



## I. BACKGROUND

Yankee ceased operating its nuclear power facility in Rowe, Massachusetts on October 1, 1991, permanently closed the plant the following year, and submitted a Decommissioning Plan in 1994.<sup>2</sup> In May 1997, Yankee submitted an LTP to the NRC for approval. In May 1999, Yankee, intending to use a different survey methodology, withdrew its LTP application.<sup>3</sup> The plant is now about 90 percent dismantled, and Yankee expects the decommissioning process to be completed by the end of calendar year 2005. In November 2003, in accordance with 10 C.F.R. § 50.82(a)(9), Yankee filed a fresh license amendment request seeking approval of its new LTP.<sup>4</sup> In June 2004, the NRC Staff issued a Notice of Opportunity for Hearing on the LTP.<sup>5</sup> In response, CAN filed a timely hearing request. Both Yankee and the NRC Staff opposed CAN's request on the ground that CAN, although it has standing to intervene, did not submit an admissible contention. In LBP-04-27, the Board granted CAN's hearing request and admitted two contentions.

The first admitted contention (CAN's Contention 2) states:

The LTP should not be approved at this time because Yankee Atomic has failed to provide documentation of the source, cause, and plan for remediation of the current high levels of tritium contamination in the ground water on site, in violation of 10 C.F.R.

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<sup>2</sup> Yankee's initial decommissioning activities triggered a lawsuit, *Citizens Awareness Network v. NRC*, 59 F.3d 284 (1<sup>st</sup> Cir. 1995), and ultimately a series of agency adjudicatory decisions culminating in a Board order finding that petitioners had submitted no contentions warranting further hearings. See *Yankee Atomic Elec. Co. (Yankee Nuclear Power Station)*, LBP-96-18, 44 NRC 86, *pet'n for review denied*, CLI-96-9, 44 NRC 112 (1996).

<sup>3</sup> Yankee moved to terminate the earlier adjudicatory proceeding, and the Licensing Board granted the request. See *Yankee Atomic Electric Co. (Yankee Nuclear Power Station)*, LBP-99-27, 50 NRC 45 (1999).

<sup>4</sup> The NRC treats LTPs as license amendments. See *Yankee Atomic Elec. Co. (Yankee Nuclear Power Station)*, CLI-98-21, 48 NRC 185, 205 (1998); 10 C.F.R. § 50.82(a)(10).

<sup>5</sup> "Biweekly Notice: Applications and Amendments to Facility Operating Licenses Involving No Significant Hazards Considerations," 69 Fed. Reg. 34,696, 34,707 (June 22, 2004).

Part 20, subpart E, §50.52, §50.82. The samples collected in 2003 following the draining and emptying of the fuel pool still show an extremely high concentration of tritium (e.g., >45,000pCi/L in monitoring well MW-107C). The LTP does not resolve the question as to whether this high level of contamination was previously overlooked or whether it relates to a new or recent release connected with work on the fuel pool in 2003. A supplemental Environmental Report and supplemental EIS should be prepared to explain the source and cause of the contamination, demonstrate that it is contained within the site, and provide a plan for cleaning up the contamination.

As support for the contention, CAN referred to the declaration of hydrogeologist, Robert J. Ross.

Contention 3 alleges that YAEC has failed to adequately characterize several possible contaminated zones within the groundwater. Contention 4 alleges that the LTP does not completely characterize the vertical extent of subsurface soil contamination beneath facility structures. The Board combined CAN's Contentions 3 and 4 to state that the LTP fails to characterize groundwater and subsurface soil contamination on the site to the extent necessary to provide the required assurance that the radiation protection standards of 10 C.F.R. Part 20 will be satisfied.

Yankee and the NRC Staff separately appeal the Board's decision to admit the contentions and grant a hearing.<sup>6</sup>

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<sup>6</sup> On the same day Yankee filed its appeal, it also filed with the Commission a Motion for Stay of this proceeding. On December 6, the Board issued a stay of LBP-04-27, rendering Yankee's Stay Motion moot. See unpublished Board Memorandum (Dec. 6, 2004).

