

**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))	
)	January 30, 2012

**ENTERGY'S MOTION IN LIMINE TO EXCLUDE PORTIONS OF PRE-FILED
DIRECT TESTIMONY, EXPERT REPORT, EXHIBITS, AND STATEMENT OF
POSITION FOR CONTENTION RIVERKEEPER TC-2 (FLOW-ACCELERATED
CORROSION)**

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I. INTRODUCTION

In accordance with 10 C.F.R. §§ 2.1204, 2.319, 2.323, 2.337, the Atomic Safety and Licensing Board’s (“Board’s”) Scheduling Order of July 1, 2010, and subsequent Order dated November 17, 2011,¹ Entergy Nuclear Operations, Inc. (“Entergy”) hereby moves to exclude portions of the Prefiled Testimony of Joram Hopenfled in Support of RK-TC-2 (“Testimony”),² the Report of Joram Hopenfled in Support of RK-TC-2 (“Report”),³ and the Riverkeeper Initial Statement of Position Regarding Contention RK-TC-2 (“Position Statement”).⁴ Portions of Dr. Hopenfled’s Testimony, Report, and the Position Statement, identified in Attachment 1, are inadmissible in this proceeding and should be excluded pursuant to 10 C.F.R. § 2.337(a) because

¹ Licensing Board Order (Granting Unopposed Motion by the State of New York and Riverkeeper, Inc. to Amend the Scheduling Order) at 1 (Nov. 17, 2011) (unpublished).

² Exh. RIV000003, Pre-filed Written Testimony of Dr. Joram Hopenfled Regarding Riverkeeper Contention TC-2 - Flow Accelerated Corrosion (Dec. 22, 2011).

³ Exh. RIV000005, Report of Dr. Joram Hopenfled in Support of Riverkeeper Contention TC-2 - Flow Accelerated Corrosion (Dec. 22, 2011).

⁴ Exh. RIV000002, Riverkeeper Initial Statement of Position Regarding Contention RK-TC-2 - Flow Accelerated Corrosion (Dec. 22, 2011).

they: (1) fall outside the scope of the admitted RK-TC-2 contention, (2) fall outside the scope of this proceeding, or (3) concern matters outside Dr. Hopenfeld's area of expertise.

II. LEGAL STANDARDS

Nuclear Regulatory Commission ("NRC" or "Commission") regulations governing the admissibility of evidence provide that "[o]nly relevant, material, and reliable evidence . . . will be admitted. Immaterial and irrelevant parts of an admissible document will be segregated and excluded so far as is practicable."⁵ Thus, pursuant to 10 C.F.R. § 2.319(d), the Board may "strike any portion of a written presentation or a response to a written question that is irrelevant, immaterial, unreliable, duplicative or cumulative," and under Section 2.319(e) the Board may restrict evidence or arguments for the same reasons.

Because only relevant and material evidence is admissible, the Board may exclude or accord no weight to testimony and exhibits that are outside the admitted contention's scope or that raise issues that were not properly raised in earlier pleadings.⁶ Thus, the Board may strike pre-filed testimony that introduces entirely new bases for a contention.⁷ Similarly, it may

⁵ 10 C.F.R. § 2.337(a).

⁶ See, e.g., *S. Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), Licensing Board Memorandum and Order (Ruling on In Limine Motions) at 3-7 (Jan. 26, 2009) (unpublished) (granting in part motion to exclude testimony and exhibits outside the scope of the admitted contentions); *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), Licensing Board Order (Ruling on Pending Matters and Addressing Preparation of Exhibits for Hearing) at 2 (Mar. 24, 2008) (unpublished) (granting in part motions to exclude testimony on topics outside the scope of a license renewal proceeding, because such issues "do not relate to aging and/or because they are addressed as part of ongoing regulatory process"); *AmerGen Energy Co., LLC* (License Renewal for Oyster Creek Nuclear Generating Station), Licensing Board Memorandum and Order (Ruling on Motions in Limine and Motion for Clarification) at 1-2 (Aug. 9, 2007) ("Oyster Creek Ruling on Motions in Limine") (unpublished) (excluding evidence on topics outside scope of contention and license renewal proceeding); *La. Energy Servs., L.P.* (Nat'l Enrichment Facility), Licensing Board Memorandum and Order (Ruling on In Limine Motions and Providing Administrative Directives) at 4-10 (Jan. 21, 2005) (unpublished) (excluding testimony on topics outside the scope of the admitted contention).

⁷ *Nuclear Mgmt. Co., LLC* (Palisades Nuclear Plant), CLI-06-17, 63 NRC 727, 732 (2006) ("New bases for a contention cannot be introduced in a reply brief, or any other time after the date the original contentions are due, unless the petitioner meets the late-filing criteria set forth in 10 C.F.R. § 2.309(c), (f)(2).") (emphasis added); see also *Entergy Nuclear Generation Co. & Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station, CLI-10-11, 71 NRC 287, 309 (2010).

exclude testimony and supporting evidence that is outside the scope of this license renewal proceeding.⁸

Recent Commission decisions explicitly hold that Intervenorors are not permitted to change the scope of a contention as admitted by the Board. In the *Vogtle* proceeding, the Commission upheld a Board ruling excluding testimony at hearing that strayed beyond the scope of the bases as pled and admitted, which “defined the scope of the . . . contention.”⁹ The Commission emphasized that the scope of a contention is limited to issues of law and fact pled with particularity in the intervention petition, including its stated bases.¹⁰

Similarly, in the recent *Pilgrim* decision, the Commission reiterated that longstanding precedent requires a Board to look back at the bases to determine the scope of a contention, because the “reach of a contention *necessarily* hinges upon its terms *coupled* with its stated bases.”¹¹ A key reason for this requirement is to provide notice to the opposing parties of the issues they will need to defend against.¹² Because of this principle:

Intervenorors therefore may not “freely change the focus of an admitted contention at will” to add a host of new issues and objections that could have been raised at the outset. Where warranted we allow for amendment of admitted contentions, but do not allow distinctly new complaints to be added at will as litigation

⁸ See cases cited *supra* note 6.

⁹ *S. Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), CLI-10-05, 71 NRC 90, 101 (2010). Thus, to the extent Riverkeeper may seek to argue, based on *Entergy Nuclear Vt. Yankee, LLC* (Vt. Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 147 (2006) and *La. Energy Servs., L.P.* (Nat’l Enrichment Facility), CLI-04-35, 60 NRC 619, 623 (2004), that it may freely add bases after the contention pleading stage, the Board should reject this argument. These rulings interpreted the contention admissibility rule, not the question of whether testimony at hearing that strayed beyond the stated bases of an admitted contention was admissible.

¹⁰ *Vogtle*, CLI-10-05, 71 NRC at 100.

¹¹ *Pilgrim*, CLI-10-11, 71 NRC at 309 (emphasis added) (citing *Pub. Serv. Co. of N. H.* (Seabrook Station, Units 1 & 2), ALAB-899, 28 NRC 93, 97 (1988)).

¹² See *id.*

progresses, stretching the scope of admitted contentions beyond their *reasonably inferred* bounds.¹³

Based on this standard, the Commission affirmed a Board decision to exclude allegations related to “health costs” from a contention challenging the input data on “economic consequences” in a SAMA evaluation, because the stated *bases* did not include such costs.¹⁴ The Commission stressed that “NRC adjudicatory proceedings would prove endless if parties were free . . . to introduce entirely new claims which they either originally opted not to make or which simply did not occur to them at the outset.”¹⁵

Furthermore, an expert’s opinion is admissible only if it is offered by a witness who has demonstrated his or her qualification to provide expert testimony on the specific technical subject at issue.¹⁶ An expert’s opinion is admissible “only if the factual basis for that opinion is adequately stated and explained in the affidavit.”¹⁷ “A witness may qualify as an expert by knowledge, skill, experience, training, or education to testify [i]f scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a

¹³ *Id.* (emphasis added) (citations omitted).

