

UNITED STATES OF AMERICA
 NUCLEAR REGULATORY COMMISSION
 ATOMIC SAFETY AND LICENSING BOARD

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Before Administrative Judges:

E. Roy Hawkens, Chairman
 Dr. Paul B. Abramson
 Dr. Anthony J. Baratta

In the Matter of

AMERGEN ENERGY COMPANY, LLC

(Oyster Creek Nuclear Generating Station)

Docket No. 50-0219-LR

ASLBP No. 06-844-01-LR

October 10, 2006

MEMORANDUM AND ORDER
 (Granting Petition to File a New Contention)

I. INTRODUCTION

On February 27, 2006, this Board granted a Petition to Intervene submitted by six groups¹ – hereinafter referred to collectively as Citizens – opposing an application by AmerGen Energy Company, LLC (“AmerGen”) to renew its operating license for the Oyster Creek Nuclear Generating Station (“Oyster Creek”) for twenty years beyond the current expiration date of April 9, 2009. See LBP-06-07, 63 NRC 188 (2006). This Board admitted one contention for litigation; namely, Citizens’ challenge to AmerGen’s aging management program for measuring corrosion in the sand bed region of Oyster Creek’s drywell liner to the extent that the program “fails to include periodic [ultrasonic testing (“UT”)] measurements in that region throughout the period of extended operation” (LBP-06-07, 63 NRC at 217).

¹ The six groups are: Nuclear Information and Resource Service (“NIRS”); Jersey Shore Nuclear Watch, Inc.; Grandmothers, Mothers and More for Energy Safety; New Jersey Public Interest Research Group; New Jersey Sierra Club; and New Jersey Environmental Federation. In previous decisions, this Board referred to these groups collectively as NIRS. These groups now identify themselves collectively as “Citizens,” and we will use that designation here.

Subsequently, on June 6, 2006, this Board issued a Memorandum and Order in which we concluded that Citizens' contention, as admitted by the Board, was a contention of omission that had been cured as a result of an April 4, 2006 docketed commitment by AmerGen to perform periodic UT measurements in the sand bed region of the drywell liner throughout the period of extended operation (LBP-06-16, 63 NRC 737, 742-44 (2006)). Instead of dismissing the proceeding, this Board gave Citizens the opportunity to file, within 20 days of the date of our Order, a new contention raising one or more specific substantive challenges to AmerGen's new periodic UT program for the sand bed region (*id.* at 744). Citizens were instructed to address the relevant factors in 10 C.F.R. § 2.309(f)(2) regarding the admission of contentions based on newly available information, as well as the admissibility factors in 10 C.F.R. § 2.309(f)(1).

On June 23, 2006, Citizens filed their new contention. Contemporaneously, Citizens filed a motion seeking leave to supplement their new contention on the basis of AmerGen's June 20, 2006 docketing of a new commitment concerning its aging management program for the Oyster Creek drywell liner. This Board granted Citizens' request, instructing that any "new bases or contention(s) [Citizens] seek[] to add to [their] June 23 Petition . . . must be limited to AmerGen's UT program for the sand bed region as reflected in AmerGen's docketed commitment of June 20, and be based on new information in that commitment" (Licensing Board Order (Granting [Citizens'] Motion for Leave to Submit a Supplement to its Petition) at 3 (July 5, 2006) (unpublished) [hereinafter July 5 Order]).

Citizens submitted a supplement to their June 23 Petition. AmerGen and the NRC Staff answered, arguing, respectively, that Citizens' new contention was not admissible, and that Citizens' new contention was admissible in part.

For the reasons discussed below, we conclude that Citizens' new contention is admissible in part.

II. BACKGROUND

AmerGen's License Renewal Application ("LRA") for Oyster Creek, as originally submitted, contained no provision for future UT measurements in the sand bed region of the drywell liner.² The LRA omitted such measurements because AmerGen had concluded that corrosion in that region had been arrested, and that periodic visual inspections – which AmerGen planned to perform throughout the twenty-year renewal period – would be adequate to identify the effects of age-related corrosion (Oyster Creek Generating Station, License Renewal Application at 3.5-19 to 3.5-21 (July 22, 2005) [hereinafter LRA]). Since submitting its LRA, however, AmerGen's position on the need for UT measurements during the period of extended operation has changed. On three occasions – in December 2005, April 2006, and June 2006 – AmerGen formally docketed with the NRC Staff additional commitments regarding its testing regime for the sand bed region of the drywell liner.

First, on December 9, 2005 – while Citizens' Petition to Intervene was pending before this Board – AmerGen docketed a commitment to perform a set of one-time UT thickness measurements in the sand bed region prior to the period of extended operation (LBP-06-07, 63 NRC at 216). Second, on April 4, 2006 – after this Board concluded that Citizens proffered an

² The drywell liner, also known as the drywell shell, is a steel pressure vessel surrounding the reactor system that is "designed to contain and control the release of fission products to the reactor building in the event of a Design Basis Accident including a Loss-Of-Coolant-Accident . . . so that the off-site radiation dose consequences to surrounding populations would be within the postulated acceptable limits" (LBP-06-07, 63 NRC at 212) (internal quotation marks omitted). Shaped like an inverted lightbulb, the drywell liner is about 100 feet tall, measuring about 70 feet in diameter at the spherical base and 30 feet in diameter in the upper cylinder region (*ibid.*). The spherical base is partially embedded in reinforced concrete up to about the 9-foot level, and the non-embedded portion of the liner is enclosed by a reinforced concrete shield wall, separated by an annular gap of 3 inches that allows for expansion of the liner during reactor operation (*ibid.*). The sand bed region (which originally was filled with sand) is on the lower portion of the spherical base, and it extends from about the 9-foot level to the 13-foot level (*ibid.*). Oyster Creek removed the sand from the sand bed region in 1993 after determining that it contained residual moisture that caused continuing corrosion (*id.* at 214 & n.22).

admissible contention³ – AmerGen docketed a commitment to perform periodic UT measurements in the sand bed region throughout the period of extended operation. See Enclosure to Letter from Michael P. Gallagher, AmerGen, to NRC (Apr. 4, 2006) [hereinafter April 4 Commitment].⁴ Specifically, AmerGen committed to perform UT measurements in the sand bed region every ten years following the measurements taken prior to the renewal period. “The UT measurements will be taken . . . at the same locations where UT measurements were performed in 1996. The inspection results will be compared to previous results [and any] [s]tatistically significant deviations from the 1992, 1994, and 1996 UT results will result in [a series of] corrective actions” (id. at 1).⁵

On June 20, 2006, AmerGen docketed its third commitment, in which it declared that – after performing the initial set of UT measurements in the sand bed region prior to the period of extended operation – it would perform an additional set of measurements two refueling outages

³ Citizens’ contention, as reframed by the Board, read as follows (LBP-06-07, 63 NRC at 217):

AmerGen’s [LRA] fails to establish an adequate aging management plan for the sand bed region of the drywell liner, because its corrosion management program fails to include periodic UT measurements in that region throughout the period of extended operation and, thus, will not enable AmerGen to determine the amount of corrosion in that region and thereby maintain the safety margins during the term of the extended license.

⁴ AmerGen’s April 4 commitment also included the following changes to its aging management plan for the sand bed region: (1) prior to the period of extended operation and every 10 years during that period, AmerGen will perform additional visual inspections of the epoxy coating applied to the exterior surface of the drywell shell in the sand bed region in accordance with ASME Section XI, Subsection IWE; and (2) on a periodic basis the drywell sand bed region drains will be monitored for water leakage. See April 4 Commitment at 1-2.

⁵ The corrective actions that will be taken prior to restarting operations from the outage include (April 4 Commitment at 1-2): (1) performing confirmatory UT measurements; (2) notifying the NRC within 48 hours of confirmation of the identified condition; (3) conducting visual inspections of the external surface in the sand bed region; (4) assessing the extent of the condition to determine if additional inspections are required to assure drywell integrity; and (5) performing “operability determination and justification for operation until next inspection.”

later, with “[s]ubsequent inspection frequency . . . established as appropriate, not to exceed 10-year intervals” (Letter from Michael P. Gallagher, AmerGen, to NRC, Encl. 2, at 2 (June 20, 2006) [hereinafter June 20 Commitment]). In addition, AmerGen committed to monitor the sand bed region drains daily during refueling outages and quarterly during the plant operating cycle throughout the period of extended operation. If leakage is detected, “procedures will be in place to determine the source of leakage and [to] investigate and address the impact of leakage on the drywell shell” (*id.* at 3). These procedures include verifying the condition of the drywell shell coating and moisture barrier seal in the sand bed region, performing UT examinations on the upper regions of the shell as well as “on any areas in the sand bed region where visual inspection indicates the coating is damaged and corrosion has occurred,” and repairing any degraded coating or moisture barrier (*id.* at 3-4).