## II. DISCUSSION

### A. Legal Standards of Review

When we receive an “interlocutory appeal as of right”<sup>7</sup> from an applicant or licensee challenging the admissibility of contentions, 10 C.F.R. § 2.311(c) provides that we consider “whether the request [for hearing and/or] petition [to intervene] should have been wholly denied.” To answer this question, we need to determine whether the petitioner has standing to intervene (a matter not at issue here)<sup>8</sup> and whether at least one of the admitted contentions satisfies the requirements set forth in 10 C.F.R. § 2.309(f)(1) (a matter very much at issue). Section 2.309(f)(1) imposes the following procedural requirements:

A request for hearing or petition for leave to intervene must set forth with particularity the contentions sought to be raised. For each contention, the request or petition must:

- (i) Provide a specific statement of the issue of law or fact to be raised or controverted;
- (ii) Provide a brief explanation of the basis for the contention;
- (iii) Demonstrate that the issue raised in the contention is within the scope of the proceeding;
- (iv) Demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding;

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<sup>7</sup> See, e.g., *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-02-9, 55 N.R.C. 245, 249 n.13 (2002) (construing former 10 C.F.R. § 2.714a (c), the predecessor regulation of section 2.311(c)). See 10 C.F.R. § 2.311, regarding interlocutory appeals as of right, and the far more rigorous standards in 10 C.F.R. § 2.341(f)(ii), regarding discretionary interlocutory appeals. CAN mistakenly considers the NRC Staff’s appeal to be discretionary, and therefore seeks to apply the standards set forth in the latter regulation. See CAN’s Brief in Opposition to NRC Staff at 12; “Citizens Awareness Network’s Brief in Opposition to Yankee Atomic Electric Company’s Notice of Appeal of LBP-04-27, Order Granting Hearing, and Brief” at 10-12 & n.8 (Dec. 13, 2004). We do not consider section 2.341(f)(ii)’s standards for discretionary review – which are simply inapplicable – in today’s decision.

<sup>8</sup> Neither Yankee nor the Staff contests CAN’s standing. The Board nevertheless briefly (and quite appropriately) addressed this issue and agreed with the parties that CAN has standing. See LBP-04-27, 60 NRC at 542 n.3.

- (v) Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue; and
- (vi) Provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact. This information must include references to specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief.

While newly codified in section 2.309(f)(1), these are the same procedural standards that long have governed admissibility of contentions in NRC adjudications.<sup>9</sup>

As for the substantive standards applicable in this proceeding, 10 C.F.R. § 50.82 governs the termination of a power reactor license. Under subsection (a)(9) of that section, a license termination application must be supported by an LTP. The provisions of 10 C.F.R. §§ 50.82(a)(9)(ii)(A)-(H) and 50.82(a)(10) govern an adjudication (such as this) involving the adequacy of an LTP. The first of these two subsections requires the licensee to include the following in its LTP:

- (A) A site characterization;
- (B) Identification of remaining dismantlement activities;
- (C) Plans for site remediation;
- (D) Detailed plans for the final radiation survey;
- (E) A description of the end use of the site, if restricted;
- (F) An updated site-specific estimate of remaining decommissioning costs;
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<sup>9</sup> See the former 10 C.F.R. § 2.714 (2003). See generally *Dominion Nuclear Connecticut* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358-59 (2001).

- (G) A supplement to the environmental report, pursuant to § 51.53, describing any new information or significant environmental change associated with the licensee's proposed termination activities; [and]
- (H) Identification of parts, if any, of the facility or site that were released for use before approval of the [LTP].<sup>10</sup>

Section 50.82(a)(10) provides an additional, and far more general, test for LTPs: they must demonstrate "that the remainder of decommissioning activities will be performed in accordance with the regulations . . . , will not be inimical to the common defense and security or to the health and safety of the public, and will not have a significant effect on the quality of the environment." These criteria bound the potential procedural and substantive issues in an adjudication of an LTP's legal adequacy.<sup>11</sup>

## **B. Significance of Ongoing Nature of License Termination Activities**

The dispute about admissibility of CAN's contentions raises the questions: (1) whether 10 C.F.R. § 50.82(a)(9)(ii) requires an LTP to include a "final" and "complete" site characterization, and (2) what constitutes sufficient information in a site remediation plan to support NRC approval of a LTP submittal.

These are issues of first impression before the Commission. Although our regulations call for "a site characterization" and "plans for site remediation," those terms are not defined.<sup>12</sup> Because these questions are closely related, we will consider them in tandem.

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<sup>10</sup> 10 C.F.R. § 50.82(a)(9)(ii).

