August 19, 2008

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

NRC STAFF'S RESPONSE TO RIVERKEEPER'S MOTION
FOR CLARIFICATION AND RECONSIDERATION OF LBP-08-13

INTRODUCTION

On July 31, 2008, in its Memorandum and Order (Ruling on Petitions to Intervene and Requests for Hearing) ("LBP-08-13"), the Atomic Safety and Licensing Board ("Board") ruled on the admissibility of contentions filed in connection with the License Renewal Application submitted by Entergy Nuclear Operations, Inc. ("Entergy") for Indian Point Nuclear Generating Units 2 and 3. In LBP-08-13, the Board found that Riverkeeper Inc.'s ("Riverkeeper") Contention EC-2 was inadmissible. *Id.* at 175-184. On August 11, 2008, Riverkeeper moved for clarification and reconsideration of that ruling.[1] Pursuant to 10 C.F.R. § 2.323(c), the Staff of the Nuclear Regulatory Commission ("Staff") hereby files its response to Riverkeeper's Motion. For the reasons set forth below, the Staff respectfully submits that Riverkeeper's Motion fails to demonstrate any clear and material error that renders the Board's decision invalid and, therefore, the motion should be denied.[2]

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[1] Riverkeeper, Inc.'s Motion for Clarification and Reconsideration of LBP-08-13, August 11, 2008 ("Riverkeeper's Motion"). Riverkeeper's Motion was accompanied by a Motion for Leave to File pursuant to 10 C.F.R. § 2.323(e).

[2] As stated *infra* at 8, the Staff would not oppose any clarification that the Board may determine to (continued. . .)

BACKGROUND

On November 30, 2007, Riverkeeper filed a "Request for Hearing and Petition to Intervene in the License Renewal Proceeding for the Indian Point Nuclear Power Plant" ("Riverkeeper Petition"), in which it raised five contentions. In one of those contentions, Contention EC-2, Riverkeeper challenged Entergy's severe accident mitigation analysis ("SAMA"). Riverkeeper's criticism of Entergy's SAMA fell into two parts: the first addressed alleged deficiencies in the SAMA probability analysis, while the second addressed alleged deficiencies in the SAMA consequence analysis.

With respect to the SAMA probability analysis, Riverkeeper asserted that Entergy had failed to consider the contribution to severe accident costs from severe accidents involving (a) reactor containment bypass via induced failure of steam generator tubes, (b) a fire in either of the spent-fuel pools at Indian Point Units 2 and 3, and (c) intentional attacks on the Indian Point Unit 2 or Unit 3 reactors or their respective spent fuel pools.[3]

With respect to the SAMA consequence analysis, Riverkeeper asserted that Entergy's analysis was deficient because it (a) used a source term that resulted in unusually low mean off-site accident consequences, (b) failed to adequately consider the uncertainties in its consequence calculations resulting from meteorological variation, and (c) used an inappropriate $2,000 per person-rem dose conversion factor.[4]

The Staff opposed the admission of EC-2. In particular, the Staff opposed the portions of the contention that relate to spent fuel pool fires and intentional attacks, on the grounds that

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be appropriate.

[3] Riverkeeper, Inc.'s Request for Hearing and Petition to Intervene in the License Renwal Proceeding for the Indian Point Nuclear Power Plant, November 30, 2007, at 55.

[4] *Id.*

those issues are outside of the scope of license renewal and constitute an impermissible challenge to NRC regulations.[5] With respect to Riverkeeper's claim regarding the source term and the $2,000 per person-rem dose conversion factor, the Staff pointed out that Riverkeeper's claims simply propose the use of one computer code or calculation as opposed to another and that without a demonstration of deficiency in the code that Entergy used (the Modular Accident Analysis Program ("MAAP") code), or a deficiency in Entergy's calculations, the claims were insufficient to establish an admissible contention.[6]

Entergy also opposed the admission of Riverkeeper's EC-2 contention. Regarding the probability of spent fuel pool fires and intentional attacks, Entergy explained that these issues were outside of the scope of license renewal and constituted challenges to the regulations at 10 C.F.R. Part 51.[7] Furthermore, Entergy opposed the probability-based contention on containment by-pass on the grounds that it lacked adequate factual or expert support and failed to establish a genuine dispute. Specifically, Entergy explained that Riverkeeper inappropriately assumed a "worst-case" scenario; it questioned the expertise of the author of the expert opinion Riverkeeper had advanced in support of the contention; it stated that the draft findings advanced in support of the contention did not constitute adequate factual or expert support for the contention; and it asserted that the contention provided no meaningful assessment of the costs and benefits of severe accident mitigation alternatives for containment by-pass accidents.[8] On the issue of the appropriate source term, Entergy argued that Riverkeeper failed to show how

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[5] NRC Staff's Response to Petitions for Leave to Intervene Filed by (1) Connecticut Attorney General Richard Blumenthal, (2) Connecticut Residents Opposed to Relicensing of Indian Point, and Nancy Burton, (3) Hudson River Sloop Clearwater, Inc., (4) the State of New York, (5) Riverkeeper, Inc., (6) the town of Cortlandt, and (7) Westchester County, January 22, 2008 ("NRC Staff Response"), at 111.