Pending before this Board is Citizens’ new contention, as set forth in their July 25 Supplement. The contention reads as follows ([Citizens’] Supplement to Petition to Add a New Contention at 7 (July 25, 2006) [hereinafter Citizens Supplement]):

AmerGen must provide an aging management plan for the sand bed region of the drywell shell that ensures that safety margins are maintained throughout the term of any extended license, but the proposed plan fails to do so because the acceptance criteria are inadequate, the scheduled UT monitoring frequency is too low in the absence of adequate monitoring for moisture and coating integrity and is not sufficiently adaptive to possible future narrowing of the safety margins, the monitoring for moisture and coating integrity is inadequate, the response to wet conditions and coating failure is inadequate, the scope of the UT monitoring is insufficient to systematically identify and sufficiently test all the degraded areas of the shell in the sand bed region, the quality assurance for the measurements is inadequate, and the methods proposed to analyze the UT results are flawed.

AmerGen and the NRC Staff each filed Answers. AmerGen opposes the admission of Citizens’ new contention on two principal grounds: (1) Citizens fail to comply with the Board’s July 5 Order; and (2) Citizens fail to satisfy the requirements of 10 C.F.R. § 2.309(f)(1) and (f)(2). See AmerGen’s Answer to Citizens’ Petition to Add a New Contention and Supplement Thereto (Aug. 11, 2006) [hereinafter AmerGen Answer]. The NRC Staff, on the other hand,

supports admitting Citizens' new contention in part. See NRC Staff Answer to Petition to Add a New Contention and Petition Supplement (Aug. 21, 2006) [hereinafter NRC Staff Answer].

Citizens filed a Reply to each Answer. See Citizens' Reply to AmerGen's Answer to the Petition to Add a New Contention and Supplement Thereto (Aug. 18, 2006) [hereinafter Citizens Reply to AmerGen]; Citizens' Reply to NRC Staff's Answer to the Petition to Add a New Contention and Supplement Thereto (Aug. 29, 2006) [hereinafter Citizens Reply to NRC Staff].

III. ANALYSIS

A. LEGAL STANDARDS GOVERNING THE ADMISSIBILITY OF CITIZENS' NEWLY PROFFERED CONTENTION

Because Citizens seek to introduce a new or amended contention based on allegedly new information that was previously unavailable, they must show that (10 C.F.R. § 2.309(f)(2)):⁶

- (i) The information upon which the amended or new contention is based was not previously available;
- (ii) The information upon which the amended or new contention is based is materially different than information previously available; and
- (iii) The amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information.

Failure to satisfy any of these requirements will mandate the rejection of Citizens' contention as nontimely.⁷

⁶ To gain party status in an NRC adjudicative proceeding, a petitioner must – in addition to submitting at least one admissible contention – satisfy standing requirements (10 C.F.R. § 2.309(a), (d)). At a previous stage of this proceeding, this Board concluded that Citizens have standing (LBP-06-07, 63 NRC at 195-97).

⁷ A nontimely contention is not perforce inadmissible. However, a petitioner must demonstrate that admission of a nontimely contention is warranted pursuant to the eight-factor balancing test in 10 C.F.R. § 2.309(c). Because Citizens fail to address section 2.309(c) in their filings, this Board must reject nontimely aspects of Citizens' contention. Contrary to Citizens' belief (Citizens Supplement at 14, 24), they may not belatedly attempt to rehabilitate nontimely aspects of their contention. We have, on several occasions, put Citizens on notice that nontimely contentions must satisfy section 2.309(c). See LBP-06-16, 63 NRC at 745 n.12; LBP-06-11, 63 NRC 391, 396 n.3 (2006). In these circumstances, Citizens should have

(continued...)

Citizens' contention must also satisfy the following six requirements to be deemed admissible (10 C.F.R. § 2.309(f)(1)):

- (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;
- (v) Provide a concise statement of the alleged facts or expert opinions which support the . . . 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 . . . 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 . . . 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.

These contention requirements are "strict by design" (Dominion Nuclear Conn., Inc. (Millstone Nuclear Power Station, Units 2 & 3), CLI-01-24, 54 NRC 349, 358 (2001)). A contention that fails to comply with any of these requirements will not be admitted for litigation (Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC at 318, 325 (1999); Changes to Adjudicatory Process, 69 Fed. Reg. 2182, 2221 (Jan. 14, 2004)).

⁷(...continued)

addressed the section 2.309(c) factors for any contention that reasonably might be viewed as nontimely. We treat Citizens' failure to address those factors as a waiver, which forecloses them hereafter from making an untimely attempt to satisfy section 2.309(c).

Because this proceeding involves a license renewal application, its scope is cabined by 10 C.F.R. Part 54, which limits the scope of the NRC's public health and safety review in license renewal proceedings to "a review of the plant structures and components that will require an *aging* management review for the period of extended operation and the plant's systems, structures, and components that are subject to an evaluation of time-limited *aging* analyses" (Duke Energy Corp. (McGuire Nuclear Station, Units 1 & 2), CLI-02-26, 56 NRC 358, 363-64 (2002) (quoting CLI-01-20, 54 NRC 211, 212 (2001)). See also Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 & 4), CLI-01-17, 54 NRC 3, 10 (2001) (license renewal reviews focus "on plant systems, structures, and components for which current [regulatory] activities and requirements may not be sufficient to manage the effects of aging in the period of extended operation") (emphasis omitted) (quoting Nuclear Power Plant License Renewal, 60 Fed. Reg. 22,461, 22,469 (May 8, 1995)). Issues relating to a plant's current licensing basis ("CLB") are ordinarily beyond the scope of a license renewal review, because "those issues already [are] monitored, reviewed, and commonly resolved as needed by ongoing regulatory oversight" (Turkey Point, CLI-01-17, 54 NRC at 8).⁸

⁸ The term "current licensing basis," or CLB, is defined as (10 C.F.R. § 54.3(a)):

the set of NRC requirements applicable to a specific plant and a licensee's written commitments for ensuring compliance with and operation within applicable NRC requirements and the plant-specific design basis (including all modifications and additions to such commitments over the life of the license) that are docketed and in effect. The CLB includes regulations contained in 10 C.F.R. Parts 2, 19, 20, 21, 26, 30, 40, 50, 51, 54, 55, 70, 72, 73, 100 and appendices thereto; orders; license conditions; exemptions and technical specifications. It also includes the plant-specific design-basis information defined in 10 C.F.R. 50.2 as documented in the most recent final safety analysis report (FSAR) . . . and the licensee's commitments remaining in effect that were made in docketed licensing correspondence such as licensee responses to NRC bulletins, generic letters, and enforcement actions, as well as licensee commitments documented in NRC safety evaluations or licensee event reports.

B. CITIZENS' CONTENTION IS ADMISSIBLE IN PART

Citizens' proposed contention, which is set out verbatim supra p. 5, may – for convenience of analysis – be divided into the following seven discrete challenges:⁹

1. AmerGen's acceptance criteria are inadequate to ensure adequate safety margins.
2. AmerGen's scheduled UT monitoring frequency in the sand bed region is insufficient to maintain an adequate safety margin.¹⁰
3. AmerGen's monitoring in the sand bed region for moisture and coating integrity is inadequate.
4. AmerGen's response to wet conditions and coating failure in the sand bed region is inadequate.
5. AmerGen's scope of UT monitoring is insufficient to systematically identify and sufficiently test all the degraded areas in the sand bed region.
6. AmerGen's quality assurance for the measurements in the sand bed region is inadequate.
7. AmerGen's methods for analyzing UT results in the sand bed region are flawed.

⁹ The proposed contention in Citizens' July 25 Supplement is a slightly expanded and edited version of the proposed contention in their June 23 filing. Compare Citizens Supplement at 7-8 (supplemented new contention) with [Citizens'] Petition to Add a New Contention at 4 (June 23, 2006) [hereinafter Citizens Petition] (new contention). For simplicity, we will analyze the contention as framed by Citizens in their July 25 Supplement.

¹⁰ To the extent that challenge number 2, as originally framed by Citizens (supra p. 5), raises a question regarding the adequacy of AmerGen's plan to monitor for moisture and coating integrity, it is duplicative of the question raised in challenge number 3. For simplicity and efficiency, we have reframed challenge number 2, as shown above in text. See Andrew Siemaszko, CLI-06-16, 63 NRC 708, 720 (2006) (Board has discretion to reframe contention "for purposes of clarity, succinctness, and a more efficient proceeding") (quoting Virginia Elec. and Power Co. (North Anna Power Station, Units 1 & 2), LBP-84-40A, 20 NRC 1195, 1199 (1984)). We address the admissibility of Citizens' challenge to AmerGen's plan to monitor for moisture and coating integrity in the context of considering the admissibility of challenge number 3.

As discussed below, we conclude that challenge number 2 is an admissible contention. We conclude that the remaining challenges are not admissible.¹¹

1. Citizens' Assertion That AmerGen's Acceptance Criteria Are Inadequate To Ensure Adequate Safety Margins Is Not An Admissible Contention

Citizens assert that AmerGen's "acceptance criteria" – i.e., the minimum required thickness for the drywell shell to ensure its structural integrity – are inadequate to ensure that the safety margins will be maintained throughout any period of extended operation, because it does "not fully reflect the limitations in the modeling that was used to derive the results" (Citizens Petition at 7).