<sup>11</sup> See *Yankee Atomic*, CLI-98-21, 48 NRC at 204-05 ("the scope of the LTP application (and therefore the scope of this proceeding) is defined solely by the terms of 10 C.F.R. § 50.82(a)(10), as read in light of the filing requirements of 10 C.F.R. § 50.82(a)(9)(ii)(A)-(G)"). The above-quoted language omits any reference to subsection (H) because the Commission promulgated subsection (H) five years after the issuance of CLI-98-21. See Final Rule, "Releasing Part of a Power Reactor Site or Facility for Unrestricted Use Before the NRC Approves the License Termination Plan," 68 Fed. Reg. 19,711, 19,727 (April 22, 2003).

<sup>12</sup> See 10 C.F.R. § 50.82(a)(9)(ii)(A) & (C)).

“Site characterization” and “plans for site remediation” are two of the elements required by 10 C.F.R. § 50.82(a)(9)(ii) to be included in a licensee’s LTP submittal. To determine what constitutes sufficient site characterization and site remediation plans for purposes of meeting the LTP requirements, we first turn to our regulations and enabling statute (here the Atomic Energy Act (AEA)). As alluded to above, these terms are not defined in either place. In the absence of regulatory definitions, we examine the plain meaning of the words.

The word “characterization” is defined as “the act, process, or result of characterizing,” while the word “characterize” means “to describe the essential character or quality of.”<sup>13</sup> The term “process” supports a view that site characterization is ongoing, not complete. The term “result” tends to imply a form of finality or comprehensiveness, although describing the “essential” quality or character of the site suggests something less than complete detail or a final inventory is required.

An interpretation that embraces the potential for additional, more detailed data is also supported by the lack of such modifying terms as “complete” or “final” in reference to “a site characterization” and the contrast between that general requirement of “a site characterization” and the requirement of “[d]etailed plans for the final radiation survey.” This interpretation is also buttressed by the fact the LTP as a whole is a *plan*. Yet, the absence of the word “plan” in specific association with the requirement of “a site characterization” contrasts with the use of the limiting term “plans” in regard to site remediation and the final radiation survey, indicating that more than mere plans or methodologies for site characterization is required.

The word “remediation” is defined as the “act or process of remedying.”<sup>14</sup> The word “plan” has meanings ranging from “a method of achieving something” to a “detailed and

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<sup>13</sup> See *Webster’s Third New International Dictionary* at p. 376 (1981).

<sup>14</sup> *Id.* at 1920.

systematic formulation of a large-scale campaign or program of action.”<sup>15</sup> Given that these definitions are not sufficient to resolve fully the questions of interpretation in this case, we next turn to the Statement of Considerations in support of promulgation of these provisions.

Twenty years ago, prior to enactment of our current regulatory regime for license termination, the NRC set forth technical and financial criteria for a proposed decommissioning rule.<sup>16</sup> The proposed rule required a preliminary decommissioning plan, including a site-specific cost estimate, five years before permanent cessation of operations. The licensee had to submit a detailed decommissioning plan to the NRC within two years after permanent cessation of activities. The intent of the rule was “to assure that decommissioning of all licensed facilities will be accomplished in a safe and timely manner and that adequate licensee funds will be available for this purpose.”<sup>17</sup> Decommissioning plans were to contain “sufficient detail to demonstrate that decommissioning [*sic*] can be accomplished safely.”<sup>18</sup> The proposed rule (the then-section 50.82) specified only the major elements of decommissioning plans. The term “site characterization” was not used at all in the proposed rule, which required a discussion of planned decommissioning activities; a description of methods to assure protection of workers and the environment against radiation hazards during the decommissioning process; a description of the planned final radiation survey; and a detailed cost estimate for decommissioning and plan for assuring the availability of adequate funding.

The Commission turned again to decommissioning issues in the mid-1990s, when it

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<sup>15</sup> *Id.* at 1729.

<sup>16</sup> See Proposed Rule, “Decommissioning Criteria for Nuclear Facilities,” 50 Fed. Reg. 5600 (Feb. 11, 1985).