¹⁴ *See id.* at 309-10,

¹⁵ *Id.* at 311 (quoting *La. Energy Servs., L.P.* (Nat’l Enrichment Facility), CLI-05-28, 62 NRC 721, 727-28 (2005)).

¹⁶ *See Entergy Nuclear Vt. Yankee* (Vt. Yankee Nuclear Power Station), Licensing Board Order (Ruling on Motions to Strike and Motions in Limine) at 7-8 (July 16, 2008) (unpublished) (“Vermont Yankee Order”) (granting in part motion to exclude opinion testimony proffered by an individual outside of demonstrated expertise); 10 C.F.R. § 2.319(d); *see also Duke Power Co.* (William B. McGuire Nuclear Station, Units 1 & 2), ALAB-669, 15 NRC 453, 475 (1982) (upholding Licensing Board conclusion that witness lacked sufficient expertise to testify).

¹⁷ *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-05-4, 61 NRC 71, 81 (2005) (citing *Garside v. Osco Drug, Inc.*, 895 F.2d 46, 50 (1st Cir. 1990); *United States v. Various Slot Machs. on Guam*, 658 F.2d 697, 700 (9th Cir. 1981)). Thus, Licensing Boards may look to federal cases and the Federal Rules of Evidence as sources of authority for evaluating the admissibility of expert witness testimony. *See also* Final Rule, Changes to Adjudicatory Process, 69 Fed. Reg. 2182, 2187 (Jan. 14, 2004) (“Although the Commission has not required the application of the Federal Rules of Evidence in NRC adjudicatory proceedings, presiding officers and Licensing Boards have always looked to the Federal Rules for guidance in appropriate circumstances.”).

fact in issue.”¹⁸ Similarly, opinion testimony is only admissible if it is based on the “methods and procedures of science,” rather than on “subjective belief or unsupported speculation.”¹⁹

When the qualifications of an expert witness are challenged, the party sponsoring the witness has the burden of demonstrating that the witness is qualified.²⁰

III. ARGUMENT

Portions of Dr. Hopenfeld’s Report and Testimony should be excluded from the evidentiary record because they do not constitute admissible evidence, as discussed below.²¹

A. Four New Issues Raised for the First Time in Dr. Hopenfeld’s Report and Testimony Fall Outside the Scope of the Admitted Contention

On July 31, 2008, the Board admitted RK-TC-2, which contends that:

(1) Entergy’s AMP [Aging Management Program] for components affected by FAC is deficient because it does not provide sufficient details (e.g., inspection method and frequency, criteria for component repair or replacement) to demonstrate that the intended functions of the applicable components will be maintained during the extended period of operation; and (2) Entergy’s program relies on the results from CHECWORKS without benchmarking or a track record of performance at [Indian Point Energy Center’s] power uprate levels.²²

¹⁸ *Duke Energy Corp.* (Catawba Nuclear Station, Units 1 & 2), CLI-04-21, 60 NRC 21, 27-28 (2004) (alteration in original omitted) (internal quotation marks omitted).

¹⁹ *Savannah River*, LBP-05-4, 61 NRC at 98-99 (*quoting Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 589-90 (1993)) (disqualifying expert for certain purposes).

²⁰ *Catawba*, CLI-04-21, 60 NRC at 27; *Pac. Gas & Elec. Co.* (Diablo Canyon Nuclear Power Plant, Units 1 & 2), ALAB-410, 5 NRC 1398, 1405 (1977).

²¹ Those portions of Riverkeeper’s Position Statement that rely on inadmissible evidence or otherwise raise excluded issues may be stricken. *See* Oyster Creek Ruling on Motions in Limine at 2; Vermont Yankee Order at 2-3. Therefore, to the extent the Board grants this motion and excludes evidence, the associated discussions in the Position Statement should be excluded or accorded no weight in the Board’s decision on this contention. *But see Calvert Cliffs 3 Nuclear Project, LLC* (Combined License Application for Calvert Cliffs Unit 3), Licensing Board Order (Granting in Part and Denying in Part NRC Staff’s Motion in Limine) at 5 (Jan.17, 2012) (unpublished) (“Calvert Cliffs Order”) (“We need not rule on the admissibility of statements of position because they will not be admitted as evidence, but will only be considered by the Board in its merits ruling to the extent they are based on admitted evidence.”).

²² *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 & 3), LBP-08-13, 68 NRC 43, 177 (2008).

Riverkeeper alleged that because of these two deficiencies, Entergy's flow-accelerated corrosion ("FAC") program failed to comply with 10 C.F.R. § 54.21(a)(3), which requires a demonstration that the effects of aging will be adequately managed.²³ Entergy later moved for summary disposition of RK-TC-2.²⁴ In its Opposition to Summary Disposition, Counter-Statement of Material Facts,²⁵ and the 2010 Hopenfeld Declaration,²⁶ Riverkeeper raised a number of objections to Entergy's AMP for FAC. Riverkeeper's bases, as summarized by the Board, were that: (1) CHECWORKS must be "calibrated or benchmarked separately at each individual power plant and recalibrated when plant conditions change,"²⁷ (2) "CHECWORKS, as used at Indian Point, has not been properly benchmarked, and accordingly, that CHECWORKS predictions of wall thinning at Indian Point have been 'highly unreliable'"²⁸ and (3) that "Entergy does not employ any meaningful tools that, separate and apart from CHECWORKS, would sufficiently manage the aging effects of FAC at Indian Point."²⁹

²³ See *id.* at 173.

²⁴ See Licensing Board Memorandum and Order (Ruling on Entergy's Motion for Summary Disposition of Riverkeeper TC-2 (Flow-Accelerated Corrosion)) (Nov. 4, 2010) (unpublished) ("Ruling on Summary Disposition").

²⁵ Riverkeeper Opposition to Entergy's Motion for Summary Disposition of Riverkeeper Technical Contention 2 (Flow-Accelerated Corrosion) Attach. 1 (Aug. 16, 2010) ("Opposition"), *available at* ADAMS Accession No. ML102371214.

²⁶ Opposition Attach. 2.

²⁷ Ruling on Summary Disposition at 6 (*citing* 2010 Hopenfeld Decl. ¶ 9).

²⁸ *Id.* (*citing* 2010 Hopenfeld Decl. ¶¶ 11, 12).

²⁹ *Id.* at 7 (*quoting* 2010 Hopenfeld Decl. ¶ 24). Riverkeeper raised similar objections to Entergy's AMP in its filings associated with the original contention. See Riverkeeper Inc.'s Request for Hearing and Petition to Intervene in the License Renewal Proceeding for the Indian Point Nuclear Power Plant (Nov. 30, 2007) ("Petition"), *available at* ADAMS Accession No. ML073410093; Declaration of Dr. Joram Hopenfeld in Support of Riverkeeper's Contentions TC-1 and TC-2 (Nov. 30, 2007), *available at* ADAMS Accession No. ML073410093; Riverkeeper Inc.'s Reply to Entergy's and NRC Staff's Responses to Hearing Request and Petition to Intervene (Feb. 15, 2008), *available at* ADAMS Accession No. ML080560247.

