

UNITED STATES
NUCLEAR REGULATORY COMMISSION
ATOMIC SAFETY LICENSING BOARD

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In re:

License Renewal Application Submitted by	Docket Nos. 50-247-LR and 50-286-LR
Entergy Nuclear Indian Point 2, LLC, Entergy Nuclear Indian Point 3, LLC, and Entergy Nuclear Operations, Inc.	ASLBP No. 07-858-03-LR-BD01 DPR-26, DPR-64

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**THE STATE OF NEW YORK’S
OBJECTION TO ENT000589**

On Friday evening, October 12, 2012, less than one business day before the start of the scheduled evidentiary hearings in this matter, Entergy Nuclear Operations, Inc. (“Entergy”), disclosed for the first time new MACCS2 computer runs and calculations related to Consolidated Contention NYS-16B. On October 22, 2012, the Board entered Entergy’s calculations as ENT000589, “subject to a later objection, recognizing the late time when [the State] received it.” Transcript at 2519:5-10. In accordance with the Board’s ruling on October 23, 2012 allowing the State 30 days to object, *see* Transcript at 2728:11-2732:3, the State objects to the admission of ENT000589 as irrelevant, immaterial, and unreliable under 10 C.F.R. § 2.337(a).

Background

In its March 28, 2012 submissions, Entergy claimed with respect to NYS-16B that its “experts performed a MACCS2 sensitivity analysis in which they increased Entergy’s 2035 population estimate for census undercount and commuters as suggested by Dr. Sheppard[,] . . . [which] did not result in the identification of any additional cost-beneficial SAMAs. . . . [and] would have no material effect on the SAMA analysis results.” Entergy’s Statement of Position

Regarding Consolidated Contention NYS-16B (Severe Accident Mitigation Alternatives Analysis) (ENT000002). In its June 29, 2012 rebuttal, the State and its expert Dr. Stephen Sheppard disputed the relevance of Entergy's purported sensitivity analysis and explained its major flaws: (1) Entergy viewed the State's SAMA contentions—NYS-16B and NYS-12C—in isolation, but instead, should have run the MACCS2 code with both the increased population from NYS-16B and corrected inputs for the parameters at issue in NYS-12C; (2) Entergy's MACCS2 runs only accounted for 50% of Dr. Sheppard's commuter population instead of the full 1.2 million additional people the State argues should be added to the population estimate; and (3) Entergy's sensitivity analysis utilized a flawed distribution for Dr. Sheppard's population increases. Rebuttal Testimony of Dr. Stephen C. Sheppard Regarding Contention NYS 16B (NYS000404) at 31-38. On April 4, 2012, the State had requested from Entergy "any additional native MACCS2-related data files for MACCS2 runs that Entergy or its experts may have completed. . . . includ[ing] data for any MACCS2 runs that are not referenced in Entergy's filings" April 4, 2012 Letter from John Sipos to Kathryn Sutton and Paul Bessette (Attachment A); *see also* April 5, 2012 Letter from Paul Bessette to John Sipos (Attachment B) (Entergy's response).

Just before 7:00 p.m. on October 12, 2012, Entergy disclosed new MACCS2 runs, new calculations labeled "IP2 - SENS - POP2," and new analysis using Dr. Sheppard's entire population figure (Entergy disclosed no new documents aimed at fixing the first flaw described by Dr. Sheppard). Due to the late filing, the State was unable to propose additional cross-examination questions to the Board on this new analysis and had minimal time to formulate its own cross-examination questions on the matter.

Entergy's New Analysis Is Irrelevant, Unreliable, and Immaterial

Under 10 C.F.R. § 2.337(a), “only relevant, material, and reliable evidence which is not unduly repetitious will be admitted.” Entergy’s revised analysis does not meet this standard and should not have been admitted. Entergy’s revised analysis is irrelevant and immaterial because it continues to improperly view two of the State’s SAMA contentions—NYS-16B and NYS-12C—in isolation. The revised analysis is unreliable because its assumptions and conclusions are inconsistent with testimony offered by Entergy at the hearing. Even taking Entergy’s analysis at face value, the difference in percentages between the outcome of the new sensitivity analysis and the increase necessary to make IP2 SAMA 025 cost-beneficial—6.15% vs. 11%—is too close to be considered relevant, material, or reliable given the other evidence offered at the hearing.