<sup>17</sup> *Id.*

<sup>18</sup> *Id.* at 5602.

issued proposed<sup>19</sup> and final rules<sup>20</sup> promulgating the current subsection 50.82(a)(9)(ii), including the disputed “site characterization” provision. The new rule sought “to clarify ambiguities in the current rule and codify practices which have been used for other licensees on a case-by-case basis.”<sup>21</sup> Although the SOC described the proposed rule as preserving the substantive elements of the 1988 regulations, it went on to state:

The current [1988] rule allows a less detailed decommissioning plan initially, with the more detailed plan nearer to the completion of decommissioning because more accurate planning can be accomplished. The termination plan would contain similar elements for consideration as the current rule requires. In particular, the proposed rule would require that the termination plan contain a site characterization . . . plans for site remediation, detailed plans for the final radiation survey . . . ”<sup>22</sup>

The older rule did not contain such specific requirements.

The SOC for the 1996 final rule refers, in a substantive fashion, only twice to site characterization and once to site remediation plans. The first reference to both notes generally that site characterization and plans for site remediation are “necessary for the NRC to be sure that the licensee will have adequate funds to complete decommissioning and that the appropriate actions will be completed by the licensee to ensure that the public health and safety will be protected.”<sup>23</sup> The second reference to site characterization indicates that the “radiological criteria rule,” when issued, would address whether “a complete site

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<sup>19</sup> Proposed Rule, “Decommissioning of Nuclear Power Reactors,” 60 Fed. Reg. 37,374 (July 20, 1995).

<sup>20</sup> Final Rule, “Decommissioning of Nuclear Power Reactors,” 61 Fed. Reg. 39,278 (July 29, 1996).

<sup>21</sup> 60 Fed. Reg. at 37,374.

<sup>22</sup> *Id.* at 37,377.

<sup>23</sup> 61 Fed. Reg. at 39,289.

characterization should be included at the initiation of decommissioning activities.”<sup>24</sup> But the radiological criteria rule, when it did issue a year later, did not refer to “site characterization,”<sup>25</sup> and did not address the question left open in the 1996 SOC for section 50.82.

Unfortunately, our review of relevant SOCs does little to inform our consideration of this issue. Therefore, we next turn to a review of NRC guidance documents to assist us in interpreting the site characterization and site remediation plan requirements. NUREG-1700, Rev. 1, “Standard Review Plan for Evaluating Nuclear Power Reactor License Termination Plans” was developed to guide the NRC staff in conducting its safety reviews of LTPs and to assist licensees in the development of their LTP submittals.<sup>26</sup>

With regard to site characterization, NUREG-1700 indicates that this information is provided to

determine the extent and range of radioactive contamination on site, including structures (on a structure by structure basis and as necessary on a room by room basis), systems, components, residues, soils, and surface and ground water. On the basis of the site characterization, the licensee designs final radiation surveys to evaluate all areas in which contamination previously existed, remains, or has the potential to remain.<sup>27</sup>

The document also indicates that the staff’s purpose in reviewing site characterization information is to “ensure that the site characterization presented in the LTP is complete,” and to

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<sup>24</sup> *Id.* at 39,292.

<sup>25</sup> See Final Rule, “Radiological Criteria for License Termination,” 62 Fed. Reg. 39,058 (July 21, 1997).

<sup>26</sup> See NUREG-1700, Rev. 1, “Standard Review Plan for Evaluating Nuclear Power Reactor License Termination Plans,” ADAMS Accession No. ML031270391 (Mar. 2003). We recognize, of course, that guidance documents do not have the force and effect of law. See *Private Fuel Storage, LLC* (Independent Spent Fuel Storage Installation), CLI-01-22, 54 NRC 255, 264 (2001); *U.S. Enrichment Corp.* (Paducah, Kentucky), CLI-01-23, 54 NRC 267, 280 n.37 (2001). Nonetheless, guidance is “at least implicitly endorsed by the Commission” and therefore “is entitled to correspondingly special weight.” *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-900, 28 NRC 275, 290 (1988).

<sup>27</sup> *Id.* at 8.

verify that the licensee data was obtained in a manner that assures the NRC staff that the data is reliable and will support a finding that “the site will meet the decommissioning limits if characterization data is used as final survey data.”<sup>28</sup> Although the word “complete” is used above to describe staff expectation of site information of at least an adequate scope, there is also a recognition in the guidance document that licensees have the option of submitting an LTP amendment request at a time of their choosing (as long as it is at least two years prior to license termination), and that consequently, “the level of detail required to be submitted in the LTP will vary depending on when the licensee submits the LTP.”<sup>29</sup> NUREG-1700 also goes on to specify the staff’s “Acceptance Criteria,” including the criterion that “[t]he LTP site characterization is *sufficiently detailed* to allow the NRC staff to determine the extent and range of radiological contamination of structures, systems,” and other areas of the site, such as groundwater, including maximum and average contamination levels .....<sup>30</sup>

