

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Gregory B. Jaczko, Chairman  
Kristine L. Svinicki  
George Apostolakis  
William D. Magwood, IV  
William C. Ostendorff

In the Matter of

NUCLEAR INNOVATION NORTH AMERICA  
LLC

(South Texas Project, Units 3 and 4)

Docket Nos. 52-012-COL,  
52-013-COL

CLI-11-06

**MEMORANDUM AND ORDER**

The NRC Staff has filed a petition for review of LBP-11-7, which denied the Staff's motion to dismiss one of two pending contentions in the captioned combined license proceeding.<sup>1</sup> As explained below, the Atomic Safety and Licensing Board's decision is interlocutory; the petition for review is therefore premature, and we deny review.

**I. BACKGROUND**

Nuclear Innovation North America LLC (the Applicant) has applied for a combined license (COL) for two new reactors to be built adjacent to the two existing reactors at the South Texas Nuclear Project site in Bay City, Texas. The application references the certified design for the Advanced Boiling Water Reactor (ABWR). Three intervenors, the Sustainable Energy and Economic Development Coalition, the South Texas Association for Responsible Energy, and Public Citizen (collectively, Intervenors) offered several contentions claiming, as a general

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<sup>1</sup> LBP-11-7, 73 NRC \_\_ (Feb. 28, 2011) (slip op.).

matter, that the application failed to account for the effects of co-locating additional reactors at the site of the existing South Texas Project Electric Generating Station, Units 1 and 2.

In its initial order ruling on standing and contention admissibility, the Board admitted Contention 21, which claimed that the Applicant's Environmental Report (ER) did not address impacts that severe accidents at the new reactors might have on operation of Units 1 and 2.<sup>2</sup> Thereafter, the Applicant (at that time, STP Nuclear Operating Company)<sup>3</sup> revised its ER to add a new Section 7.5S to cure the omission that had formed the basis for Contention 21, and moved for summary disposition.<sup>4</sup> Intervenors opposed the summary disposition motion, moved to modify Contention 21, and proposed four new, multi-part, co-location contentions based on the Applicant's revisions, CL-1 through CL-4.<sup>5</sup> In response, the Board dismissed Contention 21 (finding that the asserted omissions had been cured), rejected proposed contention CL-1,<sup>6</sup> and admitted in part and rejected in part the remaining new proposed contentions, combining them into one new co-location contention, CL-2.<sup>7</sup>

Contention CL-2 claims that the ER fails to consider that a severe accident at one reactor would affect operations at the others on the site, thereby increasing the replacement

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<sup>2</sup> See LBP-09-21, 70 NRC 581, 617-20 (2009).

<sup>3</sup> See Letter to Administrative Judges from Steven P. Frantz, Counsel for STP Nuclear Operating Company, at 1 (Jan. 21, 2011) (notifying Board that NINA, which has a 92% ownership interest in the proposed facilities, would take over as lead applicant in this proceeding).

<sup>4</sup> See Notification of Filing Related to Contention 21, Letter to the Administrative Judges from Stephen J. Burdick, Counsel for STP Nuclear Operating Company (Nov. 11, 2009); *Applicant's Motion to Dismiss Contention 21 as Moot* (Nov. 30, 2009).

<sup>5</sup> See *Intervenors' Response to Applicant's Motion to Dismiss Contention 21 as Moot* (Dec. 14, 2009); *Intervenors' Contentions Regarding Applicant's Proposed Revision to Environmental Report Section 7.5S and Request for Hearing* (Dec. 22, 2009) (Intervenors' New Contentions).

<sup>6</sup> Contention CL-1 argued the inadequacy of the Applicant's evaluation of the possible impacts of a severe accident at one unit on the other units. Intervenors' New Contentions at 3-7.