The Board denied Entergy's motion for summary disposition.³⁰ In doing so, the Board emphasized that the 2010 Hopenfeld Declaration raised genuine disputes of material fact regarding the *two issues* identified in the original contention.³¹

It is well-settled that the scope of a contention is "limited to issues of law and fact pled with particularity in the intervention petition, including its stated bases, unless the contention is satisfactorily amended in accordance with our rules."³² Nevertheless, Riverkeeper for the first time raises the following four issues in Dr. Hopenfeld's Report and Testimony:

1. *Loss of Coolant Accidents ("LOCAs") and Probabilistic Risk Assessments ("PRAs")*: Dr. Hopenfeld claims for the first time that undetected FAC "poses a risk of loss of coolant accidents ('LOCA') in violation of NRC's General Design Criteria ('GDC') 4" and identifies associated alleged deficiencies in the IPEC probabilistic risk assessments ("PRAs").³³
2. *Seismic Issues*: Dr. Hopenfeld now claims that alleged "uncertainty related to pipe wall thickness at Indian Point will affect the integrity of components under transient loads . . . such as earthquakes."³⁴
3. *Station Blackout Issues*: Dr. Hopenfeld now claims that the "uncertainty" related to pipe wall thickness "will affect the integrity of components under transient loads" such as station blackouts ("SBOs").³⁵
4. *Metal Fatigue Issues*: Dr. Hopenfeld now claims that the "uncertainty" related to pipe wall thickness "will affect the likelihood of components succumbing to the effects of metal fatigue."³⁶

Riverkeeper raises these new issues for the first time in Dr. Hopenfeld's Report, Testimony, and in its Position Statement, in the final few pages of each document. As demonstrated below, each of these four new issues are outside the scope of the admitted

³⁰ See Ruling on Summary Disposition at 9.

³¹ See *id.* at 8.

³² *Vogtle*, CLI-10-05, 71 NRC at 100 (citation omitted).

³³ Exh. RIV000005, Report at 24.

³⁴ *Id.* at 25.

³⁵ *Id.*

³⁶ *Id.*

contention, because they cannot be reasonably inferred from the various CHECWORKS-related bases that Riverkeeper provided in support of its contention as admitted by the Board.³⁷ In the three years since this contention was admitted, Riverkeeper did not attempt to amend the original contention to incorporate these issues in accordance with Commission regulations. Accordingly, Riverkeeper should be precluded from raising these four new issues in Dr. Hopenfled’s Report and Testimony.

1. Loss of Coolant Accidents and Probabilistic Risk Assessments

For the first time, Dr. Hopenfled claims that there is a potential for “undetected FAC” to pose a “risk of loss of coolant accidents (‘LOCA’) in violation of NRC’s General Design Criteria (‘GDC’) 4, which requires plant structures, systems, and components be able to ‘accommodate the effects . . . of loss of coolant accidents.’”³⁸ He goes on to allege associated deficiencies in the IPEC PRAs, which—without any factual basis—he asserts were developed under the assumption that the “pipes were in pristine condition[.]”³⁹ Similar statements appear in Dr. Hopenfled’s Testimony,⁴⁰ and in Riverkeeper’s Position Statement.⁴¹

There are no references to LOCAs, GDC 4, or PRAs in Riverkeeper’s prior pleadings on this contention, nor can these topics be reasonably inferred to be in scope from the admitted CHECWORKS-related bases. These issues are entirely new. Entergy had no notice that Riverkeeper planned to litigate these issues, and therefore Riverkeeper cannot be permitted to

³⁷ See *Pilgrim*, CLI-10-11, 71 NRC at 308-11.

³⁸ Exh. RIV000005, Report at 24 (*quoting* 10 C.F.R. Part 50, Appx. A, General Design Criteria for Nuclear Power Plants, Criterion 4 (alteration in original)). The full text of the sentence in the regulation is: “Structures, systems, and components important to safety shall be designed to accommodate the effects of and to be compatible with the environmental conditions associated with normal operation, maintenance, testing, and postulated accidents, including loss-of-coolant accidents.”

³⁹ *Id.*; see also *id.* at 25.

⁴⁰ See Exh. RIV000003, Testimony at 19:13-20, 20:8-12.

⁴¹ Exh. RIV000002, Position Statement at 39-40.

raise them for the first time at this late date. Consistent with the Commission's decisions in *Vogtle* and *Pilgrim*, to maintain order in this proceeding and ensure that it remains focused and fair for all parties, the Board should strike this new claim as outside the scope of the admitted contention and, therefore, irrelevant.⁴² Accordingly, Riverkeeper's statements on LOCA and PRA issues identified in Attachment 1 should be excluded under 10 C.F.R. §§ 2.319(d) and 2.337(a).

2. Seismic Issues

The Board should also exclude the portions of Dr. Hopenfeld's Report and Testimony that address seismic issues because such topics are clearly outside the scope of the admitted contention. In addition, Dr. Hopenfeld impermissibly relies upon a document that is not attached as an exhibit in violation of the Board's Scheduling Order.⁴³ Specifically, Dr. Hopenfeld claims that:

Adequate protection is particularly important at Indian Point because recent risk assessments show that Indian Point is vulnerable to core melts from earthquake loads. In fact, while the area around Indian Point is susceptible to earthquakes of up to 7.0 magnitude, an NRC report from August 2010 (in conjunction with supplemental data regarding power plants not reviewed in the report) reveals that Indian Point Unit 3 has the highest risk of seismic related core damage than any other nuclear power plant in the country.⁴⁴

Based on this, he then asserts that the "uncertainty related to pipe wall thickness at Indian Point will affect the integrity of components under transient loads other than plant transients, such as

⁴² See *Vogtle*, CLI-10-05, 71 NRC at 100; *Pilgrim*, CLI-10-11, 71 NRC at 308-09.

⁴³ The Earth Institute Press Release cited on page 24 of the Report was not submitted as an exhibit, in violation of the Board's Scheduling Order. See Scheduling Order at 17-18. Dr. Hopenfeld's assertions that "the area around Indian Point is susceptible to earthquakes of up to 7.0 magnitude" is taken from the Earth Institute Press Release rather than Exhibit RIV000031, the other citation in footnote 68 in Dr. Hopenfeld's Report. See Exh. RIV000005, Report at 24. This statement, therefore, should be stricken as unreliable.

⁴⁴ Exh. RIV000005, Report at 24 (citation omitted).

earthquakes.”⁴⁵ Similar statements appear in Dr. Hopenfeld’s Testimony⁴⁶ and in Riverkeeper’s Position Statement.⁴⁷ As with Dr. Hopenfeld’s new claims regarding LOCA and PRA issues, these seismic assertions are entirely new—there is no reference to seismic issues or bases in Riverkeeper’s prior pleadings on this contention, nor can this topic be reasonably inferred to be in scope from the admitted CHECWORKS-related bases. Therefore, the Board should strike Dr. Hopenfeld and Riverkeeper’s statements on seismic issues as being outside the scope of the admitted contention and, therefore, irrelevant.⁴⁸

Accordingly, Riverkeeper’s statements on seismic issues identified in Attachment 1 should be excluded under 10 C.F.R. §§ 2.319(d) and 2.337(a).

3. Station Blackout Issues

The Board similarly should exclude the portions of Dr. Hopenfeld’s Report and Testimony that address SBO issues because such topics are outside the scope of the admitted contention and wholly unsupported.

Dr. Hopenfeld states that “[a]nother important class of accidents that depends on reliable knowledge of wall thickness of various components are station blackouts, SBOs.”⁴⁹ Dr. Hopenfeld alleges that Entergy has “failed to consider how the uncertainty related to pipe wall thickness at Indian Point will affect the integrity of components under transient loads other than

⁴⁵ *Id.* at 25.

⁴⁶ *See* Exh. RIV000003, Testimony at 19:22-26, 20:2-4.

⁴⁷ *See* Exh. RIV000002, Position Statement at 39-40.

⁴⁸ *See Vogtle*, CLI-10-05, 71 NRC at 100; *Pilgrim*, CLI-10-11, 71 NRC at 308-09.