First, even if materiality were the correct standard, which it is not, the Board must evaluate materiality based on the combined impact of the SAMA input changes asserted in Contentions NYS-12C and NYS-16B. In NYS-12C, the State’s experts concluded that Entergy underestimated Offsite Economic Cost Risk (“OECR”) by a factor of 3 to 7 based on MACCS2 inputs other than population. June 29, 2012 Pre-Filed Rebuttal Testimony of Dr. François Lemay, of International Safety Research (NYS000420) at 3.¹ At the hearing, Entergy admitted that it did not determine what effect the errors outlined in NYS-12C would have on the SAMA analysis. Testimony at 2228:5-2229:7. Since the purpose of the FSEIS is to present an accurate assessment of the full environmental costs of license renewal, the Board “cannot treat the identified environmental concern in a vacuum.” *Grand Canyon Trust v. FAA*, 290 F.3d 339, 346

¹ The State’s experts also concluded that while changes to some input parameters may affect Population Dose Risk (“PDR”) differently than OECR, the change in PDR had no appreciable impact on the NYS-12C conclusions because the PDR changed by less than 4%. *Id.* at 33-34.

(D.C. Cir. 2002) (finding an Environmental Assessment deficient for failing to examine the aggregate effect of various incremental environmental impacts).² Instead, the Board must determine whether the combined impact of all the individual input errors in Entergy's SAMA analysis distorted its outcome by underestimating the environmental costs of relicensing. Thus, a purported sensitivity analysis that fails to consider the factor of 3 to 7 increase in economic costs from Contention NYS-12C along with the population increase of approximately 1.2 million people cannot be deemed relevant or material.

Second, Entergy's new analysis concludes "[p]opulation dose risk and cost risk increase approximately 6.7% and 6.8% respectively, due to the population increase of 6.7%." ENT000589 at p. 2. Entergy's calculation includes a table showing that this increase leads to a 6.15% increase in the total costs used in the SAMA analysis. *Id.* at p. 8 (Table titled "Pop2 Sens Impact"). This leads Entergy to conclude that "[t]he SAMA impact is approximately 6.15%." *Id.* at p. 2. Entergy then directly compares this increase of 6.15% to the 11% increase in benefit that IP2 SAMA 025 would need to become cost-effective. *See* Testimony of Entergy Witnesses Lori Potts, Kevin O'Kula, Grant Teagarden, and Jerry Riggs on Consolidated Contention NYS-16B (Severe Accident Mitigation Alternatives Analysis) (ENT000003) at A89 (citing NL-09-165, Attach. 1 at 30 (ENT000009)). This increase of 11% comes from the difference between the benefit with uncertainty of \$430,516 and the estimated cost of \$476,000 from a table in Entergy's SAMA Reanalysis, reproduced below. NL-09-165, Attach. 1 at 30 (ENT000009).

² *See also* Generic Environmental Impact Statement for License Renewal of Nuclear Plants Supplement 38 Regarding Indian Point Generating Unit Nos. 2 and 3 at xvi (Dec. 2010) ("[t]he purpose of the NRC staff's environmental review, as defined in 10 CFR 51.95(c)(4) and the GEIS, is to determine the following: '. . . whether or not the adverse environmental impacts of license renewal are so great that preserving the option of license renewal for energy planning decision makers would be unreasonable.'").

Table 6 – IP2 TI-SGTR Sensitivity Results

IP2 Phase II SAMA	Original Benefit with Uncertainty	TI-SGTR Revised Benefit with Uncertainty	Estimated Cost	Conclusion
001 - Create an independent RCP seal injection system with a dedicated diesel.	\$788,963	\$892,287	\$1,137,000	Not cost effective
006 - Add a diesel building high temperature alarm.	\$64,202	\$223,493	\$274,000	Not cost effective
025 - Improve MSIV design.	\$258,310	\$430,516	\$476,000	Not cost effective
029 - Increase/ improve DC bus load shedding.	\$102,574	\$257,560	\$460,000†	Not cost effective
040 - Create/enhance a reactor coolant depressurization system.	\$1,205,070	\$1,325,614	\$2,000,000†	Not cost effective
052 - Install secondary side guard pipes up to the MSIVs.	\$619,756	\$878,065	\$1,100,000	Not cost effective

† Cost estimate revised from what was previously reported. See Section [6] for more information.