With regard to site remediation plans, NUREG-1700 indicates that the information submitted by the licensee should discuss in detail “how facility and site areas will be remediated to meet the NRC’s release criteria” found in Subpart E of 10 C.F.R. Part 20.<sup>31</sup> Other provisions that are instructive, given the contentions in this case, are found under the “Acceptance Criteria”

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<sup>28</sup> *Id.* at 9. See also Reg. Guide 1.179, “Standard Format and Content of License Termination Plans for Nuclear Power Reactors” at 3, ADAMS Accession No. ML003780514 (Jan. 1999), which contains similar information about the amount of detail required for the LTP. The Regulatory Guide states that, “for the most part, the LTP will contain a final site characterization,” and then specifically describes the purpose of the site characterization in the LTP as “providing information . . . to ensure that final radiation surveys are conducted to cover all areas where contamination existed, remains, or has the potential to exist or remain.” *Id.* at 2, 3.

<sup>29</sup> *Id.* at 4.

<sup>30</sup> *Id.* at 9 (emphasis added). A pertinent staff evaluative finding is whether “the licensee met the *objective* of providing an *adequate* site characterization as required by 10 C.F.R. 50.82(a)(9)(ii)(A).” *Id.* at 18 (emphasis added).

<sup>31</sup> *Id.* at 10.

heading. The first relevant provision states that the licensee should address “changes in radiological controls to be implemented to control radiological contamination.” The second relevant provision, which includes a number of subsections, indicates that the licensee’s submittal should discuss in detail:

how facility and site areas will be remediated to meet the proposed residual radioactivity levels (DCGLs) for license termination. Discussions should focus on any unique techniques or procedures used to evaluate whether the DCGLs have been met including . . . a detailed description of the techniques that will be employed to remove or remediate surface and subsurface soils, groundwater, and surface water and sediments.<sup>32</sup>

Although these guidance documents are informative, the Commission declines to develop a “bright line” test for when a site characterization or site remediation plan is “final” or “complete” enough to support approval of an LTP. We do not agree with the Board insofar as the Board may have deemed a site characterization incomplete on the grounds that additional site characterization may be obtained at a later time. For example, the mere fact that ongoing monitoring, confirmatory investigations, and surveys (e.g., the final site survey) will provide additional data and results does not by itself establish the insufficiency of a site characterization. On the other hand, we agree with the Board that the requirement of “a site characterization” involves more than methodologies or plans for characterization.

It appears that determining what constitutes adequate site characterization and site remediation plans is dependent, to a large extent, on site specific conditions. At a minimum, the site characterization and remediation plans must provide sufficient information to allow the NRC to determine the extent and range of expected radioactive contamination, to determine whether estimates for remaining decommissioning costs are reasonable, to determine the likely schedule for remaining activities, and to support the final site survey to verify compliance with

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<sup>32</sup> *Id.* at 11. NUREG-1700 describes the pertinent evaluative finding as whether the licensee has “adequately described its plans for remediation as required by 10 C.F.R. 50.82(a)(9)(ii)(C).” *Id.* at 18.

Part 20 release limits - the ultimate goal of the decommissioning process. With respect to an adequate site characterization, it seems reasonable to interpret the regulation as requiring LTP submissions to contain the type of information discussed in the NUREG-1700 acceptance criteria, including a reasonably bounded discussion of future activities to refine site characterization information. Thus, contentions asserting nothing more than a site characterization is incomplete, ongoing, or not final, on the basis that the licensee plans to conduct further characterization, including confirmatory characterization and monitoring activities would be inadmissible. However, contentions arguing that the site characterization and remediation plan are insufficient to support the conclusions required to satisfy the license termination rule and proposals on how the licensee will deal with the remaining decommissioning processes could be admissible provided they contain appropriately supported bases.<sup>33</sup> This being said, we next turn to CAN's contentions in this case.<sup>34</sup>

### C. CAN's Contentions

CAN's first admitted contention (CAN's Contention 2) states:

The LTP should not be approved at this time because Yankee Atomic has failed to provide documentation of the source, cause, and plan for remediation of the current high levels of tritium contamination in the ground water on site, in violation of 10 C.F.R.