The "modeling" Citizens refer to is an analysis that is based on a 36-degree section model – known as a bay – that "takes advantage of symmetry of the drywell" and that "assume[s] that the shell thickness in the entire sand bed region has been reduced uniformly to a thickness of 0.736 inches" (Citizens Petition, Exh. 1, AmerGen Response to NRC Aging Management Program ("AMP") Questions, at 8 (AMP-210 (April 5, 2006) [hereinafter AMP-210])). Although actual UT measurements in the sand bed region revealed "isolated, localized areas where the . . . thickness is less than 0.736 inches" (ibid.), the shell will reportedly remain within the safety margins, so long as "one contiguous area of one square foot in each bay . . . [is] thicker than 0.536 inches" and any area 2.5 inches in diameter measures at least 0.49 inches in thickness (Citizens Petition at 7) (citing Exh. 3, GPU Nuclear Corp., Calculation Sheet

¹¹ Because we find that challenges number 1 and 3 through 7 are inadmissible on other grounds, we need not address AmerGen's argument that those challenges are beyond the scope of our directive "to limit any new contention to AmerGen's 'new' UT program as reflected in its April 4 and June 20 docketed commitments" (AmerGen Answer at 4), aside from observing that AmerGen's argument appears to be based on an unduly confining interpretation of our directive. We reject, however, AmerGen's suggestion (id. at 4-5) that our directive imposed a limit on Citizens' exercise of their regulatory right to proffer any new or supplemented contentions, provided that they complied with the requirements of 10 C.F.R. § 2.309(c) or (f)(2), and also satisfied section 2.309(f)(1).

C-1302-187-5320-024, Rev. 0, at 9 (Apr. 16, 1993) [hereinafter GPU Nuclear Calculation Sheet]; Exh. 1, AMP-210, at 9).

Citizens' first challenge to the modeling is that it wrongly assumes that only one area in each bay is thinner than 0.736 inches, whereas, in one bay alone there are reportedly at least nine areas measuring thinner than 0.736 inches (Citizens Petition at 7-8) (citing Exh. 3, GPU Nuclear Calculation Sheet at 26). In fact, Citizens state, "AmerGen has recently reported that over 20 areas in total are now thinner than 0.736 inches" (id. at 8) (citing Exh. 1, AMP-210, at 10). Second, Citizens contend that the modeling failed to calculate the "minimum required linear distances between thin areas," did not provide any estimates of uncertainty, and did not "look at whether other geometries . . . would lead to failure even if the thin area is less than [the allowable amount of] one square foot" (ibid.).

These alleged failures and omissions demonstrate, Citizens argue, that "AmerGen's current approach to assessing the continued integrity of the drywell shell . . . may not properly capture the behavior of the shell in its degraded state" (Citizens Supplement at 18). Further, state Citizens, AmerGen acknowledges that one of the code sections it is using to derive its acceptance criteria "is not directly applicable to the issues involved" (id. at 19). Citizens' expert, Stress Engineering Services, Inc., opines that "much better techniques than those used by AmerGen are now available and are code compliant . . . and provide the most accurate assessment of vessel integrity possible" (id. at 18).

Citizens maintain that their challenge is timely because it is based on the new and previously unavailable information contained in AmerGen's April 4 and June 20 commitments and supporting documentation. Citizens assert that these documents – which were not available when Citizens filed their Petition to Intervene – clarified "how AmerGen had changed the acceptance criteria for measurements that showed that the steel shell was already thinner than the initial 0.736 inch criterion" (Citizens Petition at 16). Furthermore, Citizens assert, the

June 20 commitment “set[s] forth new information and assertions regarding the derivation of the acceptance criteria” (Citizens Supplement at 17) and as such, constitutes AmerGen’s “formal[] adopt[ion] [of] the old acceptance criteria for use in the future monitoring, . . . [which] filled the prior omission of acceptance criteria” (Citizens Reply to AmerGen at 14-15).

AmerGen and the NRC Staff both contend that Citizens’ challenge is not based on new and previously unavailable information and, thus, is nontimely pursuant to 10 C.F.R. § 2.309(f)(2), because “nothing in AmerGen’s April 4 or June 20 commitments . . . adds to, or modifies, the acceptance criteria that have been in effect for years and have been used to assess the actual 1992, 1994, and 1996 UT results” (AmerGen Answer at 7; accord NRC Staff Answer at 12). We agree.

Contrary to Citizens’ assertion, the *information* contained in AmerGen’s April 2006 responses to the NRC Staff’s AMP Questions is by no means new, nor was it previously unavailable. First, in its original Petition to Intervene, Citizens indicated that the “as designed” and “minimum required” thicknesses for the sand bed region are 1.154 and 0.736 inches, respectively. See [Citizens’] Request for Hearing and Petition to Intervene at 9 (Nov. 14, 2005) [hereinafter Citizens Petition to Intervene]; see also Combined Reply of [Citizens] at 7 (Dec. 19, 2005) (AmerGen’s “analysis for code required remaining wall thicknesses . . . establishes the critical minimum required drywell wall thickness at 0.736 inches to prevent buckling”) [hereinafter Citizens 2005 Reply]. Had Citizens wished to challenge the methodology used to determine this acceptance criteria for the sand bed region, it had an obligation – once it became aware of that criteria – to obtain the information necessary to advance such a challenge.¹²

¹² It is well established that the “onus of obtaining . . . copies of documents necessary to support its proposed contentions” is on the petitioner (CLI-06-24, 64 NRC ___, ___ n.71 (slip op. at 14 n.71) (Sept. 6, 2006)).

In fact, Citizens' allegation that this information was previously unavailable to them is belied by the record. First, AmerGen's LRA clearly states that its aging management program for the drywell shell – which “is consistent with the ten elements of aging management program XI.S1, ‘[American Society of Mechanical Engineers (“ASME”)] Section XI, Subsection IWE,’ specified in NUREG-1801” (LRA, App. B, at B-75) – will “[d]emonstrate that the minimum required shell thickness is in accordance with ASME code” (LRA at 3.5-18; accord id. at 3.5-20; see also id. at 4-55). Second, Citizens' own exhibits to its Petition to Intervene make repeated specific references to AmerGen's (and its predecessor's) use of the ASME code for establishing the acceptance criteria for the drywell shell. See Citizens Petition to Intervene, Exh. 4, Summary of May 5, 1993, Meeting with GPU Nuclear Corp., Encl. 2, at 12 (drywell shell was “evaluated using ASME local acceptance criteria”); id., Exh. 3, Evaluation Report on Structural Integrity of the Oyster Creek Drywell at 3 (Apr. 24, 1992) (discussing then-licensee's application of ASME Section III, Subsection NE-3213.10 for the localized discontinuity of corrosion). Third, Citizens directly challenged the adequacy of AmerGen's acceptance criteria in their February 2006 motion to add new contentions. See [Citizens'] Motion for Leave to Add Contentions or Supplement the Basis of the Current Contention at 12 (Feb. 7, 2006) (“new acceptance criteria must be developed”) [hereinafter Citizens Motion to Add Contentions]. Finally, Citizens' exhibits attached in support of their June 23 Petition demonstrate that the analyses in effect at Oyster Creek for deriving the acceptance criteria have long been publicly available. See Citizens Petition, Exh. 1, AMP-210, at 7 (“engineering analys[es] that demonstrated compliance to ASME Code requirements [for vessel thickness] . . . are documented in GE Reports [and] were transmitted to the NRC Staff in December 1990 and in 1991”).

To the extent Citizens seek to create the impression that, because the NRC Staff sought clarification of AmerGen's methods for deriving the acceptance criteria, these methods were previously unknown to the Staff or were otherwise altered, such an impression is demonstrably

incorrect. AmerGen's response to the Staff's AMP questions makes clear that the analyses currently in effect for Oyster Creek are the same as those documented in the early 1990s. See Citizens Petition, Exh. 1, AMP-210, at 7-10. Because Citizens fail to show that these analyses have changed in any significant way, they are simply incorrect when they state that there was a "prior omission of acceptance criteria" (Citizens Reply to AmerGen at 15) or that "[n]either [the] NRC Staff, nor Citizens knew what statistical technique AmerGen would employ to analyze the future UT measurements" (id. at 16; see also Citizens Reply to NRC Staff at 5). Thus, any challenge to the adequacy of AmerGen's acceptance criteria should have been made at the time Citizens filed their initial Petition to Intervene. It cannot be submitted at this late juncture.

2. Citizens' Assertion That AmerGen's Scheduled UT Monitoring Frequency In The Sand Bed Region Is Insufficient To Maintain An Adequate Safety Margin Is An Admissible Contention

In this contention as we have reframed it (supra note 10), Citizens argue that – because the corrosion rate in the sand bed region is unknown due to the uncertain corrosive environment – AmerGen's proposed plan to perform UT tests prior to the period of extended operations, two refueling outages later, and thereafter at an appropriate frequency not to exceed 10-year intervals, is insufficient to maintain an adequate safety margin (Citizens Supplement at 8-10).