But this methodology of comparing the increase in total costs of 6.15% directly to the difference in benefit of 11%, without re-running the MACCS2 code for IP2 SAMA 025, contradicts testimony that Entergy provided at the hearing as demonstrated, for example, by the following passages:

JUDGE WARDWELL: Let me ask another more fundamental question. If one was to say yup, boy, New York State is spot on. As far as I can understand, this should have been the justification for the selection of numbers at Indian Point. That doesn't necessarily mean that the cost benefit analysis is going to change by the same percentage as these OECRs do. Isn't that correct? Because you're taking the same CDNFM's [sic] and TIMDECs would also be used when ran it with a mitigation alternative in place, correct?

MR. TEAGARDEN: Correct, Your Honor.

Transcript at 2228:5-15 (emphasis added).

MS. POTTS: I'm sorry. As I stated, increasing the OECR by a factor of three does not equate to increasing the benefit of any particular SAMA by a factor of three.

MS. LIBERATORE: What would increasing the OECR by a factor of three translate to as far as the benefit of a given SAMA?

MS. POTTS: It is SAMA-specific.

MS. LIBERATORE: Let's focus on IP2 SAMA 025, since it appears that you've done some analysis on that. What would an increase in OECR by a factor of three translate into for IP2 SAMA 025?

MS. POTTS: I don't know at this point, without looking into it.

Transcript at 2526:12-19 (emphasis added).

JUDGE McDADE: Mr. Teagarden, are you saying that you wouldn't be able to estimate it [the impact on a given SAMA candidate] without actually running the calculation for that particular SAMA, which is not something you could do here in your head?

MR. TEAGARDEN: Yes, your Honor. It could be dependant -- it's dependant upon how the risk is being increased, and how that relates to the mitigation that that SAMA candidate is providing.

Transcript at 2527:13-21 (emphasis added).

Entergy's expert testimony indicates that a second level of analysis is necessary to determine what exact impact a change in OECR or PDR will have on a given SAMA candidate, but ENT000589 does not include such an analysis. Such inconsistency deems this evidence unreliable.

Third, even taking Entergy's new analysis at face value, the difference in percentages is too close to be considered relevant, material, or reliable given the other evidence offered at the hearing. The difference between the outcome of the new sensitivity analysis and the increase necessary to make IP2 SAMA 025 cost-beneficial is only a few percentage points—6.15% and 11%—which may be overcome by looking at the higher growth rate of 15.98% Sandia proposed in the FSEIS (NYS00133I at G-25) or scrutinizing the polynomial regression analysis Entergy completed for three counties in ENT000589 at p. 2. NRC Staff itself admitted that there often can be a percentage variances in population. Transcript at 2418:3-5. Without further scrutiny, such a small

percentage difference is insufficient to deem this purported sensitivity analysis relevant, reliable, or material.

**Entergy Did Not Show Good Cause For Admitting New
Evidence On the Eve of the Hearing and Preventing the State from
Proposing Cross-Examination Questions to the Board**

Entergy has not shown good cause for submitting its new calculation on the eve of hearing, preventing the State from proposing cross-examination questions to the Board and limiting the State's ability to formulate its own cross-examination questions. *See In The Matter of Crow Butte Resources, Inc. (North Trend Expansion Project)*, 67 N.R.C. 241, 258 (May 21, 2008) (applying 10 C.F.R. § 2.309(c)(1)(i)-(iii) criteria to exhibits) (“The most important [factor] is good cause, if any, for the failure to file on time.”). Entergy's late filing is particularly egregious given the inconsistent answers provided by its witnesses, as discussed above. Entergy itself regularly seeks to hold intervenors and would-be intervenors to strict deadlines to protect itself from the kind of prejudice inflicted by untimely evidentiary proffers. *See, e.g., Matter of Entergy Nuclear Ops., Inc. (Palisades Nuclear Plant)*, 68 N.R.C. 251, 261 (2008) (denying request to file belated authorization affidavits to support petition to intervene because the Board's “acceptance and consideration of such belatedly submitted evidence regarding standing would deprive [Entergy Nuclear Operations] of the opportunity to challenge the substantive sufficiency of the affidavit – an opportunity [Entergy] could have exercised had Local 590 submitted a timely affidavit with its petition to intervene”).

Entergy had much preparation time in which it could have performed and disclosed this analysis. It chose not to at multiple junctures—after the State's prefiled testimony, in its own prefiled testimony, or even promptly after the State's rebuttal testimony, which was filed three and a half months ago. The information available to Entergy and used in its October 12

disclosure and analysis is not materially different from information that was previously—and timely—available to it and its experts.

