceeded the cost by almost \$600,000. *Id.* Entergy's revised estimated cost, reported in NL-13-075, is \$1,467,848. NL-13-075, Attach. 1 at 4, Table 1. The benefit with uncertainty (\$1,388,873) does not exceed the new estimated cost, so Entergy designated this SAMA candidate as no longer cost-beneficial. *Id.*

212. The difference between the benefit with uncertainty and the new estimated cost for IP2 SAMA 021 is \$198,942, approximately 4.5%. The difference between the benefit with uncertainty and the new estimated cost for IP2 SAMA 053 is \$78,975, approximately 5.7%. Therefore, if the benefit with uncertainty for IP2 SAMAs 021 and 053 were increased by more than 4.5% or 5.7%, respectively, those SAMAs would become cost-beneficial.

**B. Accounting For Commuters and Undercounted Minority Residents Will Render Indian Point Unit 2 SAMAs 021 and 053 Cost-Beneficial**

213. Entergy's October 2012 sensitivity analysis showed that if the MACCS2 code population input for Indian Point were adjusted to include commuters and undercounted minority residents—an addition of approximately 1.2 million people—the benefit of each SAMA candidate would increase by 6.15%. ENT000589 (MACCS2 Sensitivity Analysis for NYS-16 Using Dr. Sheppard's Proposed Data, Oct. 9, 2012) at 2; Entergy Proposed Findings of Fact and Conclusions of Law for Contention NYS-16B ("Entergy Proposed Findings") (Mar. 22, 2013) at 98, ¶194.

214. If the benefit of IP2 SAMA 021 is increased by 6.15%, the benefit with uncertainty will become \$4,679,207, which exceeds the cost of \$4,607,051. If the benefit of IP2 SAMA 053 is increased by 6.15%, the benefit with uncertainty will become \$1,474,289, which exceeds the cost of \$1,467,848. Therefore, if the MACCS2 code population input for Indian Point is adjusted to include commuters and undercounted minority residents, two SAMA candidates that Entergy currently claims in NL-13-075, Attachment 1, Table 1 (NYS000476) are not cost-beneficial will become cost-beneficial.

### **III. CONCLUSIONS OF LAW**

#### **A. Correcting the Deficiencies Raised in Contention NYS-16B Will Materially Alter the Outcome of the SAMA Analysis by Rendering Two SAMA Candidates Cost-Beneficial**

215. Entergy and NRC Staff argue that it is the State's burden to show that the omission of 1.2 million people from the population estimate could make a "material" difference to the SAMA analysis conclusions. Entergy Proposed Findings at 40-41, ¶¶79 and 99, ¶196; NRC Staff Proposed Findings of Fact and Conclusions of Law for Contention NYS-16B ("Staff Proposed Findings") (Mar. 22, 2013) at 13-14, ¶6.33. They argue that an omission is "material" only if it alters the outcome of the SAMA analysis by making at least one additional SAMA candidate cost-beneficial. Entergy Proposed Findings at 4, ¶5, n. 11 and 38-40, ¶¶75-77; Staff Proposed Findings at 6-8, ¶¶6.16-6.18 and 24, ¶6.47. Entergy argues that since accounting for commuters and census undercount increases the benefits of each SAMA by 6.15%, and (under its December 2009 SAMA Reanalysis) the SAMA with the smallest margin between the current benefit and cost has a difference of 11%, accounting for these omissions will not make any other SAMAs cost-beneficial. Entergy Proposed Findings at 98, ¶194. Similarly, Staff argues that

accounting for the population omissions will not make any SAMAs cost-beneficial and therefore, those omissions are immaterial. Staff Proposed Findings at 14, ¶6.33 and 24, ¶6.47.

216. While the State does not agree that materiality is the correct standard by which to judge the reasonableness of the population omissions, Entergy's latest revision to its SAMA analysis, contained in its May 2013 NL-13-075 SAMA Reanalysis, shows that accounting for the omission of commuters and undercounted minority residents will make two SAMAs cost-beneficial—Indian Point Unit 2 SAMAs 021 and 053. Therefore, the record does not support Entergy's argument that "New York's postulated population increases—even if fully accepted—would not have any material impact on the FSEIS SAMA analysis conclusions." Entergy Proposed Findings at 98, ¶194. Nor does the record support NRC Staff's argument that "[t]he inclusion of additional persons to account for the census undercount and commuter population would not alter the SAMA analysis." Staff Proposed Findings at 29, ¶6.55. Entergy's and NRC Staff's materiality argument is incorrect—as is their reliance on decisions reviewing the case-specific evidentiary records from other proceedings, such as *Pilgrim*. See, e.g., Entergy Proposed Findings at 99, ¶196, n.546 and 100, ¶200, n. 549; Staff Proposed Findings at 6-7, ¶¶6.16-6.17.

217. Instead, the record supports a Board finding that accounting for commuters and census undercount will materially alter the SAMA analysis conclusions—even under Entergy's and NRC Staff's definition of materiality—by rendering two SAMAs, IP2 021 and IP2 053, cost-beneficial.

Respectfully submitted,

*Signed (electronically) by*

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