⁴⁹ Exh. RIV000005, Report at 24-25.

plant transients, such as . . . station blackouts.”⁵⁰ Similar statements appear in Dr. Hopenfelf’s Testimony⁵¹ and in Riverkeeper’s Position Statement.⁵²

As with the other issues discussed above, SBO issues are entirely new—there is no reference to SBO issues in Riverkeeper’s prior pleadings on this contention, nor can this topic be reasonably inferred to be in scope from the admitted CHECWORKS-related bases. Therefore, the Board should strike Dr. Hopenfelf and Riverkeeper’s statements on SBO issues as outside the scope of the admitted contention and, therefore, irrelevant.⁵³

Dr. Hopenfelf also fails to offer any reason why the evaluation of an SBO “depends on reliable knowledge of wall thickness of various components.”⁵⁴ Given the lack of obvious connection between the two topics, his testimony on this subject should be stricken as speculative, unsupported, and unreliable.⁵⁵

Accordingly, Riverkeeper’s statements on SBO issues identified in Attachment 1 should be excluded under 10 C.F.R. §§ 2.319(d) and 2.337(a).

4. Metal Fatigue Issues

Finally, the Board should exclude the portions of Dr. Hopenfelf’s Report and Testimony that address metal fatigue issues because such topics are outside the scope of the admitted contention. Indeed, such issues are the subject of a different contention altogether.

Dr. Hopenfelf claims that “Entergy has not considered how the operation of Indian Point with such large uncertainties about pipe wall thicknesses will affect the likelihood of components

⁵⁰ *Id.* at 25.

⁵¹ *See* Exh. RIV000003, Testimony at 19:26-20:4.

⁵² *See* Exh. RIV000002, Position Statement at 40.

⁵³ *See Vogtle*, CLI-10-05, 71 NRC at 100; *Pilgrim*, CLI-10-11, 71 NRC 308-09.

⁵⁴ Exh. RIV000005, Report at 24-25.

⁵⁵ *See Savannah River*, LBP-05-4, 61 NRC at 81 (“Expert opinion is admissible only if . . . the factual basis for that opinion is adequately stated and explained in the affidavit.”).

succumbing to the effects of metal fatigue.”⁵⁶ Similar statements appear in Dr. Hopenfeld’s Testimony⁵⁷ and in Riverkeeper’s Position Statement.⁵⁸ As with the other issues discussed above, metal fatigue issues are entirely new—there is no reference to fatigue issues in Riverkeeper’s prior pleadings on this contention, nor can this topic be reasonably inferred to be in scope from the admitted CHECWORKS-related bases.

Accordingly, Riverkeeper’s statements on metal fatigue issues identified in Attachment 1 are outside the scope of the admitted contention and should be excluded as irrelevant under 10 C.F.R. §§ 2.319(d) and 2.337(a).

B. Three of the Four New Issues are Outside the Scope of this Proceeding

In addition to being outside the scope of admitted contention RK-TC-2, three of the four new issues should also be excluded as irrelevant under 10 C.F.R. §§ 2.319(d) and 2.337(a) because they are outside the scope of this proceeding.⁵⁹

The first new issue (LOCA and PRA) addresses the plant’s design basis and existing PRA, topics that relate to the current licensing basis (“CLB”) and ongoing current-term regulation of the plants rather than the license renewal application, and are therefore outside the scope of this proceeding, and should be stricken.⁶⁰

⁵⁶ Exh. RIV000005, Report at 25.

⁵⁷ See Exh. RIV000003, Testimony at 20:4-6.

⁵⁸ See Exh. RIV000002, Position Statement at 40.

⁵⁹ The fourth issue (metal fatigue) is the subject of an entirely different Riverkeeper contention, NYS-26B/RK-TC-1B (Metal Fatigue of Reactor Components). See Licensing Board Memorandum and Order (Ruling on Motion for Summary Disposition of NYS-26/26A/Riverkeeper TC-1/1A (Metal Fatigue of Reactor Components and Motion for Leave to File New Contention NYS-26B/Riverkeeper TC-1B) (Nov. 4, 2010) (unpublished).

⁶⁰ See, e.g., SECY-11-0151, Annual Update of the Risk-Informed and Performance-Based Plan (Oct. 27, 2011) (updating the Commission on the Staff’s risk-informed and performance based regulatory activities without reference to license renewal and with a sole focus for operating reactors on current term issues such as the Reactor Oversight Process, fire protection, and Fukushima-related issues), available at ADAMS Accession No. ML112620701 (Attachment 2 to this Motion); see also *Pac. Gas & Elec. Co.* (Diablo Canyon Nuclear

The second new issue (seismic design bases for the IPEC units) is also a part of the CLB of the plants, and is, therefore, outside the scope of this proceeding and should be stricken.⁶¹

The third issue (SBO) also relates to the CLB and is about to become the subject of an NRC rulemaking.⁶² Thus, SBO issues are outside the scope of this proceeding and should be stricken.⁶³

C. Dr. Hopenfeld Lacks Expertise to Provide Testimony on the Four New Issues

Dr. Hopenfeld makes no claim and fails to demonstrate that he has the requisite knowledge, skill, experience, training, or education to provide expert testimony on the four new matters raised in his testimony. As a result, his testimony on these topics should be stricken as unreliable under 10 C.F.R. §§ 2.319(d) and 2.337(a).

His *curriculum vitae* is silent on the highly specialized fields of PRA (first new issue), seismic design or seismic hazard analysis (second new issue) and SBO issues (third new issue).⁶⁴ The Hopenfeld CV and Testimony provide no evidence that he has any particular experience or specialized knowledge in these matters. Riverkeeper makes no mention of these new issues in its

Power Plant, Units 1 & 2), CLI-11-11, 73 NRC ___, slip op. at 11 (Oct. 12, 2011) (reversing the admission of a contention because “current operational issues” are excluded from a license renewal proceeding).

⁶¹ See *Indian Point*, LBP-08-13, 68 NRC at 122-24; see also *Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 & 4), CLI-01-17, 54 NRC 3, 9 (2001) (“It [the current licensing basis] also includes the plant-specific design basis information documented in the plant’s most recent Final Safety Analysis Report. . . .”); *Oyster Creek Ruling on Motions in Limine* at 5-6 (striking challenges to the adequacy of ASME Code-based minimum thickness acceptance criteria as an impermissible challenge to the CLB); see also *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), LBP-07-17, 66 NRC 327, 342 & n.19 (2007) (holding same acceptance criteria to be part of CLB), *aff’d* CLI-09-7, 69 NRC 235, 270-71 (2009); 10 C.F.R. § 54.3(a).

⁶² See SRM-SECY-11-0124, Memorandum from R. Borchardt, Exec. Dir. for Operations, NRC, to A. Vietti-Cook, Sec’y of the Comm’n, Recommended Actions To Be Taken Without Delay from the Near-Term Task Force Report” at 2 (Oct. 18, 2011) (“SRM-SECY-11-0124”), available at ADAMS Accession No. ML112911571 (directing staff to “initiate the rulemaking as an advance notice of proposed rulemaking”) (Attachment 3 to this Motion).

⁶³ See *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 & 3), CLI-10-19, 72 NRC 98, 100 (2010) (holding that contentions on subjects that are (or are about to become) the subject of general rulemaking are inadmissible).

⁶⁴ See Exh. RIV000004, Curriculum Vitae of Joram Hopenfeld (“Hopenfeld CV”).

statement describing Dr. Hopenfeld's qualifications to provide expert testimony.⁶⁵ Accordingly, Riverkeeper has not carried its burden of showing that its expert has the requisite knowledge, skill, experience, training or education to provide an expert opinion on these matters.

On the fourth new issue, metal fatigue, Dr. Hopenfeld has conceded that he lacks expertise in the analytical process at the very heart of the metal fatigue issue, stress analysis.⁶⁶ As a result, Dr. Hopenfeld is not qualified to provide expert testimony on metal fatigue in the NYS-26B/RK-TC-2 contention. Therefore, Dr. Hopenfeld's testimony on this topic in this contention should also be stricken for lack of expertise.

⁶⁵ See Exh. RIV000002, Position Statement at 7-8 ("Dr. Hopenfeld is an expert in the field relating to nuclear power plant aging management. Dr. Hopenfeld is a mechanical engineer, holds a doctorate in mechanical engineering, and has 45 years of professional experience in the fields of thermal-hydraulics, material/environmental interaction instrumentation, design, project management, and nuclear safety regulation").