AmerGen does not challenge the timeliness of this contention (AmerGen Answer at 6), but it asserts that this contention should be rejected for lack of an adequate basis and failure to present a genuine dispute of material fact or law (id. at 13-16). In the NRC Staff's view, on the other hand, this contention satisfies both the timeliness requirements of 10 C.F.R. § 2.309(f)(2) and the admissibility requirements of section 2.309(f)(1). See NRC Staff Answer at 10, 13-14.

We agree with Citizens and the NRC Staff that this contention is admissible.

First, we agree with the undisputed averments of Citizens (Citizens Supplement at 23-24) and the NRC Staff (NRC Staff Answer at 11) that the contention satisfies the timeliness requirements of 10 C.F.R. § 2.309(f)(2)(i)-(iii), because: (1) the information on which the new contention is based – i.e., AmerGen’s new UT testing plan of April 4, 2006 and June 20, 2006 – was not previously available; (2) the new UT testing plan challenged by Citizens is materially different than the prior plan; and (3) Citizens submitted the new contention in a timely fashion.

Similarly, we agree with Citizens (Citizens Supplement at 8-10) and the NRC Staff (NRC Staff Answer at 13-14) that the contention satisfies the admissibility requirements of 10 C.F.R. § 2.309(f)(1). First, Citizens’ contention provides a “specific statement of the issue of . . . fact to be raised” (10 C.F.R. § 2.309(f)(1)(i)). The issue presented is whether, in light of the uncertainty regarding the existence vel non of a corrosive environment in the sand bed region and the correlative uncertainty regarding corrosion rates in that region, AmerGen’s UT monitoring plan is sufficient to ensure adequate safety margins. See Citizens Supplement at 9-10; Citizens Petition at 5-6, 8-10.

Second, Citizens provide a “brief explanation of the basis for the contention” (10 C.F.R. § 2.309(f)(1)(ii)). Citizens explain that “the drywell shell is 0.026 inches or less from violating AmerGen’s acceptance criteria. Under corrosive conditions, long-term corrosion rates of more than 0.017 inches per year have been observed. Thus, if corrosive conditions are possible, a UT monitoring frequency of once per year or more would be necessary” to prevent violation of the acceptance criteria (Citizens Supplement at 9; accord Citizens Petition at 9). Moreover, state Citizens, “if the next scheduled UT monitoring that is to occur before the end of the licensing period shows that these safety margins have narrowed, even more frequent monitoring would be needed” (Citizens Supplement at 9).¹³

¹³ AmerGen argues that, contrary to this Board’s direction (July 5 Order at 3), Citi-
(continued...)

Third, Citizens' contention "is within the scope of the proceeding" (10 C.F.R. § 2.309(f)(1)(iii)). This license renewal proceeding encompasses a "review of the plant structures and components that will require an aging management review for the period of extended operation and the plant's systems, structures, and components that are subject to an evaluation of time-limited aging analyses" (McGuire, CLI-02-26, 56 NRC at 363-64) (emphasis omitted) (quoting CLI-01-20, 54 NRC at 212); accord Notice of Opportunity for Hearing, 70 Fed. Reg. 54,585 (Sept. 15, 2005). The Commission's regulations (10 C.F.R. §§ 54.4, 54.21(a)) require AmerGen to include in its LRA an aging management review for the drywell shell, and there is no dispute that AmerGen performed such a review. See LRA at 3.5-18 to 3.5-21, 4-54 to 4-55, B-75 to B-76, B-89 to B-90. Citizens' contention – which alleges that AmerGen's aging management plan for the sand bed region may not be sufficient to identify and control the effects of aging (i.e., corrosion) that will occur during the period of extended operations – fits squarely within the scope of this proceeding. See Turkey Point, CLI-01-17, 54 NRC at 7-8 (license renewal inquiry includes "age-related degradation" of components that, left unmitigated, can "unacceptably reduce safety margins, and lead to the loss of required plant functions . . . with a potential for offsite exposures"); accord LBP-06-07, 63 NRC at 222-25.

Fourth, Citizens demonstrate that the issue raised in their contention "is material to the findings the NRC must make to support the action that is involved in the proceeding" (10 C.F.R. § 2.309(f)(1)(iv)). To approve AmerGen's license renewal request, the NRC Staff must find that AmerGen "demonstrate[s] that the effects of aging [of Oyster Creek's drywell shell] will be adequately managed so that the intended function(s) [i.e., structural support and pressure

¹³(...continued)

zens improperly "incorporate by reference the bases [for their contention] from their June 23 Petition" (AmerGen Answer at 13). AmerGen misreads the July 5 Order. The Order directs Citizens to "set forth any *new* bases or contention(s) [they] seek[] to *add* to [their] June 23 Petition" (July 5 Order at 3) (emphasis added). We believe that Citizens are in substantial compliance with our directive.

boundary] will be maintained . . . for the period of extended operation” (id. § 54.21(a)(3)).

Citizens’ contention – which raises the issue of whether AmerGen is taking sufficiently frequent UT measurements in the sand bed region to maintain adequate safety margins – plainly is material to the finding the NRC Staff must make to approve AmerGen’s license renewal request.

Fifth, Citizens provide a “concise statement of the alleged facts or expert opinions which support . . . [their] position . . . together with references to the specific sources and documents on which [they] intend[] to rely” (10 C.F.R. § 2.309(f)(1)(v)). Relying on the expert opinion of Dr. Rudolf H. Hausler,¹⁴ Citizens state that (Citizens Supplement at 9): (1) portions of the drywell shell are 0.026 inches or less from violating AmerGen’s acceptance criteria (Citizens Petition, Memorandum from Dr. Rudolf H. Hausler to Richard Webster, at 7 (June 23, 2006) [hereinafter Dr. Hausler June 2006 Memo]); (2) long-term corrosion rates of more than 0.017 inches per year have been observed (id. at 6); and, thus (3) if corrosive conditions are possible, a UT monitoring frequency of once per year is necessary (id. at 7). Moreover, if the UT monitoring that is scheduled to occur before the end of the licensing period reveals that the sand bed region has suffered additional corrosion, the UT testing frequency would have to be increased accordingly (ibid.). Citizens also state that such UT monitoring is necessary even where visual inspections of the epoxy coating do not reveal that the coating has deteriorated, because corrosion may occur under the epoxy coating in the absence of visible deterioration due to non-visible holidays, or pinholes. See Citizens Supplement at 12; accord Citizens Supplement, Memorandum from Dr. Rudolf H. Hausler to Richard Webster, at 5-6 (July 25, 2006) [hereinafter Dr. Hausler July 2006 Memo].

¹⁴ This Board previously concluded that, for present purposes, Dr. Hausler is qualified to provide an expert opinion with regard to matters relating to corrosion of the drywell shell (LBP-06-07, 63 NRC at 220 n.33).

Finally, Citizens' contention provides "sufficient information to show that a genuine dispute exists . . . on a material issue of law or fact" (10 C.F.R. § 2.309(f)(1)(vi)). Specifically, we find that – given the asserted minimal safety margin in the sand bed region due to prior corrosion, coupled with the uncertainty of the corrosive environment and corrosion rate in that region – Citizens have shown that a genuine dispute exists as to whether AmerGen's scheduled UT monitoring frequency for that region is sufficient to maintain an adequate safety margin. See NRC Staff Answer at 13-14 (Citizens' claim that "UT measurements should be taken yearly based on current acceptance criteria . . . raises a genuine dispute regarding whether the . . . frequency of monitoring is sufficient to identify degradation").

AmerGen asserts that Citizens fail to raise a genuine dispute regarding the adequacy of the UT program for the following two reasons (AmerGen Answer at 14): (1) Citizens have not shown that the sand bed region is exposed to a corrosive environment; and (2) even if a corrosive environment exists, Citizens have not shown that such an environment would affect the sand bed region, which is protected by an epoxy coating. We are not persuaded by AmerGen's arguments.

First, contrary to AmerGen's apparent understanding, Citizens need not – at this stage of the proceeding – definitively show that the sand bed region is exposed to a corrosive environment. Rather, Citizens need simply proffer "some minimal factual . . . foundation" sufficient to raise a genuine dispute regarding the existence of a corrosive environment (Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, & 3), CLI-99-11, 49 NRC 328, 334 (1999)). This they have done. See, e.g., LBP-06-07, 63 NRC at 224 (a majority of this Board found that Citizens made a sufficient showing to raise a genuine dispute as to whether "a corrosive environment exists in the drywell liner that may result in continuing degradation during the renewal period"); Dr. Hausler July 2006 Memo at 5 ("water leaks continue to occur, or at least could occur, both during refueling outages as well as during normal operations").