The lack of opportunity to submit proposed cross-examination questions to the Board, and lack of time for the State to formulate its own cross-examination questions, goes against the public interest. As a previous Board has stated in relation to another kind of untimely filing, this time by an intervenor,

[Prior to the date of the late filing], the [parties] had every right to assume that both the issues to be litigated and the participants had been established with finality. Simple fairness to them—to say nothing of the public interest requirement that NRC licensing proceedings be conducted in an orderly fashion—demanded that the [Licensing] Board be very chary in allowing one who had slept on its rights to inject itself and new claims into the case as last minute trial preparations were underway.

Matter of Houston Lighting and Power Company (Allens Creek Nuclear Generating Station), 15 N.R.C. 508 at *3 (Mar. 31, 1982), *citing South Carolina Electric and Gas Co.* (Virgil C. Summer Nuclear Station, Unit 1), ALAB-642, 13 N.R.C. 881, 886 (1981).

CONCLUSION

For the reasons stated above, the State respectfully requests that the Board deny Entergy's motion to admit ENT000589.

Respectfully submitted,

Signed (electronically) by

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Dated: November 21, 2012

**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. November 21, 2012
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CERTIFICATE OF SERVICE

I hereby certify that on November 21, 2012, copies of the State of New York's Objection to ENT000589 and attachments were served electronically via the Electronic Information Exchange on the following recipients:

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Signed (electronically) by

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Dated at New York, New York
this 21st day of November, 2012

Attachment A



STATE OF NEW YORK
OFFICE OF THE ATTORNEY GENERAL

ERIC T. SCHNEIDERMAN
ATTORNEY GENERAL

DIVISION OF SOCIAL JUSTICE
ENVIRONMENTAL PROTECTION BUREAU

April 4, 2012

Via Electronic Mail

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Paul M. Bessette, Esq.
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Re: Entergy's Mandatory Disclosures, Indian Point License Renewal, Docket
Nos. 50-247-LR and 50-286-LR (ASLBP No.07-858-03-LR-BD01)

Dear Counsel and Parties:

On April 3, 2012, counsel for Entergy transmitted (1) native MACCS2-related data files for the NYS-16B sensitivity analysis (Entergy March 28, 2012 Disclosure Log Entry # 9316), and (2) supporting native files for the NYS-16B commuter analysis (Entergy Disclosure Log Entry # 9317).

The State of New York requests any additional native MACCS2-related data files for MACCS2 runs that Entergy or its experts may have completed. Such files would include data for any MACCS2 runs that are not referenced in Entergy's filings or in the materials provided on April 3, 2012. These MACCS2 runs are not protected by any privilege or confidentiality agreement and, therefore, must be disclosed. If Entergy or its experts did not conduct any additional MACCS2 runs, please so certify.

As we require these MACCS2 files to complete the State's rebuttal testimony and revised statements of position, we appreciate your prompt attention to this matter. Please contact AAG Kathryn Liberatore or me if you have any questions or would like to discuss this further.

Sincerely,

s/

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April 5, 2012

Via E-Mail and Regular Mail

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Albany NY 12224-0341

Re: Entergy Nuclear Operations, Inc. (Indian Point Nuclear Generating Units 2 and 3),
Docket Nos. 50-247-LR and 50-286-LR

Dear Mr. Sipos:

This letter is in response to your April 4, 2012 letter seeking any additional MACCS2-related data files for MACCS2 runs that Entergy or its experts may have completed. As we discussed on the phone yesterday, Entergy already disclosed, on April 3, 2012, all MACCS2-related data files and supporting native data files for the NYS-16B sensitivity and commuter analyses conducted by Entergy and its experts.

As we also discussed, Entergy and its experts did not conduct or rely on any MACCS2 sensitivity analyses in connection with its testimony submitted on March 30, 2012 concerning NYS-12C. Entergy did conduct four MACCS2 sensitivity runs in November 2011, before NYS filed its testimony and expert report on NYS-12C on December 21, 2011. Because Entergy tailored its testimony to the specific issues raised by NYS in its testimony and expert report, it did not rely on the November 2011 draft MACCS2 sensitivity analyses in its testimony. Therefore, we do not believe that the associated MACCS2 data files are necessary for the completion of NYS's rebuttal testimony, as suggested in your April 4, 2012 letter. Nonetheless, in the ongoing spirit of cooperation, we will forward to New York State the native MACCS2-related data files for those analyses. By doing so, however, Entergy does not concede or address your claim that such information "must be disclosed."

Sincerely,



Paul M. Bessette

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