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<sup>33</sup> One example of such a contention could involve a site characterization that fails to address a radionuclide the petitioner has a good basis to believe is present at the site. Another example could involve a site characterization that is so over-broad or vague as not to allow sound planning.

<sup>34</sup> In its December 6, 2004, unpublished memorandum, the Board reasoned that, should the Commission accept Yankee's interpretation of the LTP regulations, "an essential underpinning of the grant of the hearing request would be removed." *Id.*, slip op. at 3. Should the Board's (and CAN's) interpretation be upheld, "the necessary consequence would appear to be that the Staff would have to treat the LTP on file as incomplete." *Id.* The latter, according to the Board, would require Yankee to resubmit the LTP at a later date, and give rise to a fresh opportunity for hearing. As our analysis indicates, we do not fully adopt either Yankee's or the Board's interpretation of the LTP regulations in permitting this proceeding to go forward.

Part 20, subpart E, §50.52, §50.82. The samples collected in 2003 following the draining and emptying of the fuel pool still show an extremely high concentration of tritium (e.g., >45,000pCi/L in monitoring well MW-107C). The LTP does not resolve the question as to whether this high level of contamination was previously overlooked or whether it relates to a new or recent release connected with work on the fuel pool in 2003. A supplemental Environmental Report and supplemental EIS should be prepared to explain the source and cause of the contamination, demonstrate that it is contained within the site, and provide a plan for cleaning up the contamination.

In support of this contention, CAN asserts that site characterization must be both detailed and final. According to CAN, “[t]he sole ambiguity of [this regulatory] provision resides in whether the requisite ‘site characterization’ is a final document or a continuing activity.”<sup>35</sup> CAN argues that the LTP must include a complete site characterization; *i.e.*, it must “take[] the form of a relatively fixed road map of conditions on site”<sup>36</sup> and not be a “status report” on ongoing site characterization activities.

Yankee, on the other hand, insists that site characterization is an ongoing process and does not need to be detailed or final at the LTP stage. Yankee claims that our regulations inherently recognize that decommissioning work is not necessarily complete at the time the licensee submits the LTP. Thus, says Yankee, the “regulations contemplate that an LTP establish a *process* leading to license termination”<sup>37</sup> and, “[a]t the LTP stage, there can be no expectation that all characterization (*i.e.*, all monitoring and surveys) will be complete.”<sup>38</sup> Yankee argues that a site characterization need only “be sufficiently detailed to provide data for

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<sup>35</sup> CAN’s Brief in Opposition to Yankee at 16.

<sup>36</sup> *Id.*

<sup>37</sup> Yankee’s Appeal Brief at 12 (emphasis in original).

<sup>38</sup> *Id.* at 15.

planning further decommissioning activities as well as the final survey program.”<sup>39</sup> According to Yankee, “the level of detail in the LTP will vary depending on the nature of activities *remaining* to be performed;”<sup>40</sup> therefore, “[t]he issue for hearing in the present case . . . is whether the LTP provides the methodologies that will be used to perform, as necessary, remediation activities of residual radioactivity and the criteria to demonstrate compliance with the radiological criteria for license termination . . . .”<sup>41</sup> Yankee asserts that, were CAN correct in its construction of the phrase “site characterization,” both the hearing opportunity and the end of the hearing would necessarily be delayed “until *after* the LTP has been fully implemented and acceptable results have been demonstrated”<sup>42</sup> – not the result, Yankee maintains, the Commission was looking for when it promulgated the current version of section 50.82.

In admitting CAN’s Contention 2, the Board considered and rejected Yankee’s argument that a contention, to be admissible, cannot merely fault the incompleteness of the site characterization process described in the LTP. In a related vein, the Board also drew attention to a second perceived flaw in Yankee’s reasoning: if the characterization of the site is incomplete, the remediation plan addressing the contamination disclosed during the site characterization activities must likewise be incomplete.<sup>43</sup> While acknowledging that “a substantial amount of site characterization already has been accomplished,”<sup>44</sup> the Board viewed either of these two flaws as sufficient grounds for admission of Contention 2. The Board

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<sup>39</sup> *Id.* at 16, *quoting* Regulatory Guide 1.179, “Standard Format and Content of License Termination Plans for Nuclear Power Reactors” at 3 (Jan. 1999).

<sup>40</sup> *Id.* at 13 (emphasis in original).

<sup>41</sup> *Id.* at 14.

<sup>42</sup> *Id.* at 18-19 (emphasis in original).