⁶⁶ See Entergy's Motion in Limine to Exclude Portions of Intervenor's Pre-Filed Direct Testimony, Expert Report, Exhibits, and Statement of Position for Contention NYS-26B/RK-TC-2 (Metal Fatigue) (January 30, 2012).

IV. CONCLUSION

For the foregoing reasons, the Board should exclude the portions of Riverkeeper's pre-field direct Testimony, Expert Report, Exhibits, and Position Statement, as identified in Attachment 1. Likewise, the exhibits supporting these portions of Dr. Hopenfeld's Report (Exhs. RIV000031, RIV000032, and RIV000033) also should be stricken.⁶⁷

Respectfully submitted,

Signed (electronically) by Paul M. Bessette

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Counsel for Entergy Nuclear Operations, Inc.

Dated in Washington, D.C.
this 30th day of January 2012

⁶⁷ Exh. RIV000031, Lynn R. Sykes, John G. Armbruster, Won-Young Kim & Leonardo Seeber, *Observations and Tectonic Setting of Historic and Instrumentally Located Earthquakes in the Greater New York City–Philadelphia Area*, 98 Bull. of the Seismological Soc'y of Am. 1696 (2008); Exh. RIV000032, Generic Issue 199 (GI-199), Implications of Updated Probabilistic Seismic Hazard Estimates in Central and Eastern United States on Existing Plants Safety/Risk Assessment, August 2010, at Appendix D (Seismic Sore-Damage Frequencies) ("GI-199"); Exh. RIV000033, Bill Dedman, *What are the odds? US nuke plants ranked by quake risk*, March 17, 2011 ("Dedman Article").

**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))	
)	January 30, 2012

MOTION CERTIFICATION

Pursuant to 10 C.F.R. § 2.323(b), counsel for Entergy certifies that he made a sincere effort to contact the other parties in this proceeding, to explain to them the factual and legal issues raised in this Motion, and to resolve those issues, and he certifies that his efforts have been unsuccessful. The NRC Staff does not oppose Entergy's Motion and anticipates filing an answer.

Signed (electronically) by Paul M. Bessette

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Counsel for Entergy Nuclear Operations, Inc.

TABLE OF ENTERGY MOTION IN LIMINE FOR RK-TC-2 ATTACHMENTS

Attachment	No.
Exclusion Chart.....	1
SECY-11-0151, Annual Update of the Risk-Informed and Performance-Based Plan (Oct. 27, 2011).....	2
SRM-SECY-11-0124, Memorandum from R. Borchardt, Exec. Dir. for Operations, NRC, to A. Vietti-Cook, Sec'y of the Comm'n, Recommended Actions To Be Taken Without Delay from the Near-Term Task Force Report" (Oct. 18, 2011).....	3

ENTERGY'S MOTION IN LIMINE FOR RK-TC-2
ATTACHMENT 1

Exclusion Chart

Entergy Attachment 1 to Entergy's Motion in Limine to Exclude Portions of Pre-Filed Direct Testimony, Expert Report, Exhibits, and Statement of Position for Contention Riverkeeper TC-2 (Flow-Accelerated Corrosion)

Location of Information to Be Stricken	Basis for Exclusion
<i>RIV000003: Hopenfeld Testimony</i>	
<p>Page 19, L13 through L20, strike “In addition, undetected FAC during the extended operating terms at Indian Point also poses a risk of loss of coolant accidents (‘LOCA’) in violation of NRC’s General Design Criterion (‘GDC’) 4, which requires plant structures, systems and components be able to handle such accidents, including equipment failures due to circumstances outside the plant. Notably, when the original Indian Point probabilistic risk assessments (‘PRAs’) were developed, the effects of aging were not included, and it was assumed that pipes were in pristine conditions. In actuality, the probability of a pipe failing under a given load will be reduced [sic] when the walls have been degraded.” (omitted citations should also be stricken)</p>	<p>This portion of the Testimony addresses LOCA/PRA issues.</p>
<p>Page 19, L22 through L26, strike “Adequate protection is particularly important at Indian Point because recent risk assessments show that Indian Point is vulnerable to core melts from earthquake loads. In fact, while the area around Indian Point is susceptible to earthquakes of up to 7.0 magnitude, an NRC report from August 2010 reveals that Indian Point Unit 3 has the highest risk of seismic related core damage than any other nuclear power plant in the country.”</p>	<p>This portion of the Testimony addresses seismic issues.</p>
<p>Page 19, L26 through L29, strike “Another important class of accidents that depends on reliable knowledge of wall thickness of various components are station blackouts, SBOs. The fact that Entergy has not demonstrated that it has any reliable method of predicting component wall thinning casts a doubt about Entergy’s risk predictions from such accidents.”</p>	<p>This portion of the Testimony addresses station blackout issues.</p>
<p>Page 20, L4 through L6, strike “In addition, Entergy has not considered how the operation of Indian Point with such large uncertainties about pipe wall thicknesses will affect the likelihood of components succumbing to the effects of metal fatigue.”</p>	<p>This portion of the Testimony addresses metal fatigue issues.</p>

Location of Information to Be Stricken	Basis for Exclusion
<p>Page 20, L8 through L12, strike “Pipes at Indian Point have already been reduced in strength due to almost 40 years of operation. Entering an extended period of operation with no valid tool to predict wall thinning limits Entergy’s ability to determine the degree of pipe degradation and reduction in strength. Entergy has failed to show that despite such uncertainty, Indian Point would continue to operate in compliance with GDC 4, and without a severe accident occurring.”</p>	<p>This portion of the Testimony addresses LOCA/PRA issues.</p>
<p><i>RIV000005: Hopenfeld Report⁶⁸</i></p>	
<p>Page 24, strike “In addition, undetected FAC during the extended operating terms at Indian Point also poses a risk of loss of coolant accidents (‘LOCA’) in violation of NRC’s General Design Criterion (‘GDC’) 4, which requires plant structures, systems and components be able to ‘accommodate the effects of ... loss of coolant accidents’ and ‘be appropriately protected against dynamic effects ... that may result from equipment failures and from events and conditions outside the nuclear power unit.’ Notably, when the original Indian Point probabilistic risk assessments (‘PRAs’) were developed, the effects of aging were not included, and it was assumed that pipes were in pristine conditions. In actuality, the probability of a pipe failing under a given load will be reduced [sic] when the walls have been degraded.” (omitted citations should also be stricken)</p>	<p>This portion of the Report addresses LOCA/PRA issues.</p>
<p>Page 24, strike “Adequate protection is particularly important at Indian Point because recent risk assessments show that Indian Point is vulnerable to core melts from earthquake loads. In fact, while the area around Indian Point is susceptible to earthquakes of up to 7.0 magnitude, an NRC report from August 2010 (in conjunction with supplemental data regarding power plants not reviewed in the report) reveals that Indian Point Unit 3 has the highest risk of seismic related core damage than any other nuclear power plant</p>	<p>This portion of the Report addresses seismic issues.</p>

⁶⁸ Riverkeeper filed a non-public (proprietary) and public (redacted) version of Dr. Hopenfeld’s Report (Exh. RIV000005). All references in this table are to the non-public (proprietary) version. The corresponding statements and passages should also be stricken from the public version of this document.