<sup>7</sup> LBP-10-14, 72 NRC \_\_ (July 2, 2010) (slip op.).

cost of energy estimates contained in the Severe Accident Mitigation Design Alternatives (SAMDA) analysis. Intervenors argue that underestimating the replacement costs of energy in turn improperly skews the cost/benefit balance in the SAMDA analysis.<sup>8</sup>

The Staff moved for summary disposition of this contention last summer. The Staff argued that all issues surrounding SAMDAs have been resolved by regulation, and therefore may not be challenged in this individual adjudication.<sup>9</sup> The Staff pointed out that the design certification rule for the ABWR, codified in 10 C.F.R. Part 52, Appendix A, provides that the Commission considers resolved in a subsequent COL proceeding:

All environmental issues concerning severe accident mitigation design alternatives associated with the information in the NRC's final environmental assessment for the U.S. ABWR design and Revision 1 of the technical support document for the U.S. ABWR, dated December 1994, for plants referencing this appendix whose site parameters are within those specified in the technical support document.<sup>10</sup>

The controversy arises from the phrase "whose site parameters are within those specified in the technical support document." The Staff, in its draft Environmental Impact Statement (DEIS), acknowledged that vendor General Electric Nuclear Energy's (GE) technical support document (TSD) for the ABWR<sup>11</sup> does not list any explicit "site parameters."<sup>12</sup> In the DEIS, the Staff concluded, in essence, that an appropriate site parameter can be inferred. The Staff reasoned that the probability-weighted population dose risk specified in the TSD is the

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<sup>8</sup> See *id.* at \_\_\_ (slip op. at 30) (summarizing Contention CL-2, as admitted).

<sup>9</sup> *NRC Staff Motion for Summary Disposition* (July 22, 2010) (attaching the affidavit of Richard L. Emch, Jr., and James V. Ramsdell, Jr.) (Staff Motion).

<sup>10</sup> 10 C.F.R. Part 52, Appendix A, VI.B.7.

<sup>11</sup> See Letter from J.F. Quirk, Project Manager, ABWR Certification, to R.W. Borchardt, Director, Standardization Project Directorate, U.S. Nuclear Regulatory Commission, Attach. 1, Technical Support Document for the U.S. ABWR (Dec. 21, 1994) (Rev. 1) (ADAMS Accession No. ML100210563) (TSD).

<sup>12</sup> See NUREG-1937, "Draft Environmental Impact Statement for Combined Licenses (COLs) for South Texas Project Electric Generating Station Units 3 and 4" (Mar. 2010) at 5-110 (ML100700327 & ML100700333).

appropriate “site parameter” to use when determining if environmental issues are resolved by rule.<sup>13</sup> The DEIS concluded that the probability-weighted population dose risk at the South Texas site would fall within this parameter.<sup>14</sup> The DEIS did not discuss the site-specific SAMDA analysis that the Applicant had included in its ER, which contention CL-2 challenges.<sup>15</sup>

The Staff, in its motion for summary disposition, argued that because the South Texas site was within the applicable parameter as determined in the DEIS (i.e., the probability-weighted population dose risk in the TSD), SAMDA issues were precluded from litigation by operation of the design certification rule in Appendix A, section VI.B.7.<sup>16</sup>

Earlier this year, the Board rejected the Staff’s motion, disagreeing with the Staff’s argument that South Texas site characteristics are bounded by the site parameters listed in the ABWR TSD. The Board focused on the fact that there are no site parameters “specified” in the TSD, and that the Staff therefore used its own judgment to determine the applicable site

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<sup>13</sup> *Id.* “Population dose risk” refers to the offsite radiological consequences to the public of a severe accident. In analyzing the effects of a nuclear facility, the NRC considers a variety of site attributes, one of which is the “changes in radiation exposures to the public due to changes in accident frequencies or accident consequences associated with the proposed action.” See *generally* NUREG/BR1084, “Regulatory Analysis Technical Evaluation Handbook” (Jan. 1997) at 5.10 (ML050190193) (Regulatory Analysis Technical Evaluation Handbook).

<sup>14</sup> DEIS at 5-111.

<sup>15</sup> In February, 2011, the Final EIS (FEIS) was released. NUREG-1937, “Environmental Impact Statement for Combined Licenses (COLs) for South Texas Project Electric Generating Station Units 3 and 4; Final Report” (Feb. 2011) (FEIS) (ML11059A000 & ML11049A001). That document added a discussion of the applicant’s SAMDA analysis, but stated that the Staff confined its review to the issue whether the South Texas site characteristics were within the population dose risk parameter specified in the ABWR TSD. *Id.* at 5-112.