Second, AmerGen errs in asserting that, even if a corrosive environment exists, Citizens' contention must be rejected because they have not shown that such an environment would affect the sand bed region, "which is covered by a robust multi-layered epoxy coating" (AmerGen Answer at 14). This assertion, like the previous assertion, misperceives the amount of factual support that Citizens must proffer at the contention-admissions stage. Citizens need simply proffer sufficient information to raise a genuine factual dispute regarding the efficacy of the epoxy coating in preventing corrosion. Citizens have satisfied this requirement. See, e.g., LBP-06-07, 63 NRC at 219 n.29 (a majority of this Board found that Citizens "provided an adequate factual basis to support its assertion that corrosion-causing moisture continues to occur in the sand bed region, which may be especially problematic if such moisture seeps into pinhole leaks in the epoxy coating"); Dr. Hausler June 2006 Memo at 6 ("corrosion behind the coating could occur and not be noted visually"); Dr. Hausler July 2006 Memo at 6 ("pinholes in the coating cannot be assessed by 'visual examination'").¹⁵

Finally, AmerGen argues that this Board should reject Citizens' contention, because AmerGen's dynamic UT measurement program, coupled with the corrective actions AmerGen will take if statistically significant deviations from the prior UT results occur, is "sufficiently adaptive to possible future narrowing of the safety margins" (AmerGen Answer at 15) (internal quotation marks omitted). This argument is unavailing. It is premised on the notion that, after AmerGen takes a set of UT measurements before the period of extended operation, it may – consistent with safety standards – wait until the second refueling outage (between three to four years) to take the next set of measurements. Citizens, on the other hand, argue that UT measurements must be taken at least yearly to ensure adequate safety margins. To accept

¹⁵ AmerGen's conclusory characterization of the epoxy coating as "robust" (AmerGen Answer at 14) seems to discount entirely the fact that the coating exceeded its rated lifetime four to six years ago (LBP-06-07, 63 NRC at 215 n.26; Dr. Hausler June 2006 Memo at 12).

AmerGen's argument would require us to adjudicate the merits of Citizens' contention, which is beyond the scope of our adjudicatory function at this juncture. See Mississippi Power and Light Co. (Grand Gulf Nuclear Station, Units 1 & 2), ALAB-130, 6 AEC 423, 426 (1973) ("in passing upon the question as to whether an intervention petition should be granted, it is not the function of a licensing board to reach the merits of any contention contained therein"). The sole question before us is whether Citizens have submitted the requisite "minimal factual . . . foundation" (Oconee, CLI-99-11, 49 NRC at 334) to support the admission of their contention that AmerGen's UT monitoring program in the sand bed region is insufficient to maintain an adequate safety margin. We conclude that they have.¹⁶

3. Citizens' Assertion That AmerGen's Monitoring In The Sand Bed Region For Coating Integrity And Moisture Is Inadequate Is Not An Admissible Contention

Citizens assert that AmerGen's plan for monitoring the sand bed region for integrity of the epoxy coating and for moisture is inadequate. With regard to monitoring the epoxy coating, Citizens assert that AmerGen's most recent commitment – which calls for (1) visual inspection of the coating during a refueling outage if leakage from the sand bed drains is found during the outage, and (2) visual inspection of the coating at the next refueling outage if leakage is detected during the operating cycle – is inadequate, because visual inspections may not reveal

¹⁶ In admitting this contention, we accept Citizens' uncontroverted assertion that the "drywell shell is 0.026 inches or less from violating AmerGen's acceptance criteria [of 0.736 inches]" (Citizens Supplement at 9). This acceptance criteria is based on buckling concerns, not containment concerns. But cf. LBP-06-07, 63 NRC at 214 n.23 (this Board observes that, *on the present record*, "we [do not] perceive the [corrosion in the sand bed region] as a uniform and uninterrupted ring encircling the [drywell shell] that puts it at risk of buckling failure"). If the record, upon further development, shows that the pattern of corrosion in the sand bed region does not present a buckling risk, but rather presents a risk of localized containment failure (*i.e.*, inability of the drywell shell to contain radioactive gases under pressurized conditions), then the safety margin would be much larger, thus undercutting the foundation of Citizens' argument that UT measurements must be taken at least annually because the historical corrosion rate has been such that, if corrosion were to resume at that rate, the safety margin would be eliminated within two years. This is an issue that may ultimately be a proper topic for summary disposition.

deficiencies in the coating, and, moreover, such inspections should be conducted when moisture is detected, and quarterly, while wet conditions exist (Citizens Supplement at 11) (citing Dr. Hausler July 2006 Memo at 6). With regard to monitoring for moisture, Citizens state that the current plan – which calls for “daily monitoring of the drains from the sand bed region during refueling outages and quarterly monitoring of the drains during the plant operating cycle” (*id.* at 5) – is inadequate, because it “does not suggest continuous monitoring or monitoring of moisture in the drywell proper” (*ibid.*).

AmerGen argues that this contention should be rejected as nontimely pursuant to 10 C.F.R. § 2.309(f)(2), because “it is based on previously available information” (AmerGen Answer at 10). The NRC Staff likewise argues that this contention should be rejected as nontimely, arguing that Citizens may not challenge the adequacy of the moisture and coating integrity monitoring program based on AmerGen’s June 20 commitment, because Citizens have not shown that information about the program “is materially different from information previously available” (NRC Staff Answer at 11). We agree with AmerGen and the NRC Staff that this contention is not admissible.

It is clear to us that the contention is nontimely to the extent it challenges AmerGen’s monitoring program for epoxy coating integrity. Although Citizens’ contention does not specifically reference AmerGen’s Protective Coating Monitoring and Maintenance Program (“PCMMP”), we conclude that the contention – which attacks the adequacy of AmerGen’s inspection program for the epoxy coating – effectively challenges the PCMMP, which is described in AmerGen’s LRA.

As AmerGen’s LRA states, the PCMMP “is an existing program that provides for aging management of . . . Service Level II coatings for the external drywell shell in the area of the sand bed region” (LRA, App. A, at A-19 to A-20). It “provides for inspections, assessment, and repairs for any condition that adversely affects the ability of . . . sand bed region Service Level II

coatings, to function as intended” (LRA, App. A, at A-20). Notably, AmerGen’s discussion of the PCMMP in its LRA (LRA, App. B, at B-89 to B-90) states that the protective coating monitoring program is consistent with NUREG-1801, Vol. 2, Rev. 1, Generic Aging Lessons Learned (GALL) Report (Sept. 2005). NUREG-1801, in turn, indicates that ASTM D 5163-05 – which is entitled Standard Guide for Establishing Procedures to Monitor the Performance of Coating Service Level I Coating Systems in an Operating Nuclear Power Plant (Apr. 2005) – “provides guidelines that are acceptable to the NRC Staff for establishing an in-service coatings monitoring program” (NUREG-1801, at XI S-25) (quoting Regulatory Guide 1.54, Rev. 1, Service Level I, II, and III Protective Coatings Applied to Nuclear Plants, at C4 (July 2000) [hereinafter RG 1.54]).¹⁷

ASTM D 5163-05 provides detailed guidance for establishing a program to monitor the integrity of protective coatings. As relevant here, it states that the owner/operator shall develop an inspection plan consisting of a “general visual inspection . . . on all readily accessible coated surfaces during a walk-through. After the walk-through, thorough visual inspections shall be carried out on previously designated areas noted as deficient during the walk-through” (ASTM D 5163-05, at 2-3, § 10.1). Additionally, ASTM D 5163-05 authorizes the owner/operator to restrict the frequency of such inspections “to major maintenance outages or refueling outages” (id. at 2, § 6.1).

AmerGen’s PCMMP, as set forth in its LRA, thus establishes a monitoring program for the epoxy coating that authorizes visual inspections and provides periodicity parameters for such inspections. If Citizens wished to raise a contention challenging these aspects of the

¹⁷ RG 1.54 indicates that ASTM D 5163-05 is also acceptable “for establishing an in-service coatings monitoring program . . . for Service Level II and other areas outside containment” (RG 1.54, at C4).

PCMMP, they should have done so in their original Petition to Intervene. Their present attempt to do so is nontimely.¹⁸

That AmerGen – since its submission of the LRA – has enhanced the PCMMP does not render Citizens’ challenge timely. First, as a matter of law and logic, if – as Citizens allege – AmerGen’s *enhanced* monitoring program is inadequate, then AmerGen’s *unenanced* monitoring program embodied in its LRA was a fortiori inadequate, and Citizens had a regulatory obligation to challenge it in their original Petition to Intervene. Cf. International Uranium (USA) Corp. (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 251 (2001) (“Since a license amendment involves a facility with ongoing operations, a petitioner’s challenge must show that the amendment will cause a distinct new harm or threat apart from the activities already licensed.”) (internal quotation marks omitted). Second, as a matter of policy, an applicant’s decision to improve an existing program to promote health and safety or to boost public support and confidence ought not ordinarily be viewed as conferring petitioners with an automatic opportunity to advance a new contention; a contrary conclusion could have the perverse effect of discouraging applicants from enhancing safety, health, and environmental programs on a voluntary basis. In short, for reasons grounded in law, logic, and policy, we conclude that Citizens’ challenge to AmerGen’s June 20 commitment to conduct visual inspections of the epoxy coating at prescribed times is a nontimely attack on AmerGen’s PCMMP.¹⁹

¹⁸ That Citizens’ current attempt to challenge AmerGen’s inspection program for the epoxy coating is nontimely is further evidenced by the fact that Citizens attempted – unsuccessfully – to raise a similar contention in their December 2005 Reply. See LBP-06-07, 63 NRC at 226-27.