Location of Information to Be Stricken	Basis for Exclusion
in the country.” (omitted citations should also be stricken)	
Page 24, note 68, strike “The Earth Institute, Columbia University, “Earthquakes May Endanger New York More than Thought, Says Study: Indian Point Nuclear Power Plant Seen as Particular Risk,” Press Release Posted on The Earth Institute website, August 21, 2008, <i>available at</i> , http://www.earth.columbia.edu/articles/view/2235 (last visited March 24, 20 11).	This document was not placed into evidence.
Pages 24-25, strike “Another important class of accidents that depends on reliable knowledge of wall thickness of various components are station blackouts, SBOs. The fact that Entergy has not demonstrated that it has any reliable method of predicting component wall thinning casts a doubt about Entergy’s risk predictions relating to such accidents. Entergy should, but has failed to consider how the uncertainty related to pipe wall thickness at Indian Point will affect the integrity of components under transient loads other than plant transients, such as . . . station blackouts.”	This portion of the Report addresses station blackout issues.
Page 25, strike “In addition, Entergy has not considered how the operation of Indian Point with such large uncertainties about pipe wall thicknesses will affect the likelihood of components succumbing to the effects of metal fatigue.”	This portion of the Report addresses metal fatigue issues.
Page 25, strike “Pipes at Indian Point have already been reduced in strength due to almost 40 years of operation. Entering an extended period of operation with no valid tool to predict wall thinning limits Entergy’s ability to determine the degree of pipe degradation and reduction in strength. Entergy has failed to show that despite such uncertainty, Indian Point would continue to operate in compliance with GDC 4, and without a severe accident occurring.”	This portion of the Report addresses LOCA/PRA issues.
<i>RIV000002: Statement of Position</i>	
Page 39, strike “In addition, Dr. Hopenfeld explains that undetected FAC during the proposed PEO also poses a risk of loss of coolant accidents (‘LOCA’), which violates NRC’s General Design	This portion of the Position Statement addresses LOCA/PRA issues.

Location of Information to Be Stricken	Basis for Exclusion
<p>Criterion (‘GDC’) 4. This criterion requires plant structures, systems and components be able to ‘accommodate the effects of . . . loss of coolant accidents’ and ‘be appropriately protected against dynamic effects . . . that may result from equipment failures and from events and conditions outside the nuclear power unit.’ Dr. Hopenfeld explains that when the original Indian Point probabilistic risk assessments (‘PRAs’) were developed, it was assumed that pipes were in pristine conditions, as the effects of aging were not included. However, when the walls have been degraded, the probability of a pipe failing under a given load will be affected.” (omitted citations should also be stricken)</p>	
<p>Pages 39-40, strike: “Adequate consideration to these safety implications of undetected FAC is especially important at Indian Point because recent risk assessments show that Indian Point is vulnerable to core melts from earthquake loads. In fact, while the area around Indian Point is susceptible an earthquake of up to 7.0 magnitude. An NRC report from August 2010 (in conjunction with supplemental data regarding power plants not reviewed in the report) indicates that Indian Point Unit 3 has the highest risk of seismic related core damage than any other nuclear power plant in the country, and that Unit.” (omitted citations should also be stricken)</p>	<p>This portion of the Position Statement addresses seismic issues.</p>
<p>Page 39, note 197, strike “The Earth Institute, Columbia University, “Earthquakes May Endanger New York More than Thought, Says Study: Indian Point Nuclear Power Plant Seen as Particular Risk,” Press Release Posted on The Earth Institute website, August 21, 2008, available at, http://www.earth.columbia.edu/articles/view/2235 (last visited December 21, 2011) (hereinafter “Columbia Earth Institute Earthquake Study Press Release”).”</p>	<p>This document was not placed into evidence.</p>
<p>Page 40, strike “Additionally, Dr. Hopenfeld explains that another type of accident for which an understanding of component wall thickness is critical, is station blackouts. In Dr. Hopenfeld’s opinion, Entergy should, but has failed to</p>	<p>This portion of the Position Statement addresses station blackout issues.</p>

Location of Information to Be Stricken	Basis for Exclusion
consider how the uncertainty related to pipe wall thickness at Indian Point will affect the integrity of components under transient loads other than plant transients, such as . . . and station blackouts.” (omitted citations should also be stricken)	
Page 40, strike “Additionally, Dr. Hopenfeld observes that Entergy has not considered how the operation of Indian Point with such large uncertainties about pipe wall thicknesses will affect the likelihood of components succumbing to the effects of metal fatigue.” (omitted citations should also be stricken)	This portion of the Position Statement addresses metal fatigue issues.
Page 40, strike “Dr. Hopenfeld concludes that, as pipes at Indian Point have already been reduced in strength due to almost 40 years of operation, entering an extended period of operation with no valid tool to predict wall thinning severely limits Entergy’s ability to determine the degree of pipe degradation and reduction in strength. There is no evidence to support a conclusion that despite such uncertainty, Indian Point would continue to operate in compliance with GDC 4, and without a severe accident occurring.”	This portion of the Position statement addresses LOCA issues.
<i>Exhibits to Exclude</i>	
Strike Exhibit RIV000031 (Lynn R. Sykes, John G. Armbruster, Won-Young Kim, & Leonardo Seeber, Observations and Tectonic Setting of Historic and Instrumentally Located Earthquakes in the Greater New York City–Philadelphia Area, Bulletin of the Seismological Society of America, Vol. 98, No. 4, pp. 1696-1719, August 2008).	This exhibit is only relied upon in inadmissible portions of the Report and Position Statement.
Strike Exhibit RIV000032 (Generic Issue 199 (GI-199), Implications of Updated Probabilistic Seismic Hazard Estimates in Central and Eastern United States on Existing Plants Safety/Risk Assessment, August 2010 (Seismic Sore-Damage Frequencies)).	This exhibit is only relied upon in inadmissible portions of the Report and Position Statement.
Strike Exhibit RIV000033 (Bill Dedman, <i>What are the odds?</i> US nuke plants ranked by quake risk, March 17, 2011).	This exhibit is only relied upon in inadmissible portions of the Report and Position Statement.

**ENTERGY'S MOTION IN LIMINE FOR RK-TC-2
ATTACHMENT 2**

SECY-11-0151

POLICY ISSUE **(INFORMATION)**

October 27, 2011

SECY-11-0151

FOR: The Commissioners

FROM: Brian W. Sheron, Director
Office of Nuclear Regulatory Research

SUBJECT: ANNUAL UPDATE OF THE RISK-INFORMED AND PERFORMANCE-BASED PLAN

PURPOSE:

This paper provides the Commission with an annual update on activities contained in the Risk-Informed and Performance-Based Plan (RPP), including a summary of the recent accomplishments and near-term anticipated accomplishments. This paper does not address any new commitments or associated resource implications.

SUMMARY:

The breadth and depth of programs across the agency demonstrate the staff's commitment to the Commission's goal for a risk-informed and performance-based regulatory structure. Since the Commission promulgated the Probabilistic Risk Assessment (PRA) Policy Statement (60 FR 42622) in 1995, the staff has continued to expand the application of risk-informed methods within regulatory programs. Many NRC risk-informed programs, such as the Reactor Oversight Process, are mature elements in the regulatory structure and are not discussed in this paper. These mature programs continuously improve as the PRA state-of-practice continues to advance. Other risk-informed and performance-based initiatives, such as most of those discussed in this paper, are in a developmental stage and are being integrated into the agency's regulatory process. The staff continues to engage stakeholders as appropriate to seek feedback and insights to improve the agency's regulatory programs.

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BACKGROUND:

On June 1, 2006, the Commission issued a staff requirements memorandum (SRM) (Agencywide Documents Access and Management System [ADAMS] under Accession No. ML061520304) that directed the U.S. Nuclear Regulatory Commission (NRC) staff to improve upon the Risk-Informed Regulation Implementation Plan (RIRIP) by developing an integrated master plan for activities designed to help NRC achieve its goal of a holistic, risk-informed, and performance-based regulatory structure. The Commission also directed the staff to seek ways to communicate more transparently to the public and stakeholders on the purpose and use of PRA in the agency's reactor, materials, and waste regulatory programs. SECY-07-0074, "Update on the Improvements to the Risk-Informed Regulation Implementation Plan," dated April 26, 2007 (ADAMS Accession No. ML070890396), conveyed that plan, which the staff retitled as the "Risk-Informed and Performance-Based Plan."