<sup>43</sup> LBP-04-27, 60 NRC at 545.

<sup>44</sup> *Id.* at 544.

referenced, in particular, Yankee's acknowledgment of ongoing groundwater investigations and Yankee's statement that as the investigations progress, "actions will be taken, including further analyses or *possibly remediation*, to ensure that the site release criteria are met."<sup>45</sup> Finally, the Board indicated that, because CAN will not have an opportunity to challenge the site characterization in a later adjudication after approval of the LTP, Yankee's "process"-oriented interpretation of section 50.82 would make a "mockery" of the hearing rights provided to CAN by our *Federal Register* notice.<sup>46</sup>

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<sup>45</sup> *Id.* at 545, quoting section 2.7.4 of the September 2, 2004 Draft Revision of the LTP (emphasis supplied by the Board). The staff and Yankee both point to the fact that Yankee's LTP does go further in addressing whether remediation will be required. Yankee's Appeal Brief at 24; NRC Staff Appeal Brief at 6. For instance, in section 4.2.3 of the LTP (November 24, 2003), Yankee stated that "[c]haracterization data available to date indicated that no remediation of surface or groundwaters will be required at YNPS to meet the site release criteria." While we have not reviewed the original or revised LTP in detail, we note that the parties may have to address, as the proceeding moves forward to summary disposition or development of the record, the bases and impact of the licensee's determinations that the QA program had been adjusted to account for the new information regarding tritium concentrations (e.g., one well with concentrations greater than the EPA standard for tritium in drinking water) and "the dose consequence is insignificant and does not change the strategy for going forward towards FSS." *Id.* at 2-21 (section 2.7.4 Ongoing Groundwater Investigation). It is possible that Yankee's revised LTP submittal satisfies many of the petitioner's concerns with regard to tritium contamination and remediation. While it may well be that the tritium involved here, from a technical standpoint, will require little or no remediation as the applicant suggests, such a substantive conclusion is now more appropriately handled through summary disposition or after evidence has been presented, rather than at the contention admission stage.

<sup>46</sup> *Id.* at 544. The Board stated that under Yankee's interpretation of "site characterization":

CAN cannot raise any questions regarding tritium contamination at this point ... because the characterization of the scope and significance of that contamination is still ongoing, with the consequence that the matter and nature of possible necessary remediation measures is likewise beyond present determination. Once that characterization has been completed, however, CAN will not have an opportunity to be heard regarding the results of the characterization in terms of the need for remediation of the tritium contamination.

*Id.* It is true that our regulations call for adjudicatory hearings at the LTP stage of decommissioning, not at the license termination stage. See *Yankee Nuclear Power Station*,  
(continued...)

CAN's Contention 3 alleged that Yankee failed to adequately characterize several possible contaminated zones within the groundwater. CAN's Contention 4 alleges that the LTP does not completely characterize the vertical extent of subsurface soil contamination beneath facility structures. The Board combined CAN's Contentions 3 and 4 to state that the LTP fails to characterize groundwater and subsurface soil contamination on the site to the extent necessary to provide the required assurance that the radiation protection standards of 10 C.F.R. Part 20 will be satisfied. In admitting this combined contention, the Board rejected Yankee's line of argument – that site characterization is an ongoing process – on the same grounds as it had rejected similar assertions regarding CAN's Contention 2. The Board likewise found CAN's third and fourth contentions sufficiently specific in that they “squarely present[ed] the same issue that was raised by the second contention: namely, whether the LTP had to contain a full site characterization, combined with any plans for remediation that might be required as a result of the characterization.”<sup>47</sup>

As explained above, we do not fully agree with either the Board's or Yankee's interpretation of the pertinent requirements. The purpose of site characterization is to define relevant features of the soil, water, and buildings in order to assess risks and develop adequate plans to complete decommissioning. The LTP must deal with the correct issues – those already identified and those reasonably anticipated. The key question at the LTP submission stage is

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<sup>46</sup>(...continued)

CLI-98-21, 48 NRC at 206-07. But we cannot agree with the Board's implication that hearings on *plans*, rather than on actual termination, are therefore meaningless. It is the LTP, after all, that governs how the property will be decontaminated. And LTPs, unlike license termination, are implemented by license amendment, an agency action that triggers a hearing opportunity by law. See AEA § 189(a), 42 U.S.C. § 2239(a). This is true not only when the LTP is initially approved and made part of the license by license amendment *with such conditions and limitations as deemed appropriate and necessary* (see 50.82(a)(10)), but also later if new developments require a license amendment to approve modifications to the LTP that cannot be considered within the scope of the original amendment approving the LTP.