¹⁹ Although Citizens are prohibited from launching a nontimely attack on AmerGen’s PCMMP, the fundamental concern underlying contention number 3 – which is that corrosion of the drywell shell may not be detected in time to maintain an adequate safety margin – is assuaged by the admission of contention number 2, whose adjudication will resolve whether the frequency of UT measurements will be sufficient to assure that the safety margin will be maintained.

Moreover, Citizens' challenge to the PCMMP is inadmissible as an impermissible challenge to NRC regulations. 10 C.F.R. § 2.335 bars petitioners from challenging in adjudicatory proceedings any "rule or regulation of the Commission, or any provision thereof" (10 C.F.R. § 2.335(a)). During the course of the NRC Staff's review of the Oyster Creek LRA, AmerGen committed to enhance its PCMMP, declaring that it will "monitor the protective coating in the exterior surfaces of the drywell in the sand bed region in accordance with the requirements of ASME Section XI, Subsection IWE during the period of extended operation" (Citizens Petition, Exh. 1, at 32 (AMP-141 (Apr. 5, 2006)) (referencing AmerGen's response to NRC AMP Question 188 (Letter from Michael P. Gallagher, AmerGen, to NRC at 11 (April 17, 2006) [hereinafter AMP-188]), which explains that additional requirements will be included in Oyster Creek's current inspection specifications for Service Level II protective coating in the sand bed region to satisfy the requirements of ASME Section XI, Subsection IWE).²⁰ The requirements set forth in ASME Section XI, Subsection IWE are imposed on licensees under 10 C.F.R. § 50.55a(g)(4), (g)(6)(ii)(B). Because AmerGen has committed to a program that incorporates the requirements of an ASME Code that is specifically referenced by 10 C.F.R. § 50.55a, Citizens are prohibited from challenging its adequacy.

²⁰ The specific requirements that will be included in IS-328227-004 ("Functional Requirements for Drywell Containment Vessel Thickness Examination"), the current inspection specification for Oyster Creek Service Level II protective coatings, are (AMP-188 at 11):

Sand bed Region external coating inspections will be per Examination Category E-C (augmented examination) and will require VT-1 visual examinations per IWE-3412.1.

- a. The inspected area shall be examined (as a minimum) for evidence of off-flaking, blistering, peeling, discoloration, and other signs of distress.
- b. Areas that are suspect shall be dispositioned by engineering evaluation or corrected by repair or replacement in accordance with IWE-3122.
- c. Supplemental examinations in accordance with IWE-3200 shall be performed when specified as a result of engineering evaluation.

Nor is Citizens' attempt to challenge AmerGen's plan for monitoring for moisture an admissible contention. The instant record indicates that AmerGen's moisture monitoring program dates back over a decade. Letters from the then-licensee of Oyster Creek to the NRC Staff dated December 15, 1995 and February 15, 1996 document the existence of this program, in which the licensee committed to monitor for water leakage during power operation as well as during refueling activities (Citizens 2005 Reply, Exh. 10, Letter from R.W. Keaten, GPU Nuclear, to NRC (Dec. 15, 1995); id., Exh. 11, Letter from Alexander W. Dromerick, NRC, to Michael B. Roche, GPU Nuclear (Feb. 15, 1996)). See also Citizens Petition to Intervene, Exh. 4, Encl. 2, at 14 (explaining that the licensee will "monitor for water leakage during operating cycles and refueling outages [and] take corrective action"). If Citizens wished to argue that AmerGen's moisture monitoring program was inadequate and should be replaced with a "continuous monitoring" plan (Citizens Supplement at 5), they should have done so in their original Petition to Intervene. Their failure to do so renders their newly presented contention nontimely.

To the extent that AmerGen's June 20 commitment to perform daily monitoring of the drains from the sand bed region during refueling outages and quarterly monitoring during the plant operating cycle improved AmerGen's moisture monitoring program, it does not – for the reasons explained supra p. 23 – provide Citizens with an excuse to raise a nontimely challenge.²¹

²¹ We also conclude that Citizens' challenge to AmerGen's monitoring program for coating integrity and moisture is inadmissible pursuant to 10 C.F.R. § 2.309(f)(1)(vi). Citizens fail to reference, much less discuss the scope of, AmerGen's PCMMP, either as it was originally presented in the LRA or as amended by AmerGen's April 4 commitment. See April 4 Commitment at 1. Nor do Citizens discuss AmerGen's long-established moisture monitoring program, despite the fact that the existence of this program is obvious from Citizens' own exhibits (Citizens 2005 Reply, Exhs. 10 & 11). Having failed to discuss the very programs that they are attacking, we conclude that Citizens have failed to "[p]rovide sufficient information to show that a genuine dispute exists [regarding] a material issue of . . . fact" (10 C.F.R. § 2.309(f)(1)(vi)).

4. Citizens' Assertion That AmerGen's Response To Wet Conditions And Coating Failure In The Sand Bed Region Is Inadequate Is Not An Admissible Contention

Citizens argue that AmerGen's "proposed response to the detection of moisture and coating failure," as contained in its June 20 commitment, is inadequate (Citizens Supplement at 12). Specifically, when failure in the coating is found, instead of repairing only the coating that is damaged, as AmerGen proposes, Citizens assert that "the entire coating [must] be removed and replaced because failure of the coating in one area would indicate that it could also rapidly fail in other areas" (*ibid.*).

This contention, like contention number 3, effectively challenges the adequacy of AmerGen's PCMMP. For the same reasons we found contention number 3 to be nontimely, we find this contention to be nontimely. As explained *supra* Part III.B.3, the PCMMP is a long-standing program that – as described in AmerGen's LRA – "provides for inspections, assessment, and repairs for any condition that adversely affects the ability of . . . sand bed region Service Level II coatings, to function as intended" (LRA, App. A, at A-20). That program – including the corrective action component – satisfies the procedures in ASTM D 5163-05, none of which requires the indiscriminate removal and replacement of an entire protective coating based on the discovery of minor, localized damage or deterioration. Rather, those procedures provide for "[a] prioritization of the repair *areas* into areas that must be repaired during the same outage and areas where repair can be postponed to future outages, keeping the coating under surveillance in the interim period" (ASTM D 5163-05, at 4, § 11.1.2) (emphasis added). In addition, ASTM D 5163-05 requires that a "recommended corrective plan of action must be provided for the major defective area so that the plant can repair these areas, if appropriate during the same outage" (*id.* at 4, § 12.1).

If Citizens wished to argue that the corrective action component of AmerGen's PCMMP was inadequate, they should have done so in their original Petition to Intervene. Their belated attempt to raise this challenge is nontimely, and their contention is thus inadmissible.²²

We also conclude that – in addition to being nontimely – Citizens' challenge to the corrective action component of AmerGen's PCMMP is inadmissible pursuant to 10 C.F.R. § 2.309(f)(1)(vi). Citizens fail to mention, much less discuss, AmerGen's PCMMP. Having failed to discuss the very program that they are attacking, we conclude that Citizens have failed to “[p]rovide sufficient information to show that a genuine dispute exists [regarding] a material issue of . . . fact” (10 C.F.R. § 2.309(f)(1)(vi)).

Finally, Citizens' contention is inadmissible pursuant to 10 C.F.R. § 2.335(a) as an impermissible challenge to NRC regulations. In enhancing its PCMMP to comply with the requirements of ASME Section XI, Subsection IWE, AmerGen equally enhanced its corrective action program for the epoxy coating. As discussed supra Part III.B.3, because AmerGen has committed to a program that incorporates the requirements of an ASME Code that is specifically referenced by 10 C.F.R. § 50.55a, Citizens are prohibited from challenging its adequacy.

²² Citizens also assert that AmerGen's commitment to take UT measurements “on ‘any areas in the sand bed region’ where water is found, the coating is defective, and ‘corrosion has occurred,’” is “totally illogical” because corrosion could occur below the damaged coating without being observed visually (Citizens Supplement at 12-13). In our view, this assertion also is an untimely attack on AmerGen's PCMMP. However, to the extent this assertion may be viewed as a contention that AmerGen's UT monitoring frequency for the sand bed region is not sufficient to maintain an adequate safety margin, it is embodied in Citizens' second contention as we reframed it and has been admitted. Cf. NRC Staff Answer at 12 (NRC Staff does not object to this assertion on the basis of timeliness, “to the extent [it] can be considered part of a UT program and limited to its nexus with the performance of UTs in the sand bed region per the June 20 commitment”).