To help meet the Commission's expectations for both a risk-informed and a performance-based regulatory structure, Enclosure 1 to SECY-07-0074 included explicit criteria for the staff's review and consideration of performance-based approaches to help determine which initiatives should be both risk-informed and performance based. SECY-07-0191, "Implementation and Update of the Risk-Informed and Performance-Based Plan," dated October 31, 2007 (ADAMS Accession No. ML072700587), discusses the staff's progress in implementing the RPP and includes an updated set of objectives, bases, and goals for the reactor, materials, and waste regulatory arenas. In November 2007, the staff completed its commitment to make all aspects of the RPP available to the general public via the agency's public website. The most recent version of the plan was provided as SECY-10-0143, "Annual Update of the Risk-Informed and Performance-Based Plan," dated October 28, 2010 (ADAMS Accession No. ML102790619).

DISCUSSION:

This SECY paper contains information on some of the ongoing risk-informed and performance-based activities. The enclosure contains additional information on risk-informed and performance-based activities; detailed information appears on the NRC's public website at <http://www.nrc.gov/about-nrc/regulatory/risk-informed/rpp.html>. The website provides a readily accessible overview and current status of the agency's risk-informed and performance-based regulatory activities.

Recently, the Commission has issued guidance in a number of areas that will expand and improve the way in which risk insights are used in the regulatory process. As the staff continues to make progress on these initiatives, the website will be updated.

- Fire Protection for Nuclear Power Plants. In 2004, the Commission approved a voluntary risk-informed and performance-based fire protection rule for existing nuclear power plants. The Commission issued SRM-SECY-11-0033, "Proposed NRC Staff Approach to Address Resource Challenges Associated with Review of a Large Number of NFPA 805 License Amendment Requests," dated April 20, 2011 and SRM-SECY-11-0061, "A Request to Revise the Interim Enforcement Policy for Fire Protection Issues on 10 CFR 50.48(c) to Allow Licensees to Submit License Amendment Requests in a Staggered Approach," dated April 29, 2011 to manage the implementation of this program. The first license amendment request has been accepted for review by the staff.

- Risk-Informed Regulatory Guidance for New Reactors. In SRM-SECY-10-0121, "Modifying the Risk-Informed Regulatory Guidance for New Reactors," dated March 2, 2011, the Commission directed staff to engage external stakeholders in a series of tabletop exercises to test various realistic performance deficiencies, events, modifications, and licensing bases changes against current NRC policy, regulations, guidance and all other requirements that are or will be relevant to the licensing bases of new reactors. The staff has conducted these exercises and briefed the ACRS on its progress on September 20, 2011. The SRM also directed staff to submit a notation vote paper with options and recommendation to the Commission by June 4, 2012.
- Revised Fuel Cycle Oversight Process. Based on Commission guidance received in SRM-M100429 and SRM-SECY-10-0031, "Revising the Fuel Cycle Oversight Process," dated August 4, 2010, the staff developed and discussed with the ACRS a paper comparing integrated safety analyses (ISA) and probabilistic risk assessments (PRA). Additionally, the Commission directed the staff to continue to work on specific elements of the oversight program. In response, the staff submitted SECY-11-0140, "Enhancements to the Fuel Cycle Oversight Process," dated October 7, 2011 to provide the Commission with recommendations for next steps to enhance the fuel cycle oversight process.
- Part 61: Site-Specific Analyses-Rulemaking. In SRM-SECY-08-0147, "Response to Commission Order CLI-05-20 Regarding Depleted Uranium," dated March 18, 2009, the Commission directed the staff to pursue a limited rulemaking to specify a requirement for a site-specific analysis and associated technical requirements for unique waste streams including, but not limited to, the disposal of significant quantities of depleted uranium. Furthermore, SRM-SECY-10-0043, "Blending of Low-Level Radioactive Waste," dated October 13, 2010, approved the staff's recommendation to include blended waste in the limited scope rulemaking for depleted uranium. The staff has published draft proposed rule text, held a public meeting and briefed ACRS. The staff will consider comments from the ACRS and the public as it finalizes the proposed rule before submitting it to the Commission.
- Waste Confidence Rule and Extended Storage and Transportation (EST). SRM-COMSECY-10-0007, "Project Plan for Regulatory Program Review to Support Extended Storage and Transportation of Spent Nuclear Fuel," dated December 6, 2010, directs staff to continue efforts to support extended storage and transportation of spent nuclear fuel including research activities and the gap assessments identified in Phase 1 of the project. Furthermore, staff is directed to integrate work with the plan being developed in response to SRM-SECY-09-0090, "Final Update of the Commission's Waste Confidence Decision," dated June 15, 2009. SECY-11-0029, "Plan for the Long-Term Update to the Waste Confidence Rule and Integration with the Extended Storage and Transportation Initiative," dated February 28, 2011, provides the plan to develop a long-term waste confidence rule and describes the integration of Waste Confidence and EST project plan activities. Limited scope risk assessments will be performed to identify methodological or information gaps, including a survey of relevant risk information.
- Future Level 3 PRA Activities. In SRM-M100218, the Commission directed staff to provide various options for proceeding with the level 3 PRA related activities including costs and perspectives on future uses for level 3 PRAs. SECY-11-0089, "Options for Proceeding with

Future Level 3 Probabilistic Risk Assessment Activities,” dated July 7, 2011, provides the Commission with three primary options for proceeding. The Commission, in SRM-SECY-11-0089 has directed staff to perform a Level 3 PRA on a 4 year schedule. The staff is developing a detailed plan for the project and has initiated interactions with stakeholders for site selection. Technical work is expected to begin in fiscal year 2012.

- Clarify Defense in Depth to Ensure Consistent Interpretation. As directed in SRM-SECY-11-0014, “Use of Containment Accident Pressure in Analyzing Emergency Core Cooling System and Containment Heat Removal System Pump Performance in Postulated Accidents,” dated March 15, 2011, staff is updating Regulatory Guide 1.174 to clarify language describing defense in depth. Following staff alignment on the language for RG 1.174, other regulatory guidance that refers to defense in depth, will be updated, as appropriate.
- Use of Risk Insights to Enhance the Safety Focus of Small Modular Reactor (SMR) Reviews. In response to SRM-COMGEA-10-0001/COMGBJ-10-0004, “Use of Risk Insights to Enhance Safety Focus of Small Modular Reactor Reviews,” dated August 31, 2010, the staff developed a plan, described in SECY-11-0024, “Use of Risk Insights to Enhance the Safety Focus of Small Modular Reactor Reviews,” dated February 18, 2011, for a framework and design specific review plans for the integral pressurized water reactor (iPWR) class of SMRs. Furthermore, the plan includes activities for the development of a new risk-informed and performance-based regulatory structure for the licensing of advanced reactor designs. This plan was approved by the Commission in an SRM for SECY-11-0024 that further directs the staff to provide the Commission with a paper that explores the feasibility of including risk information in categorizing structures, systems and components (SSCs) as safety-related and non safety-related for the design-specific SMR review plans in both the short and long terms.
- Task Force for a More Holistic Risk-Informed and Performance-Based Regulatory Approach. At the request of Chairman Jaczko, Commissioner Apostolakis is leading a task force to develop a strategic vision and range of options that the NRC could pursue to achieve a more comprehensive and holistic, risk-informed and performance-based approach for the regulation of reactors, materials, waste, fuel cycle, security, and transportation. The charter for the task force is available in ADAMS under Accession No. ML110680621. The task force will provide options and recommendations in a report to the Chairman by spring 2012.
- Fukushima Response. A Near Term Task Force (NTTF) was established to complete the near-term review required by the Chairman’s March 23, 2011 tasking memorandum (COMGBJ-11-0002, “NRC Actions Following the Events in Japan”). In SECY-11-0093, “Near-Term Report and Recommendations for Agency Actions Following the Events in Japan,” dated July 12, 2011, the NTTF provided its recommendations to the Commission. The first recommendation from the NTTF states the following:

The task force recommends establishing a logical, systematic, and coherent regulatory framework for adequate protection that appropriately balances defense-in-depth and risk considerations.

