

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
OFFICE OF THE SECRETARY

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:
E. Roy Hawkens, Chair
Dr. Paul B. Abramson
Dr. Anthony J. Baratta

In the Matter of)	
AMERGEN ENERGY COMPANY, LLC)	Docket No. 50-0219-LR
(License Renewal for the Oyster Creek)	ASLB No. 06-844-01-LR
Nuclear Generating Station))	January 17, 2006

PETITIONERS' BRIEFING ON SCOPE OF PROCEEDING

PRELIMINARY STATEMENT

Nuclear Information and Resource Service, 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 (collectively "Petitioners") submit this brief in response to an order from the ASLB directing further briefing on the issue of scope of the license renewal proceeding. Petitioner's contention regarding corrosion in the drywell liner is squarely within the scope of the license renewal proceeding, because the drywell liner is a long-lived, safety-critical, passive component. The Commission decided by rulemaking that the aging management of such components has to be considered on a plant-specific basis. Because the Commission has already decided that it would be inappropriate to take a generic approach to aging management of components like the drywell liner and all parties have recognized that the corrosion issue is

within the scope of the license renewal proceeding, the ASLB must conclude that the contention raised is within the scope of this proceeding.

BACKGROUND

Petitioners contend that the testing of the extent of corrosion at all levels of the drywell liner proposed in Amergen Energy Co. LLC (“AmerGen”)’s license renewal application (“LRA”) is inadequate to assure the continued integrity of this safety-critical structure for the period of the license extension. Petition at 3. To support this contention, Petitioners showed that the drywell liner is a safety-critical structure that acts both as a pressure boundary and as a structural support. Id. at 4. Petitioners then showed that water leakage into the drywell liner has caused significant corrosion, particularly in the sand bed region, where the NRC regarded the corrosion as a “threat to drywell integrity.” Id. at 4-6. Petitioners showed further that NRC in 1986 regarded ultra-sonic testing of the sand bed region and other accessible areas of the drywell liner as “essential . . . for the life of the plant.” Id. at 7. Petitioners asserted that the potential for ongoing corrosion means that ongoing comprehensive testing is required to ensure the remaining razor-thin safety margins are met throughout the extended life of the plant.

ARGUMENT

I. Aging Of The Drywell Liner Is Within The Scope Of This Proceeding

The Commission narrowed the scope of license renewal proceedings through rulemaking in 1995 to generically exclude active components, components that are regularly replaced, and components that do not affect safety. However, in the same rulemaking the Commission decided that it would be inappropriate to generically exclude aging management of long-lived, passive, safety-related components such as the drywell

liner during the license renewal period. The few decisions implementing the resulting rule follow this distinction. Thus, the Commission has already decided that *as a matter of law* aging management of passive, safety-related components not subject to regular replacement, such as the drywell liner, has not been dealt with effectively through implementation of other regulations and therefore *must* be considered within the scope of license renewal proceedings.

A. The Regulations Show That Scope Includes Aging Of The Drywell Liner

This plant renewal proceeding is governed by 10 C.F.R. Part 54. Showing that the drywell liner is at the core of Part 54, the fact sheet on license renewal posted on NRC's website states that long-lived, passive components are part of the license renewal proceedings. NRC, Fact Sheet on License Renewal [available at http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/license-renewal.html](http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/license-renewal.html).

More formally, in Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), 49 N.R.C. 328 (1999) the ASLB stated that the regulations regarding the scope of a license renewal proceeding include components listed in 10 C.F.R. § 54.4 that require an aging management review for the period of the extended operation:

[T]he review of license renewal applications is confined to matters relevant to the extended period of operation requested by the applicant. The safety review is limited to the plant systems, structures, and components (as delineated in 10 C.F.R. § 54.4) that will require an aging management review *for the period of extended operation* or are subject to an evaluation of time-limited aging analyses. See 10 C.F.R. §§ 54.21(a) and (c), 54.29, and 54.30.

49 N.R.C. 328 (emphasis added). The language of 10 C.F.R. § 54.4 includes within the scope of license renewal safety-related structures which would help to prevent accidents and mitigate their consequences, as follows:

(a) Plant systems, structures, and components within the scope of this part are--

(1) Safety-related systems, structures, and components which are those relied upon to remain functional during and following design-basis events . . . to ensure the following functions—

- (i) The integrity of the reactor coolant pressure boundary;
- (ii) The capability to shut down the reactor and maintain it in a safe shutdown condition; or
- (iii) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to those referred to in § 50.34(a)(1), § 50.67(b)(2), or § 100.11 of this chapter, as applicable.

* * *

(b) The intended functions that these systems, structures, and components must be shown to fulfill in § 54.21 are those functions that are the bases for including them within the scope of license renewal as specified in paragraphs (a)(1) - (3) of this section.