<sup>16</sup> Staff Motion at 5-6, 11-13, Attachment 2 (Affidavit of Richard L. Emch, Jr. and James V. Ramsdell, Jr. Concerning Finality of SAMDA Conclusions in ABWR Design Certification as Applied to STP Units 3 and 4). The Applicant also moved for summary disposition of this contention, but on a different legal theory.

parameter.<sup>17</sup> The Board further held that the Staff could not “cure the absence of a list of site parameters in the TSD” by “creating” a list of site parameters for use in this proceeding.<sup>18</sup>

The Board also rejected the Staff’s argument that the population dose risk is the appropriate site parameter to compare to the South Texas site for purposes of the design certification rule.<sup>19</sup> The Board determined that this parameter does not take into account “all” the site-specific information that GE used in the TSD to evaluate SAMDAs. The Board pointed out that GE also considered “onsite costs including economic losses, replacement power costs, and direct accident costs” in the SAMDA evaluation.<sup>20</sup>

The Board included an Appendix to its decision, in which it set out in greater detail its rationale for why the Staff erred in arguing that the probability-weighted population dose risk parameter includes all of the site-specific information used to evaluate SAMDAs, and why genuine disputed issues remain with respect to Contention CL-2.<sup>21</sup> The Board cited the NRC’s Regulatory Analysis Technical Evaluation Handbook—not available at the time GE performed its SAMDA analysis in support of the design certification—which includes a list of site “attributes” that can be affected by an accident at a facility.<sup>22</sup> The Board stated its view that this

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<sup>17</sup> LBP-11-7, 73 NRC \_\_ (slip op. at 24). The Board also rejected a Staff argument that Contention CL-2 was mooted by the DEIS, which did not contain any analysis of the issue. *Id.* at \_\_ (slip op. at 25).

<sup>18</sup> *Id.* at \_\_ (slip op. at 24).

<sup>19</sup> *Id.* (slip op. at 24).

<sup>20</sup> *Id.* (citing TSD at 32).

<sup>21</sup> See *generally id.* at \_\_, Appendix Concerning NRC Staff Motion for Summary Disposition of Contention CL-2 (Appendix). The Staff challenges the propriety of this evaluation. See *NRC Staff Petition for Review of the Licensing Board’s Decision in LBP-11-07 Denying the NRC Staff Motion for Summary Disposition* (Mar. 15, 2011), at 19-20 (Staff Petition).

<sup>22</sup> Appendix at 2.

reference “now provides the current best guidance” of what costs should be considered in a SAMDA analysis.<sup>23</sup>

The Board observed that the ABWR SAMDA analysis did not consider offsite economic costs, and calculated replacement power costs assuming that the power to be replaced was that generated by a single ABWR unit.<sup>24</sup> The Board concluded that, because of this, the TSD site parameters for its analysis were the offsite exposure (population dose) risk, the presence of a single ABWR reactor, and “negligible” offsite economic costs.<sup>25</sup> In the Board’s view, the Staff should have judged the applicability of the ABWR SAMDA evaluation based on whether the site met all three of these “parameters.”<sup>26</sup>

In the same order, the Board also rejected the Applicant’s motion for summary disposition of Contention CL-2.<sup>27</sup> The Staff then filed its petition for review. Intervenors oppose

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<sup>23</sup> *Id.* at 1-2.

<sup>24</sup> *Id.* at 3-4.

<sup>25</sup> *See id.* at 4-5.

<sup>26</sup> *See id.*

<sup>27</sup> The Applicant argued that its site-specific SAMDA analysis was sufficiently conservative as to render all of the Intervenors’ challenges immaterial; that is, none of the Intervenors’ claims could alter the conclusion that there are no additional cost-effective SAMDAs. *STP Nuclear Operating Company’s Motion for Summary Disposition of Contention CL-2* (Sept. 14, 2010). The Board also denied the Applicant’s motion, concluding that genuine issues of material fact remain in dispute regarding whether Intervenors’ challenges to replacement power costs are bounded by the Applicant’s analysis. See LBP-11-7, 73 NRC at \_\_\_ (slip op. at 20-21). Judge Arnold dissented from the portion of the Board’s order denying summary disposition to the Applicant on the SAMDA issue. See *id.* (Dissenting Opinion of Judge Gary S. Arnold). Judge Arnold did not speak to the Staff’s arguments. LBP-11-7 also admitted one, and rejected five of Intervenors’ six proposed new contentions on the DEIS, all unrelated to the SAMDA issue. See *id.* at \_\_\_ (slip op. at 30-74). Those rulings are not before us today.

the petition.<sup>28</sup> The Applicant filed a brief in support of Staff's petition, but did not seek review in its own right.<sup>29</sup>

## II. DISCUSSION

We decline to consider the Staff's interlocutory appeal because the challenged Board ruling is not ripe for review. LBP-11-7 is not a partial or final initial decision—there remain outstanding questions of fact relating to the contention in question.