[6] *Id.* at 111-112

[7] Answer of Entergy Nuclear Operations, Inc. Opposing Riverkeeper Inc.'s Request for Hearing and Petition to Intervene, January 22, 2008 ("Entergy's Answer") at 116-127.

[8] *Id.* at 112-116.

the MAAP code was unreliable or Entergy's use of the code was inappropriate.[9] Regarding Riverkeeper's claim that Entergy failed to consider variations in meteorological data, Entergy countered that Riverkeeper's expert opinion was based on an imprecise reading of the license renewal application and a misunderstanding of Entergy's SAMA methodology.[10] Entergy also asserted that its use of the $2,000 per person-rem dose conversion factor was justified as it was consistent with NRC guidance and longstanding NRC practice.[11]

At the pre-hearing conference, the Board questioned Counsel regarding the appropriate source term for use in SAMA.[12] Riverkeeper responded that it found that use of the source term from NUREG-1465 resulted in a significantly more conservative SAMA than the source term Entergy used.[13] The Staff countered that NUREG-1465's source term described a release from the core to containment and was not appropriate for use in analyzing releases from containment to the environment via containment by-pass, which was the accident scenario that Riverkeeper analyzed.[14]

The Board offered Riverkeeper an opportunity to address the source term issue more fully in a post-hearing brief and gave the Staff an opportunity to respond. In its post-hearing brief, Riverkeeper argued that since accidents involving energetic containment breach result in nearly all radioactive material being expelled through the breach, it was justified in using NUREG-1465's source term.[15] In its response, the Staff reiterated its position that use of the

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[9] *Id.* at 128-132.

[10] *Id.* at 132-136.

[11] *Id.* at 136-139.

[12] Transcript of Pre-Hearing Conference (March 12, 2008) at 613-629.

[13] *Id.* at 616.

[14] *Id.* at 617-619.

[15] Riverkeeper, Inc.'s Response to Atomic Safety and Licensing Board Questions Regarding (continued. . .)

NUREG-1465 source term was inappropriate for the accident Riverkeeper posited, and explained that "Entergy's MAAP-based source term represents all 'early high' release accident sequences, including Riverkeeper's early energetic containment failure sequence," and that Entergy had appropriately weighted these sequences "according to their estimated frequency of occurrence".[16]

In LBP-08-13, the Board rejected Riverkeeper Contention EC-2 in its entirety. The Board rejected the probability analysis issues regarding spent fuel pool fires and intentional attacks for the reasons put forward by the Staff and Entergy.[17] The Board addressed the remaining probability analysis issue, involving containment by-pass, with respect to the three consequence analysis issues Riverkeeper raised (source term, meteorological variations, and the $2,000 per person-rem dose conversion factor).[18] Citing the post-argument briefs on the source term issue and the contention pleading rules, the Board rejected the contention as failing to demonstrate a genuine dispute on a material issue of fact or law.[19] The Board explained, "[p]resentation of an alternative analysis is, without more, insufficient to support a contention alleging that the original analysis failed to meet applicable requirements."[20] On this basis, the Board also rejected the

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Contention EC-2, April 17, 2008, at 2-3.

[16] NRC Staff's Reply to Riverkeeper, Inc.'s Response to the Licensing Board's Questions Regarding Contention EC-2 (SAMAs), April 21, 2008, at 1-2.

[17] LBP-08-13 at 180-182. Riverkeeper does not seek reconsideration or clarification on the finding of inadmissibility of the portions of its contention that address spent fuel pool fires or intentional attacks. *See* Riverkeeper Motion at 5.

[18] LBP-08-13 at 182.

[19] LBP-08-13 at 183.

[20] *Id.* at 183-184.

portions of the contention related to meteorological variations and the use of the dose conversion factor.[21]

Riverkeeper now moves for reconsideration and clarification, asserting that the Board's analysis is confused and at odds with the record.[22] Thus, Riverkeeper argues, it cannot discern the basis for the Board's rejection of the probability analysis portion of the contention regarding containment by-pass and the consequence analysis portions of the contention relating to source terms, meteorological variations, and the dose conversion factor. [23]

DISCUSSION

A. Legal Standards Governing Motion for Reconsideration

Pursuant to 10 C.F.R. § 2.323(e), motions for reconsideration may not be filed except with leave of the presiding officer or the Commission and "upon a showing of compelling circumstances, such as the existence of a clear and material error in a decision, which could not have reasonably been anticipated, that renders the decision invalid." 10 C.F.R. § 2.323(e); *Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), CLI 07-13, 65 NRC 211, 214 (2007).[24] In adopting the test of "compelling circumstances," the Commission explained that it was adopting this "higher

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[21] *Id.*

[22] Riverkeeper's Motion at 1, 7-10.

[23] *Id.* at 8-10.