10 C.F.R. § 55.4.

If the component is safety related, the next step is to analyze whether it is within the language of 10 C.F.R. § 54.21. Section 54.21 requires the LRA to include an aging management review for passive, safety-related components, including the "containment" and the "containment liner," that are not subject to regular replacement, as follows:

Each application must contain the following information:

(a) An integrated plant assessment (IPA). The IPA must--

(1) For those systems, structures, and components within the scope of this part, as delineated in § 54.4, identify and list those structures and components subject to an aging management review. Structures and components subject to an aging management review shall encompass those structures and components--

(i) That perform an intended function, as described in § 54.4, without moving parts or without a change in configuration or properties. These structures and components include, but are not limited to. . . *the containment, the containment liner, . . .*; and

(ii) That are not subject to replacement based on a qualified life or specified time period.

10 C.F.R. § 54.21 (emphasis added).

Thus, the regulations themselves manifest the Commission's intent to focus the license renewal proceedings on aging management of long-lived, passive, safety-related components, such as the drywell liner. The ASLB should not ignore that intent by further narrowing the scope of such proceedings based on a selective reading of the supplementary information that accompanied the rulemaking.

B. Supplementary Rulemaking Information Shows That Scope Includes Aging Of The Drywell Liner

The ASLB order requesting this briefing cites to Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), 54 NRC 3, 10 (2001), which quoted the supplementary information associated with the current rules as stating that the Commission regulations "focus[] the renewal review on plant systems, structures, and components for which current [regulatory] activities may not be sufficient to manage the effects of aging in periods of extended operation." The order requests "greater specificity with respect to the ambit of this legal standard." With due respect to the ASLB, the quoted language is not a legal standard at all, rather it is a general description of the function of the rules given during the rulemaking. Because it describes the effect of the rules at a much greater level of generality than the language of the rules themselves, it cannot be used to interpret that language. Furthermore, the context within which the quoted statement appeared shows that it is fully consistent with the regulatory language. Moreover, where the regulations are unambiguous, the ASLB need not resort to supplementary information to determine their meaning.

Even if the ASLB reaches beyond the regulations and examines the full text of the supplementary information, it will reach precisely the conclusion indicated by the text of the rules; the rulemaking narrowed the scope of license proceedings to focus on aging of safety-related, long-lived, passive components. The supplementary information states that that rulemaking identified certain components that “require review in order to provide the necessary assurance that they will continue to perform their intended function for the period of extended operation.” 60 Fed. Reg. 22,462 (May 8, 1995). The Commission identified the detrimental effects of aging on safety-related, passive, long-lived components, and a few other issues related to safety, as being potentially inadequately addressed by the existing regulatory processes. Id. at 22,464. The Commission further found that the reduced set of structures and components identified in Part 54 “must undergo an aging management review.” Id. at 22,476. The Commission also examined whether the scope of license renewal proceedings could be further narrowed, but concluded that further constriction of the renewal process could not be justified. Id. at 22,468. Thus, 10 C.F.R. Part 54 focused renewal proceedings on aging management of safety related, passive, long lived components, because this was necessary to protect public health and safety during the renewal term, leaving most other issues to be addressed by the agency’s existing regulatory processes. Id. at 22,463-64, 22,476.

Furthermore, the ongoing aging management of the drywell liner during the current license period provides no basis to exclude it from the license renewal proceedings. In enacting the current Part 54, the Commission stated that “components that are technically within the scope of the maintenance rule should not be generically excluded from license renewal . . .” Id. at 22,470. The Commission recognized that long-lived, passive, safety-

related components would be included in both the maintenance rule and the scope of license renewal proceedings, but found that this did not justify generically excluding such components from renewal proceedings based on the maintenance required to satisfy the maintenance rule. *Id.* at 22,470- 71. Instead, the Commission recognized that applicants for license renewal would receive credit for existing maintenance activities during renewal proceedings. *Id.* at 22,471.

Thus, examination of the context in which the Commission made the statement that the ASLB has quoted shows that NRC has already determined by rulemaking that existing regulatory activities may be insufficient to ensure safety during the renewal term for safety-related, long-lived, passive components, such as the drywell liner. These components are therefore included within the scope of license renewal proceedings *as a matter of law*.