The Staff argues that the issue is a "*de facto* partial initial decision" and ripe for our review because "the Board made a decision on the merits rejecting the position taken in the [South Texas Environmental Impact Statement], concluding as a matter of law that SAMDA issues in this proceeding cannot be resolved by rule and ruling on the merits that the Staff's identification of site parameters is incorrect."<sup>30</sup> But simply because a Board makes a disputed legal ruling does not necessarily warrant immediate Commission action.<sup>31</sup>

As an initial matter, we reject the Staff's suggestion that allowing an environmental challenge to continue after the FEIS has issued constitutes a "merits" ruling that the Staff's review document is inadequate.<sup>32</sup> Boards frequently hold hearings on contentions challenging the staff's final environmental review documents. In such cases, "[t]he adjudicatory record and

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<sup>28</sup> *Intervenors' Answer in Opposition to NRC Staff's Petition for Review of the Licensing Board's Decision in LBP-11-07 Denying NRC Staff Motion for Summary Disposition* (Mar. 25, 2011).

<sup>29</sup> *See Nuclear Innovation North America LLC's Answer to NRC Staff Appeal of LBP-11-07* (Mar. 24, 2011).

<sup>30</sup> Staff Petition at 6.

<sup>31</sup> *See Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 and 3), CLI-10-30, 72 NRC \_\_\_ (Nov. 30, 2010) (slip op. at 6) (rejecting interlocutory review where it was observed that "[p]ortions of the Board's decision appear[ed] problematic, and may warrant our review later in the proceeding"). *See also Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-08-2, 67 NRC 31, 35 (2008); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-1, 53 NRC 1, 5 (2001).

<sup>32</sup> *See* Staff Petition at 7.

Board decision (and . . . any Commission appellate decisions) become, in effect, part of the FEIS.”<sup>33</sup> Put another way, under our longstanding practice, the Staff’s review (the FEIS itself) and the adjudicatory record will become part of the environmental record of the decision.<sup>34</sup>

More to the point here, we recently rejected an argument that the denial of a motion for summary disposition constituted a “merits” decision and was the equivalent of a partial initial decision. In the *Pilgrim* license renewal case, we held that a partial initial decision is one “rendered following an evidentiary hearing on one or more contentions, but that does not dispose of the entire matter.”<sup>35</sup> The Board held an evidentiary hearing in August 2011, but has not yet issued a decision.<sup>36</sup> Further, the Staff, in fact, acknowledges that there may be some outstanding issues relating to the applicant’s SAMDA analysis.<sup>37</sup> We therefore conclude that the Board’s ruling here is interlocutory in nature, warranting immediate review only under the circumstances specified in our rules.

Our regulations provide for Commission review of interlocutory Board rulings when the petitioner demonstrates either that the ruling threatens the petitioner with immediate and irreparable harm, or where the ruling has a “pervasive and unusual effect” on the structure of the proceeding.<sup>38</sup> The Staff did not address these factors, and we do not find them present

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<sup>33</sup> *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 89 (1998) (citing *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 705-07 (1985)).

<sup>34</sup> See *Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-26, 68 NRC 509, 526 (2008), *petition for review denied on other grounds, San Luis Obispo Mothers for Peace v. NRC*, 635 F.3d 1109 (9th Cir. 2011).

<sup>35</sup> *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-08-2, 67 NRC 31, 34 (2008).

<sup>36</sup> See Memorandum and Order (Establishing Schedule for Evidentiary Hearing) (March 11, 2011) (unpublished).

<sup>37</sup> Staff Petition at 7.

<sup>38</sup> 10 C.F.R. § 2.341(f)(2). See, e.g., *Indian Point*, 72 NRC at \_\_\_ (slip op. at 6) (the admission of (continued . . . )

here.