5. Citizens' Assertion That AmerGen's Scope Of UT Monitoring Is Insufficient To Systematically Identify And Sufficiently Test All The Degraded Areas In The Sand Bed Region Is Not An Admissible Contention

Citizens assert that the “spatial scope” of AmerGen’s UT monitoring program – which will monitor “twelve 6 inch by 6 inch areas and seven 6 inch by 1 inch areas,” or approximately one percent of the “300 square feet in the sand bed region” – is too narrow “to allow meaningful comparison with the acceptance criteria” (Citizens Petition at 10). More specifically, Citizens state that the monitoring regime fails to include areas of the sand bed region known to be less than 0.736 inches, and it “fails to systematically survey the shell for new thin areas” (*ibid.*). Citizens maintain that this challenge is timely under 10 C.F.R. § 2.309(f)(2) because AmerGen’s April 4 commitment “filled the omission of a specified spatial scope in AmerGen’s monitoring plan for the future [and is therefore] materially different new information regarding the aging management regime that would be employed for any operations after the existing license expires” (Citizens Reply to AmerGen at 15).²³

AmerGen objects to the admission of Citizens’ challenge because it is not based on any material new information. According to AmerGen, neither the April 4 nor the June 20 commitment changed the spatial scope of its UT monitoring program, because “[f]uture UT [will] be conducted at the same locations and using templates with the same dimensions as those used in tests performed in 1992, 1994 and 1996” (AmerGen Answer at 11). The NRC Staff, on the other hand, does not view Citizens’ challenge to the spatial scope of AmerGen’s UT monitoring program as untimely, “given that additional specificity regarding where measurements would be taken was provided in the April 4 commitment” (NRC Staff Answer at 11). We agree with AmerGen that Citizens’ challenge is nontimely and, therefore, is inadmissible.

²³ Citizens also assert, without explanation, that AmerGen must add “another type of UT testing” to its testing program (Citizens Petition at 10). We summarily reject this claim, concluding that Citizens’ vague, one-sentence assertion falls far short of satisfying any of the six admissibility factors in 10 C.F.R. § 2.309(f)(1).

On December 9, 2005, AmerGen docketed a commitment to “perform a set of one-time thickness measurements in . . . the ‘sand bed region’” at “a sample of areas previously inspected (in the 1990s) and identified as having exhibited corrosion” (Letter from C.N. Swenson, AmerGen, to NRC at 3 (Dec. 9, 2005) [December 9 Commitment]). In the letter attached to this formal commitment, AmerGen elaborated that the “one-time UT measurements will be taken from inside the drywell *at locations tested in the 1990s such that the new measurements can be compared with the earlier testing results*” (*id.* at 1) (emphasis added). As shown below, the record is clear that, contrary to Citizens’ assertion, they were aware – even prior to submitting their Petition to Intervene – of the locations within the drywell liner that were tested during the 1990s.

The exhibits included with Citizens’ Petition to Intervene explicitly discuss the fact that UT measurements were taken in select locations in the sand bed region during the refueling outages in 1992 and 1994, and that the then-licensee of Oyster Creek had committed to taking an additional round of measurements in 1996. See Citizens Petition to Intervene, Exh. 6, Letter from R.W. Keaten, GPU Nuclear, to NRC at 2 (Sept. 15, 1995); *id.*, Exh. 9, Letter from Alexander W. Dromerick, NRC, to John J. Barton, GPU Nuclear at 3 (Nov. 1, 1995)). Additionally, Citizens’ exhibits make clear where precisely the UT measurements were taken. See *id.*, Exh. 4, at 1 (providing the thickness measurements of the individual bays in the sand bed region, as measured during the 1992 refueling outage); *id.*, Exh. 4, Encl. 2, at 10 (explaining how the selection of locations to perform the UT measurements was determined). Given that Citizens knew well before AmerGen docketed its December 9 commitment when and where the UT measurements were taken, and given further that the December 9 commitment made clear that the one-time set of UT measurements would be taken at the same locations as previously

performed, the appropriate time for a challenge by Citizens to the spatial scope of AmerGen's UT measurements was promptly after AmerGen had docketed its December commitment.²⁴

Thus, we do not accept Citizens' claim that the December 9 commitment "did not specify . . . where the measurements would be carried out" (Citizens Reply to AmerGen at 23). We therefore reject as nontimely Citizens' challenge to the spatial scope of AmerGen's UT monitoring regime.

6. Citizens' Assertion That AmerGen's Quality Assurance For The Measurements In The Sand Bed Region Is Inadequate Is Not An Admissible Contention

Citizens assert that AmerGen's "quality assurance plans" for the UT measurements in the sand bed region are inadequate and must be revised "to identify flawed data soon after it is taken" and to "carry out replacement measurements if it finds that the original measurements are questionable" (Citizens Petition at 11).

We agree with AmerGen (AmerGen Answer at 11-12) and the NRC Staff (NRC Staff Answer at 12-13) that this contention is nontimely (10 C.F.R. § 2.309(f)(2)). Additionally, we find that this contention is beyond the scope of this proceeding (*id.* § 2.309(f)(1)(iii)) and fails to demonstrate that a genuine dispute exists with AmerGen on a material issue of fact (*id.* § 2.309(f)(1)(vi)).

First, this contention is nontimely. AmerGen's LRA contains a quality assurance program that "implements the requirements of [10 C.F.R. Part 50, Appendix B] and is consistent with the summary in Appendix A.2 . . . of NUREG-1800[, Rev. 1, Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants (Sept. 2005)]" (LRA, App. B,

²⁴ In fact, Citizens could have incorporated a challenge to the spatial scope of AmerGen's UT monitoring program with its February 2006 motion, in which they sought to add a contention regarding AmerGen's testing of the inaccessible area of the sand bed region. See Citizens Motion to Add Contentions at 11-13.

at B-4).²⁵ AmerGen’s program includes “elements of corrective action, confirmation process, and administrative controls, and [it] is applicable to the safety-related and non-safety related systems, structures, and components . . . that are subject to [Aging Management Review]” (*ibid.*). Had Citizens wished to contest any aspect of that program, they should have done so in their original Petition to Intervene.

Citizens respond that their contention is timely, asserting that they neither knew, nor could have known, that AmerGen’s quality assurance program was inadequate until April 2006, when they learned that the set of UT measurements taken in 1996 produced anomalous results (Citizens Reply to AmerGen at 16). This assertion ignores that – as the Commission recently reiterated (CLI-06-24, 64 NRC at ___ n.71 (slip op. at 13 n.71)) – petitioners have an affirmative obligation to obtain documentation in support of a proffered contention to the extent such documentation is part of the LRA or contained in the LRA as an attachment or supporting document. Accord Notice of Opportunity for Hearing, 70 Fed. Reg. 54,585, 54,586 n.1 (Sept. 15, 2005). Consistent with the Commission’s rationale in CLI-06-24, it may fairly be concluded here that the 1996 UT results are supporting documentation to the LRA, because: (1) the LRA expressly states that the-then licensee of Oyster Creek established a corrosion monitoring program in 1987 that included “periodic UT inspection of the shell thickness” (LRA at 3.5-18); and (2) the LRA references supporting documentation, which states that UT inspections were, or would be, performed in 1992, 1994, and 1996 (*id.* at 4-55) (referencing Letter from GPU Nuclear to NRC, Drywell Corrosion Monitoring Program (Sept. 15, 1995)). In these circumstances, we conclude that the 1996 UT results (which, like the 1992 and 1994 results, are

²⁵ Licensees are required to develop a quality assurance program that is “documented by written policies, procedures or instructions and [it] shall be carried out throughout plant life” (10 C.F.R. Pt. 50, App. B, § II).

nonproprietary)²⁶ constitute supporting documentation to the LRA, and Citizens had a duty – if they wished to use these results to challenge the adequacy of AmerGen’s long-standing quality assurance program – to “contact [AmerGen] or [AmerGen’s] counsel” (70 Fed. Reg. at 54,586 n.1) to obtain these documents prior to submitting their original Petition to Intervene.²⁷

Even if Citizens’ contention were timely, it would still be inadmissible, because it is beyond the scope of this proceeding. As discussed supra Part III.A, the scope of the Commission’s health and safety review in license renewal proceedings does not include issues related to a plant’s CLB that “already [are] monitored, reviewed, and commonly resolved as needed by ongoing regulatory oversight” (Turkey Point, CLI-05-17, 54 NRC at 8). A licensee’s CLB includes “the NRC regulations contained in 10 C.F.R. parts . . . 50 . . . and appendices thereto” (10 C.F.R. § 54.3). Because AmerGen is required by Appendix B to Part 50 to establish a quality assurance program, it is clearly included within its CLB. Further, the Commission made clear in its 1995 Statement of Consideration that a licensee’s quality assurance program is excluded from license renewal review. In an effort to clarify the license renewal rules, the

²⁶ Significantly, Citizens obtained the 1992 and 1994 testing results before submitting their Petition to Intervene (Citizens Petition to Intervene at 9-10).

²⁷ It should be understood that this Board is not attempting to define the universe of materials that constitute LRA “supporting documents.” We simply decide that the facts of this particular case – viewed through the prism of the rationale in CLI-06-24 – support the conclusion that the 1996 UT results are LRA supporting documents and, accordingly, the “onus of obtaining [that] supporting documentation was on [Citizens]” (CLI-06-24, 64 NRC at ___ n.71 (slip op. at 14 n.71)).

Citizens allege for the first time in their reply brief to AmerGen, but without any supporting or explanatory affidavit, that AmerGen “consistently refused to provide the 1996 data to Citizens” (Citizens Reply to AmerGen at 16). Notably, Citizens’ nonspecific allegation does not indicate that they timely asked AmerGen for this data and were rebuffed. Such an allegation, if properly supported, would be probative of whether an applicant improperly thwarted a petitioner’s effort to obtain supporting documentation and, hence, whether such documentation was “not previously available” (10 C.F.R. § 2.309(f)(2)(i)). In any event, Citizens’ unsupported and unexplained allegation here is simply too late. If Citizens wanted to advance such an argument, they should have done so when they submitted their Petition to Intervene.