[24] As stated in *Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Spent Fuel Storage Installation), CLI-06-27, 62 NRC 399, 400 n.5 (2006), "the new rules "simply codify our practice" (referring to its discussion (in n. 6) of *Louisiana Energy Services, L.P* (National Enrichment Facility), CLI-04-35, 60 NRC 619, 622 (2004) (fundamental misunderstanding of a key point) and *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-18, 58 NRC 433, 434 (2003) (overlooked controlling decision or principle of law, or factual clarification). As summarized by the Commission in its 2004 rulemaking, under prior case law, motions for reconsideration were permitted where a movant showed that evidence "may have been misunderstood or overlooked, or to clarify a ruling on a matter." Changes to Adjudicatory Process, Statement of Considerations, 69 Fed. Reg. 2182, 2207 (Jan. 14, 2004).

standard" to "permit reconsideration only where manifest injustice would occur in the absence of reconsideration, and the claim could not have been raised earlier."[25] As the Commission has made clear, the test for reconsideration is applied strictly and reconsideration is not undertaken lightly.[26] The amended regulation's "clear error" standard is a high standard: "a 'clearly erroneous' finding is one that is not even plausible in light of the record viewed in its entirety."[27]

B. Absence of Clear Error to Warrant Reconsideration

Riverkeeper has put forward no compelling circumstances to justify the reconsideration it seeks. There is no "clear error" here because the record contains ample support for the Board's decision on the portions of the contention at issue: containment by-pass, source terms, meteorological variations, and the dose conversion factor.

The Board stated, in clear language, its grounds for finding inadmissible those portions of the contention that deal with meteorological variations and the dose conversion factor. It explained that it rejected Riverkeeper's contention on those issues because they constituted nothing more than the proposal of alternative analyses, and Riverkeeper did not show how Entergy's analyses were deficient.[28]

While the Board did not provide an expansive explanation for its ruling on the containment by-pass and source term issues, there is ample support for its decision in the ruling and in the record when viewed in its entirety. Entergy addressed the containment by-pass issue

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[25] 69 Fed. Reg. at 2207.

[26] *Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Spent Fuel Storage Installation), CLI-06-27, 62 NRC at 400-401 (2006).

[27] *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-5-19, 62 NRC 403, 411 (2005).

[28] LBP-08-13 at 183-184. This is consistent with the position stated by the Staff. *See* NRC Staff Response at 111-112.

at length in its Answer[29] -- and the Board explicitly declined to hear any argument on the issue at the pre-hearing conference, stating that it felt that the filings "adequately" addressed the issue.[30] On the source term issue, the Board heard argument on the issue and allowed post-argument briefing on it. The Board specifically cited the post-argument briefs on the source term issue as support for its finding. The record thus contains ample support for the Board's decision.

It is clear from Riverkeeper's motion that it would have preferred the Board to address the three probability analysis issues separately from the three consequence analysis issues and to address each of the six issues individually. But the fact that the Board chose to discuss an event (containment by-pass) in conjunction with projected consequences (source terms) does not invalidate the decision. Citing the Staff's reply of April 21, 2008 with approval, the Board effectively found (a) that Riverkeeper's reliance on the source term from NUREG-1465 was inappropriate, and (b) that the MAAP code Entergy used in its SAMA did, in fact, take into account a range of severe accidents, including the accident Riverkeeper highlighted, weighted according to their probability of occurrence. The Board further concluded with respect to this issue, as well as the issues involving meteorology and dose conversion factors, that "[p]resentation of an alternative analysis is, without more, insufficient to support a contention," and that Riverkeeper had failed to show an omission by Entergy to support a finding of a genuine issue of material fact or law.[31] The Staff believes that the record, in its entirety, fully justifies the Board's ruling on the portions of the contention at issue: containment by-pass, source terms, meteorological data, and the dose conversion factor.[32] Accordingly, the Staff

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[29] Entergy's Answer at 112-116.

[30] Transcript at 614-615.

[31] LBP-08-13 at 183-184.

[32] While clarification is not necessary, the Staff would not oppose any clarification by the Board which it may deem appropriate to address Riverkeeper's concern that the Board "may have misunderstood the contention." Riverkeeper's Motion at 7.

submits that Riverkeeper has failed to establish the compelling circumstances required by 10 C.F.R. § 2.323(e) to warrant reconsideration, and has not shown any error by the Board.

CONCLUSION

For the reasons discussed above, the Staff respectfully submits that Riverkeeper Inc.'s Motion for Clarification and Reconsideration of LBP-08-13 should be denied.

Respectfully submitted,

Beth N. Mizuno
Counsel for NRC Staff

Dated at Rockville, Maryland
this 19th day of August, 2008

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CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing "NRC STAFF'S RESPONSE TO RIVERKEEPER'S MOTION FOR CLARIFICATION AND RECONSIDERATION OF LBP-08-13", dated August 19, 2008, have been served upon the following through deposit in the NRC's internal mail system, with copies by electronic mail, as indicated by an asterisk, or by deposit in the U.S. Postal Service, as indicated by double asterisk, with copies by electronic mail this 19th day of August, 2008:

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