Last summer, Intervenors in this proceeding petitioned for interlocutory review of the Board's decision rejecting several proposed contentions relating to the applicant's mitigative strategies for dealing with fires and explosions resulting in the loss of large areas of the plant.<sup>39</sup> We declined Intervenors' interlocutory appeal, pointing to our traditional "disfavor of piecemeal appeals during ongoing licensing board proceedings."<sup>40</sup> As outlined briefly above, the disputed Board ruling deals with only one aspect of four proposed contentions concerning SAMAs and the effects of co-locating four units on a single site that Intervenors have sought to litigate in this adjudication. To the extent that the Board's admissibility decisions regarding Contention CL-1 and the balance of Contentions CL-2 through CL-4 are appealable at the end of the case, it makes sense for us to consider all related arguments at the same time.<sup>41</sup>

The Staff, as well as the Intervenors, must wait until the conclusion of the adjudication (or issuance of a partial initial decision) to bring appeals of interlocutory Board rulings. We therefore deny the Staff's request for interlocutory review, without prejudice to the Staff's ability to file a fresh petition for review after issuance of the Board's partial initial or final decision in this matter. Our decision to decline review at this time should not be interpreted as a determination

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a contention that might require further explanation of SAMA cost-benefit analysis did not have a "pervasive and unusual effect on the litigation"). *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-08-2, 67 NRC 31, 34 (2008) (the grant of summary disposition on a particular contention is an interlocutory ruling appealable at the end of the case).

<sup>39</sup> *Notice of Appeal* (Feb. 9, 2010); *Brief in Support of Intervenors' Appeal of Atomic Safety and Licensing Board's Order of January 29, 2010* (Feb. 9, 2010) (non-public).

<sup>40</sup> *South Texas Nuclear Project Operating Company* (South Texas Project, Units 3 and 4), CLI-10-16, 71 NRC \_\_\_ (slip op. at 4) (citing *Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 365 & n.178 (2009); *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-09-6, 69 NRC 128, 137 (2009)).

<sup>41</sup> See *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-00-24, 52 NRC 351, 353 (2000).

on the merits of the Staff's appeal of the Board's ruling in LBP-11-7.

One other matter merits mention. While the Staff's appeal was pending, we received a series of substantively identical petitions, filed in multiple dockets, which requested, among other things, that we suspend "all decisions" regarding the issuance of COLs, pending completion of several actions associated with the recent nuclear events in Japan.<sup>42</sup> Although the parties to this case were not served with that petition, this proceeding was included in the caption and the Applicant filed an answer to it.<sup>43</sup>

We granted the requests for relief in part, and denied them in part. In particular, we declined to suspend this or any other adjudication, or any final licensing decisions, finding no imminent risk to public health and safety, or to common defense and security.<sup>44</sup> The agency continues to evaluate the implications of the events in Japan for U.S. facilities, as well as to consider actions that may be taken as a result of lessons learned in light of those events. Particularly with respect to new reactor licenses, we observed that "we have the authority to ensure that certified designs and combined licenses include appropriate Commission-directed changes before operation."<sup>45</sup>

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<sup>42</sup> See generally *Emergency Petition to Suspend All Pending Reactor Licensing Decisions and related Rulemaking Decisions Pending Investigation of Lessons Learned from Fukushima Daiichi Nuclear Power Station Accident* (Apr. 14, 2011, corrected Apr. 18, 2011); *Declaration of Dr. Arjun Makhijani in Support of Emergency Petition to Suspend all Pending Reactor Licensing Decisions and Related Rulemaking Decisions Pending Investigation of Lessons Learned From Fukushima Daiichi Nuclear Power Station Accident* (Apr. 19, 2011).

<sup>43</sup> See *Nuclear Innovation North America LLC's Answer in Opposition to Emergency Petition to Suspend Licensing Proceedings* (May 2, 2011).

<sup>44</sup> See generally CLI-11-05, 74 NRC \_\_ (Sept. 9, 2011) (slip op.).

<sup>45</sup> *Id.* at \_\_ (slip op. at 24).

**III. CONCLUSION**

For the foregoing reasons, we *deny* the Staff's petition for review of the Board's decision in LBP-11-7, without prejudice.

IT IS SO ORDERED.

For the Commission

**[NRC SEAL]**

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Annette L. Vietti-Cook  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 9<sup>th</sup> day of September, 2011.