In the SRM for SECY-11-0093, dated August 19, 2011, the Commission directed the staff, by September 9, 2011, to “identify and make recommendations regarding any NTTF recommendations that can, and in the staff’s judgment, should be implemented, in part or in whole, without unnecessary delay.” SECY-11-0124, “Recommended Actions to be taken Without Delay From the Near-Term Task Force Report,” dated September 9, 2011 provides these recommendations. The Commission provided further direction in SRM-SECY-11-0124, dated October 18, 2011.

The staff notes that the last four activities noted above have some common aspects that will require close coordination and collaboration to ensure a holistic, risk-informed and performance based regulatory structure.

The above activities represent a significant demand for risk analysts and other specialists in engineering disciplines (e.g. fire, seismic) that provide the necessary foundation for risk modeling. To support these and other important risk-informed initiatives, the staff continues to assess and adjust priorities in the budget execution process. In addition, the applicable offices are working together to develop coordinated strategies to train staff in PRA and related disciplines, including through the Graduate Fellowship Program, to recruit new hires with PRA interest or expertise, and to leverage industry capability where appropriate. The staff will continue to keep the Commission informed of progress and if any policy issues arise.

In addition to the new Commission-directed initiatives noted above, one new staff initiative has been added to the website:

- Risk Informing Emergency Preparedness Oversight: Performance Based Offsite Response Organization Evaluation. In coordination with the Federal Emergency Management Agency (FEMA), the staff intends to initiate a study of performance based evaluation techniques that could be used for offsite response organization emergency response programs. This effort will also identify how radiological emergency response program elements could be integrated with nation-wide FEMA preparedness initiatives.

The enclosure provides an update for the following ongoing regulatory activities:

1. Fire Protection for Nuclear Power Plants
2. Risk-Informed Technical Specifications
3. Develop an Alternative Risk-Informed Approach to Special Treatment Requirements
4. NRC Risk Network
5. Risk-Informed Rulemaking and Related Activities Currently in Progress
6. Infrastructure for Risk-Informed and Performance-Based Environment for New Light Water Reactors
7. Human Reliability Analysis
8. Human Reliability Analysis Development for Fire PRA
9. Analytical Tools for Risk Applications
10. SPAR Model Development Program
11. Risk-Related Generic Issues
12. Use of Risk Insights to Enhance Safety Focus of Small Modular Reactor Reviews
13. Revised Fuel Cycle Oversight Process
14. Part 61: Site-Specific Analyses Rulemaking
15. Waste Confidence Rule and Extended Storage and Transportation of Spent Nuclear Fuel

- 16. Regulatory Basis to Support Rulemaking for Potential Reprocessing Facilities
- 17. Risk-Informed Security
- 18. Risk-Informed Emergency Action Levels

These initiatives demonstrate continued NRC commitment to use risk-informed and performance-based approaches throughout its regulatory structure. The staff will continue to keep the Commission informed of progress in these initiatives through the RPP and other reporting mechanisms.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objection.

/RA/

Brian W. Sheron, Director
Office of Nuclear Regulatory Research

Enclosure:
Recent Accomplishments and Near-Term
Anticipated Accomplishments-2011

19. Regulatory Basis to Support Rulemaking for Potential Reprocessing Facilities

20. Risk-Informed Security

21. Risk-Informed Emergency Action Levels

These initiatives demonstrate continued NRC commitment to use risk-informed and performance-based approaches throughout its regulatory structure. The staff will continue to keep the Commission informed of progress in these initiatives through the RPP and other reporting mechanisms.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objection.

/RA/

Brian W. Sheron, Director
Office of Nuclear Regulatory Research

Enclosure:

Recent Accomplishments and Near-Term
Anticipated Accomplishments-2011

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**ENTERGY'S MOTION IN LIMINE FOR RK-TC-2
ATTACHMENT 3**

SRM-SECY-11-0124

October 18, 2011

MEMORANDUM TO: R. W. Borchardt
Executive Director for Operations

FROM: Annette L. Vietti-Cook, Secretary */RA/*

SUBJECT: STAFF REQUIREMENTS – SECY-11-0124 – RECOMMENDED
ACTIONS TO BE TAKEN WITHOUT DELAY FROM THE NEAR-
TERM TASK FORCE REPORT

The Commission has approved the staff's proposed actions to implement without delay the Near-Term Task Force recommendations as described in SECY-11-0124, subject to the comments below.

The NRC should strive to complete and implement the lessons learned from the Fukushima accident within five years - by 2016.

The process for implementing new or modified regulatory requirements or programs should be transparent and the regulatory mechanism (e.g., order, rulemaking, 10 CFR 50.54(f) letter, generic letter, etc.) used to impose them should be as clear and specific as possible when issued.

As the staff evaluates Fukushima lessons-learned and proposes modifications to NRC's regulatory framework, the Commission encourages the staff to craft recommendations that continue to realize the strengths of a performance-based system as a guiding principle. In order to be effective, approaches should be flexible and able to accommodate a diverse range of circumstances and conditions. In consideration of events beyond the design basis, a regulatory approach founded on performance-based requirements will foster development of the most effective and efficient, site-specific mitigation strategies, similar to how the agency approached the approval of licensee response strategies for the "loss of large area" event under its B.5.b program.

Where gaps in knowledge in the analyses of the reactor accidents at Fukushima Dai-ichi interfere with the staff's ability to make an informed recommendation on regulatory action, the staff should inform the Commission of these gaps.

For Recommendation 2.1, when the staff issues the requests for information to licensees pursuant to 10 CFR 50.54(f) to identify actions that have been taken or are planned to address

plant-specific vulnerabilities associated with the reevaluation of seismic and flooding hazards, the staff should explain the meaning of "vulnerability."

The staff should inform the Commission, either through an Information Paper or a briefing of the Commissioners' Assistants, when it has developed the technical bases and acceptance criteria for implementing Recommendations 2.1, 2.3, and 9.3.

For NTTF recommendations 4.2 and 5.1 the staff should provide the Commission with notation vote papers for Commission approval of the orders once the staff has engaged stakeholders and established the requisite technical bases and acceptance criteria. For cases in which backfits cannot be justified using existing requirements, yet the staff believes that regulatory enhancements should be made, the staff should clearly explain the legal and policy bases for proceeding.

For Recommendation 4.1 -- "Station blackout regulatory actions," the staff should initiate the rulemaking as an advance notice of proposed rulemaking (ANPR) rather than a proposed rule.

The staff should designate the station blackout (SBO) rulemaking associated with NTTF recommendation 4.1 as a high-priority rulemaking with a goal of completion within 24 to 30 months of the date of the Staff Requirements Memorandum for this SECY paper.

The staff should monitor nuclear industry efforts underway to strengthen SBO coping times and consider whether any interim regulatory controls (e.g., commitment letters or confirmatory action letters) for coping strategies for SBO events would be appropriate while rulemaking activities are in progress.

Concerning the potential to redefine what level of protection of public health and safety should be regarded as adequate, the Commission reaffirms its guidance to the staff in the SRM on SECY-11-0093 with respect to Recommendation 1.

cc: Chairman Jaczko
Commissioner Svinicki
Commissioner Apostolakis
Commissioner Magwood
Commissioner Ostendorff
OGC
CFO
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OPA
Office Directors, Regions, ACRS, ASLBP (via E-Mail)
PDR

**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))	
)	January 30, 2012

CERTIFICATE OF SERVICE

I hereby certify that on January 30, 2012, a copy of the “Entergy’s Motion in Limine to Exclude Portions of Pre-Filed Direct Testimony, Expert Report, Exhibits, and Statement of Position for Contention Riverkeeper TC-2 (Flow-Accelerated Corrosion)” was served electronically via the Electronic Information Exchange on the following recipients:

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