Commission explained that “the portion of the CLB that can be impacted by the detrimental effects of aging is limited to the design-bases aspects of the CLB. *All other aspects of the CLB, e.g., quality assurance*, physical protection (security), and radiation protection requirements, are not subject to physical aging processes that may cause noncompliance with [the design-bases aspects] of the CLB” (Nuclear Power Plant License Renewal, 60 Fed. Reg. 22,461, 22,475 (May 8, 1995) (emphasis added)). Thus, Citizens’ attack on AmerGen’s quality assurance program is outside the scope of this proceeding and, therefore, is inadmissible.

Citizens’ challenge is also inadmissible because it fails “to show that a genuine dispute exists with [AmerGen] on a material issue of law or fact” (10 C.F.R. § 2.309(f)(1)(vi)). Citizens’ Petition contains nothing more than a broad unsupported assertion that “AmerGen must revise its quality assurance plans” (Citizens Petition at 11). Citizens fail, however, to make any “reference[] to [the] specific portion[] of the application . . . that [they] dispute[] and the supporting reasons for each dispute” (10 C.F.R. § 2.309(f)(1)(vi)). “[B]ald or conclusory allegation[s]” that a licensee’s application is deficient, without more, are insufficient (Millstone, CLI-01-24, 54 NRC at 358) (internal quotation marks omitted). Therefore, Citizens’ contention challenging the adequacy of AmerGen’s quality assurance program is inadmissible.

7. Citizens’ Assertion That AmerGen’s Methods For Analyzing UT Results In The Sand Bed Region Are Flawed Is Not An Admissible Contention

Citizens also assert that AmerGen’s statistical techniques for assessing the corrosion rate in the sand bed region are “inadequate” for finding “either the worst case baseline from which corrosion could occur, or the worst case corrosion rate” (Citizens Petition at 11). Specifically, Citizens list six “key flaws” with AmerGen’s chosen statistical method (id. at 11-12): (1) it fails to use extreme value statistics to estimate the minimum current thickness of the drywell shell; (2) corrosion is assumed to be linear, even though corrosion rates can increase in a non-linear fashion; (3) the average of the individual measurements taken in each grid is used

to analyze the corrosion rates, leading to artificially low estimates of uncertainty; (4) it omits from the mean some of the thinnest points in the grids, leading to artificially high estimates of the current mean thickness; (5) the estimated corrosion rate is not sufficiently conservative for safety-critical issues; (6) it ignores previous analysis that shows at least four valid measurements are required in order to make a valid estimate of the corrosion rate and the confidence limits. Citizens maintain that their contention is timely under 10 C.F.R. § 2.309(f)(2) because prior to AmerGen's April 2006 response to a Staff-issued Request for Additional Information – which was then specified in AmerGen's June 20 commitment – “[n]either [the] NRC Staff, nor Citizens knew what statistical technique AmerGen would employ to analyze the future UT measurements . . . because AmerGen's then-proposed regime failed to specify how this would be done” (Citizens Reply to AmerGen at 16).

AmerGen and the NRC Staff argue that Citizens' contention is not based on new or materially different information, and is therefore inadmissible (AmerGen Answer at 12; NRC Staff Answer at 12-13). We agree with AmerGen and the NRC Staff that Citizens' challenge is nontimely under 10 C.F.R. § 2.309(f)(2) and is, therefore, inadmissible.

We are unpersuaded by Citizens' claim that neither they nor the NRC Staff had any knowledge – prior to April 2006 – of AmerGen's statistical techniques for analyzing the UT measurements. First, AmerGen's LRA clearly states that elements of its corrosion monitoring program, established in 1987, have been incorporated into its aging management program, and provide for “[c]alculations which establish conservative corrosion rates” (LRA at 3.5-18). More specifically, the LRA indicates that its “ASME Section XI, Subsection IWE aging management program . . . [p]erforms calculations to track corrosion rates [and] [p]rojects vessel thickness based on conservative[] corrosion rates” (*id.* at 4-55). Second, Citizens attached to their Petition to Intervene a 1991 NRC Staff Information Notice, which indicated that “[s]ince drywell corrosion was detected in 1986 . . . [t]he most severe corrosion was found in the sand bed region

[and] [t]he highest corrosion rate determined was 35.2 +/- 6.8 mils per year” (Citizens Petition to Intervene at 5) (quoting Exh. 2, NRC Information Notice No. 86-99, Supp. 1: Degradation of Steel Containments at 1 (Feb. 14, 1991)).

This demonstrates that when Citizens submitted their Petition to Intervene, they knew that: (1) AmerGen had an established corrosion management program that included calculations to assess the corrosion rate; (2) the corrosion rate calculations were incorporated into AmerGen’s ASME Section XI, Subsection IWE aging management program; and (3) these calculations yielded an actual corrosion rate for the sand bed region. Thus, Citizens cannot now contend that prior to April 2006 they had no way of knowing how that rate was calculated. This is particularly so given that Citizens retained a qualified expert, Dr. Hausler, who could have consulted the ASME Code and NUREG-1801 (see supra p. 13) to determine how the corrosion rate they cite in their Petition to Intervene was derived.²⁸ If Citizens wished to challenge AmerGen’s statistical methods for determining the corrosion rate, they should have done so in their Petition to Intervene. Their present attempt to raise this challenge is nontimely.

Nor is there any support for Citizens’ statement that the NRC Staff was not aware of the statistical techniques AmerGen would use to analyze the UT results. The record is clear that as early as 1990, the then-licensee of Oyster Creek, GPU Nuclear, transmitted to the NRC Staff clarification on its method for determining the rate of corrosion (June 20 Commitment, Encl. 1, at 2-3) (explaining that statistical techniques currently employed by AmerGen are based on engineering specification 15-328227-004 and Calculation No. C-1302-187-5300, both of which “were submitted to the NRC in a letter dated November 26, 1990”); accord Citizens Petition, Exh. 1, at 16 (noting that a copy of the November 26, 1990 letter was provided to the NRC Staff

²⁸ Notably, Citizens quote directly from the very pages of the LRA that discuss AmerGen’s aging management program and its inclusion of calculations for tracking corrosion rates (Citizens 2005 Reply at 6-7).

during the Aging Management Plan/Aging Management Review Audit). Citizens fail to provide any evidence that these stated statistical techniques have changed as a result of AmerGen's April 4 or June 20 commitments. Citizens' challenge to AmerGen's methodology for assessing the corrosion rate is therefore nontimely and, hence, inadmissible.²⁹

IV. CONCLUSION

For the foregoing reasons, we grant Citizens' Petition to File a New Contention and we admit Citizens' contention that, in light of the uncertain corrosive environment and the correlative uncertain corrosion rate in the sand bed region of the drywell shell, AmerGen's proposed plan to perform UT tests prior to the period of extended operations, two refueling outages later, and thereafter at an appropriate frequency not to exceed 10-year intervals is insufficient to maintain an adequate safety margin. We reject as inadmissible Citizens' other contentions.

²⁹ Citizens' challenge to AmerGen's statistical techniques for assessing the corrosion rate in the sand bed region is also inadmissible, because Citizens fail to reference, much less discuss, the "specific portions of the application" that they dispute, nor do they adequately identify a "material issue of . . . [disputed] fact" (10 C.F.R. § 2.309(f)(1)(vi)).

This proceeding shall continue to be governed by the Initial Scheduling Order and Administrative Directives contained in our Memorandum and Order of April 19, 2006. Additionally, as we previously ruled, the hearing shall be conducted in accordance with the informal adjudicatory procedures prescribed in Subpart L of 10 C.F.R. Part 2. See LBP-06-07, 63 NRC at 228; Memorandum and Order (Denying [Citizens'] Motion to Apply Subpart G Procedures) (June 5, 2006) (unpublished).

It is so ORDERED.

THE ATOMIC SAFETY
AND LICENSING BOARD³⁰

/RA/

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ADMINISTRATIVE JUDGE

/RA/

Dr. Paul B. Abramson
ADMINISTRATIVE JUDGE

/RA by E. Roy Hawkens for/

Dr. Anthony J. Baratta
ADMINISTRATIVE JUDGE

Rockville, Maryland
October 10, 2006

³⁰ Copies of this Memorandum and Order were sent this date by e-mail to counsel for: (1) AmerGen; (2) Citizens; (3) the NRC Staff; and (4) New Jersey.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
AMERGEN ENERGY COMPANY, LLC) Docket No. 50-219-LR
)
)
(Oyster Creek Nuclear Generating Station))

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing LB MEMORANDUM AND ORDER (GRANTING PETITION TO FILE A NEW CONTENTION) (LBP-06-22) have been served upon the following persons by U.S. mail, first class, or through NRC internal distribution.

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[Original signed by Evangeline S. Ngbea]

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Dated at Rockville, Maryland
this 10th day of October 2006