C. Specific Decisions Show That Scope Includes Aging Of The Drywell Liner

The Turkey Point decision from which the quotation in the Order was drawn confirms that because corrosion and other effects become more severe over the extended license period, the level of inspection and testing related to age-management for the extended period is one of the core issues to be addressed by the license renewal proceeding:

Part 54 centers the license renewal reviews on the most significant overall safety concern posed by extended reactor operation - the detrimental effects of aging. By its very nature, the aging of materials "becomes important principally during the period of extended operation beyond the initial 40-year license term," Adverse aging effects can result from metal fatigue, erosion, *corrosion*, . . . and shrinkage. Such age-related degradation can affect a number of reactor and auxiliary systems, . . . Indeed, a host of individual components and structures are at issue. See 10 C.F.R. §

54.21(a)(1)(i). Left unmitigated, the effects of aging can overstress equipment, unacceptably reduce safety margins, and lead to the loss of required plant functions, including the capability . . . to otherwise prevent or mitigate the consequences of accidents with a potential for offsite exposures.

Accordingly, Part 54 requires renewal applicants to demonstrate how their programs will be effective in managing the effects of aging during the proposed period of extended operation. . . . Applicants must identify any additional actions, i.e., maintenance, replacement of parts, etc., that will need to be taken to manage adequately the detrimental effects of aging. *Id.* Adverse aging effects generally are gradual and thus can be detected by programs that *ensure sufficient inspections and testing*. *Id.* at 22,475.

54 N.R.C. at 7 (emphasis added). However, in considering the individual contentions in that case the Commission found none within the scope of the Part 54 rules, in part because they did not raise an aging issue. *Id.* at 24. The Turkey Point decision therefore confirms that aging issues are at the core of license renewal proceedings.

Even more relevantly, in Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), 49 NRC 328 (1999), the ASLB rejected a contention that the age related management program was inadequate *not* because it was beyond the scope of the proceeding, but because it had an inadequate basis. *Id.* Because jurisdictional issues are considered prior to adjudicatory facts, the rejection of this contention on basis grounds is instructive and shows that the ASLB regarded this contention as within the scope of the proceeding.

Finally, in the license renewal proceeding Dominion Nuclear Connecticut, Inc., 60 N.R.C 631, 633 (2004), the ALSB denied contentions regarding human suffering, terrorism, water discharge permits, effects on fish, plant design, and inability to evacuate stating “[t]he potential detrimental effects of aging is the issue that essentially defines the scope of license renewal proceedings. Our license renewal inquiry is narrow. It focuses

on the potential impacts of an additional 20 years of nuclear power plant operation, not on everyday operational issues.” 60 N.R.C at 633.

Thus, the few decisions that are available dealing with contentions in the context of license renewal proceedings show that aging management for the extended term is at the core of the issues that are within the scope of this proceeding.

II. The Drywell Liner Corrosion Management Program Is Within the Scope of the License Renewal Proceeding

The drywell liner is designed to contain and control fission products in the event of a design basis accident. Its failure would also impair or prevent safe shut down of the reactor, and could violate the integrity of the reactor pressure coolant boundary. Thus, the drywell liner performs all three functions mentioned in 10 C.F.R. § 55.4(a)(1) and is therefore unquestionably “safety-related.” In addition, because it is a passive containment structure that is not subject to replacement during the operating period, the drywell liner is exactly the type of component that the Commission intended license renewal proceedings to focus on.

Recognizing the inclusion of the drywell liner within the scope of Part 54, AmerGen has already carried out an aging management review as part of the license renewal application. Illustrating that there is a genuine issue with the level of testing required prior to renewal and that NRC staff also recognized that the drywell liner is within the scope of the renewal proceedings, AmerGen has already agreed during the aging management program audit to increase the level of testing beyond the LRA and take a one-time test of the most corroded area of the drywell liner. Petitioners continue to contend that a one-time measurement of limited scope in the most corroded area identified to date is totally inadequate to ensure the integrity of a safety-critical component over the full 20

year extended license period. This is especially true when that component already has razor-thin safety margins, which are far narrower than when the plant was originally built.

Thus, the drywell liner corrosion management program falls squarely within the scope of the license renewal proceedings. In the rulemaking for Part 54, the Commission recognized that aging management decisions taken during the current license period are made on the basis that the plant would cease operations at the end of its license and thus may not adequately protect safety for a 20 year extended license term. Therefore, the aging management program for the drywell liner, which is a safety-related, passive, long-lived component, must be thoroughly reviewed in this proceeding to ensure that adequate levels of safety are maintained throughout the extended license term.

CONCLUSION

For the forgoing reasons, the ASLB should decide that aging management of the drywell liner is within the scope of these proceedings.

Respectfully submitted



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Dated: January 17, 2006

UNITED STATES OF AMERICA
BEFORE THE NUCLEAR REGULATORY COMMISSION
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CERTIFICATE OF SERVICE

I hereby certify that the foregoing brief on scope of the proceedings was sent this 17th day of January, 2006 via email and U.S. Postal Service as designated to each of the following:

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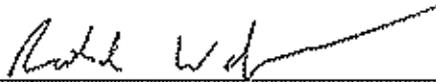
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