<sup>47</sup> See LBP-04-27, 60 NRC at 546.

whether the site characterization is sufficiently detailed to allow evaluation of the adequacy of each element prescribed by 10 C.F.R. § 50.82(a)(9) and for making the findings required for approval of the LTP (see 10 C.F.R. § 50.82(a)(10)).

Turning to our consideration of the admissibility of CAN's contentions, we find that we do not have grounds to vacate the Board's decision. It appears that at least a portion of CAN's Contention 2 related to Yankee's alleged failure to include a remediation plan that adequately addresses tritium contamination would be admissible. The Commission has previously held that if an application contains disputed information or omits required information, petitioners normally must specify the portions of the application that are in dispute or incomplete.<sup>48</sup> In this case, the petitioner has alleged that Yankee has omitted from its LTP application a remediation plan that addresses tritium contamination present at the site, and that Yankee's site characterization is inadequate to support any necessary remediation of this tritium. We find that the Board had a sufficient basis to find that petitioners had made the showing required to indicate an inquiry in depth was warranted and admit such a contention, even though this may have been a close question.

Having said this, we recognize that this case may have become somewhat overtaken by events. New developments, in the form of a revised LTP submittal from Yankee and the staff's completion of an environmental assessment, have come to our attention.<sup>49</sup> Add to this the clarification of applicable regulatory requirements we have articulated in this order, and it seems clear that these issues will require consideration and may alter the course of this proceeding as

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<sup>48</sup> See *Georgia Power Company, et al.* (Vogtle Electric Generating Plant, Units 1 and 2), CLI-93-16, 38 NRC 25, 41 (1993).

<sup>49</sup> On November 19, 2004, Yankee submitted a formal revision to its LTP, "Submittal of Revision 1 of Yankee Nuclear Power Station's License Termination." In addition, on June 7, 2005, the staff advised the Board of its Environmental Assessment and Finding of No Significant Impact Related to License Termination Plan for the Yankee Atomic Electric Co., License DPR-003, Rowe, Massachusetts, as published in the Federal Register on June 3, 2005.

it moves forward. As a result of these developments, the Board may be faced with summary disposition motions.

We are also mindful that the NRC staff has raised the issue of whether the Board treated in too dismissive a manner certain staff arguments related to the criteria for contention admission. We note that the Board in LBP-04-27 considered the Staff's procedural opposition to CAN's contentions "hyper-technical" and thus summarily rejected it.<sup>50</sup> We agree with the staff that 10 C.F.R. § 2.309(f) is strict by design and should be rigorously followed by our adjudicatory bodies. In light of the allegedly material omission in the application and the uncertainties in the applicant's rationale, we cannot say that the Board abused its obligation to examine the contention in light of the requirements of 10 C.F.R. § 2.309(f). We would strongly caution that with regard to future contentions associated with an LTP, the Board should consider our clarification of LTP requirements in this decision and ensure that proponents of a contention demonstrate that it is within the scope of the proceeding, has an adequate basis supported by facts or opinion, and raises a genuine dispute regarding an issue material to the findings the NRC must make prior to approval of the LTP.

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<sup>50</sup> See LBP-04-27, 60 NRC at 546. For instance, the staff challenged aspects of the second contention regarding the alleged failure of the LTP to demonstrate the cause and source of the tritium contamination, on grounds that such a showing was not required by § 50.82 and CAN had not demonstrated that the issue was material to the findings the NRC must make to support the action (see § 50.82(a)(10)). *Id.* at 545 n. 4; see also NRC Staff Response to CAN's Request for Hearing and Proposed Contentions at 10-11 (Sept. 20, 2004).

**CONCLUSION**

The Commission *affirms* LBP-04-27 and directs the Board to proceed consistent with this decision.

IT IS SO ORDERED.

For the Commission<sup>51</sup>

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Annette L. Vietti-Cook  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 29<sup>th</sup> day of June, 2005.

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<sup>51</sup> Commissioner Jaczko was not present when this item was affirmed. Accordingly the formal vote of the Commission was 4-0 in favor of the decision. Commissioner Jaczko, however, had previously voted to approve this Memorandum and Order and had he been present he would have affirmed his prior vote.