

November 10, 2004

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKETED 11/10/04

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
ENTERGY NUCLEAR VERMONT YANKEE,)	Docket No. 50-271-OLA
LLC and ENTERGY NUCLEAR)	
OPERATIONS, INC.)	ASLBP No. 04-832-02-OLA
)	
(Vermont Yankee Nuclear Power Station))	

NRC STAFF RESPONSE TO VERMONT DEPARTMENT OF PUBLIC SERVICE REQUEST
FOR LEAVE TO FILE A NEW CONTENTION

INTRODUCTION

Pursuant to 10 C.F.R. § 2.309(h)(1), the Staff of the Nuclear Regulatory Commission ("NRC" or "Commission") hereby responds to the Vermont Department of Public Service ("DPS") Request for Leave to File a New Contention, filed on October 18, 2004 ("Request").¹ For the reasons discussed below, the NRC does not oppose the admission of DPS's late-filed contention.

DISCUSSION

A. Legal Standards for Admission of Late-Filed Contentions

Under Commission regulations, a late-filed contention may be admitted only upon the presiding officer's determination that it should be admitted after balancing the following eight factors, all of which must be addressed in the petitioner's filing:

- (i) Good cause, if any, for the failure to file on time;
- (ii) The nature of the requestor's/petitioner's right under the Act to be made a party to the proceeding;
- (iii) The nature and extent of the requestor's/petitioner's property, financial or other interest in the proceeding;

¹ At the prehearing conference for this proceeding, held in Brattleboro, Vermont, on October 21-22, 2004, the Atomic Safety and Licensing Board ("Board") confirmed that responses to this Request were to be filed within twenty-five days of its filing on October 18, 2004.

- (iv) The possible effect of any order that may be entered in the proceeding on the requestor's/petitioner's interest;
- (v) The availability of other means whereby the requestor's/petitioner's interest will be protected;
- (vi) The extent to which the requestor's/petitioner's interests will be represented by existing parties;
- (vii) The extent to which the requestor's/petitioner's participation will broaden the issues or delay the proceeding; and
- (viii) The extent to which the requestor's/petitioner's participation may reasonably be expected to assist in developing a sound record.

10 C.F.R. § 2.309(c).² Petitioners seeking admission of a late-filed contention bear the burden of showing that a balancing of these factors weighs in favor of admittance. *Baltimore Gas & Elec. Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 & 2), CLI-98-25, 48 NRC 325, 347 (1998) (noting that the Commission has summarily dismissed petitioners who failed to address the factors for a late-filed petition). The first factor, whether good cause exists for the failure to file on time, is entitled to the most weight. *State of New Jersey* (Department of Law and Public Safety), CLI-93-25, 83 NRC 289, 296 (1993). Where no showing of good cause for the lateness is tendered, "petitioner's demonstration on the other factors must be particularly strong." *Texas Utils. Elec. Co.* (Comanche Peak Steam Electric Station, Units 1 & 2), CLI-92-12, 36 NRC 62, 73 (1992) (quoting *Duke Power Co.* (Perkins Nuclear Station, Units 1, 2, & 3), ALAB-431, 6 NRC 460, 462 (1977)). The fifth and sixth factors, the availability of other means to protect the petitioner's interest and the ability of other parties to represent the petitioner's interest, are less important than the other factors, and are therefore entitled to less weight. *See id.* at 74.

² Although these regulations were revised recently (*see* Final Rule, Changes to Adjudicatory Process, 69 Fed. Reg. 2182 (Jan. 14, 2004)), they incorporate the substance of the Commission's long-standing late-filed contention requirements. *Compare* 10 C.F.R. § 2.309(c) and (f)(2), *with* 10 C.F.R. § 2.714(a)(1)(i)-(v) and (b)(2) (2004); *see also* 69 Fed. Reg. at 2221.

The Commission's regulations additionally provide that a proposed late-filed contention may be admitted with leave of the presiding officer only upon a showing that:

- (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.

10 C.F.R. § 2.309(f)(2). Requests for Additional Information ("RAIs") sent out by the Staff, and responses to such requests, may form the basis for a late-filed contention, but "the NRC Staff's mere posing of questions does not suggest that the application was incomplete, or that [the application] provided insufficient information" to frame timely contentions. *Calvert Cliffs*, CLI-98-25, 48 NRC at 349.

In addition to fulfilling the requirements of 10 C.F.R. § 2.309(f)(2), a petitioner must also show that the late-filed contention meets the standard contention admissibility requirements of § 2.309(f)(1)(i)-(vi). *See Sacramento Mun. Util. Dist. (Rancho Seco Nuclear Generating Station)*, CLI-93-12, 37 NRC 355, 362-363 (1993). This regulation requires a petitioner to:

- (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 requestor's/petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and

documents on which the requestor/petitioner intends to rely to support its position on the issue; and

- (vi) provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact. This information must include references to specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief.

10 C.F.R. § 2.309(f)(1). As discussed in the NRC Staff Answer to Vermont Department of Public Service Notice of Intention to Participate and Petition to Intervene ("NRC Answer"), the Commission has elaborated upon the requirements of this regulation and established a high burden for proposed contentions.³ See NRC Answer at 3-5. Significantly, a late-filed contention must refer to specific documents and be accompanied by a concise statement of the alleged facts or expert opinion which support the proposed contention. See *Millstone*, CLI-01-24, 54 NRC at 358 (citing *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, & 3), CLI-99-11, 49 NRC 328, 333 (1999)); *Calvert Cliffs*, CLI-98-25, 48 NRC at 348 ("This absence of specificity and support is, without more, a sufficient ground for rejecting the two contentions."). Failure to comply with any of the requirements may be grounds for dismissing a contention. See *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999).

B. DPS' Proposed Late-Filed Contention

DPS' proposed contention states:

The application for amendment, including all supplements thereto, fails to comply with 10 C.F.R. 50 Appendix R, Specific Requirements, Paragraph L(2)(b) because it does not verify the assumption, used for purposes of the Safe Shutdown Capability

³ As the contention admissibility standard has previously been well documented in filings in this proceeding, and considered during the oral arguments at the prehearing conference on October 21, 2004, the Staff does not repeat that discussion here.

Analysis (SSCA), that the Reactor Core Isolation Cooling (RCIC) System can be made operable in sufficient time to permit the operator to perform the required actions before core uncover.

Request at 1. DPS' basis for this proposed contention is its assertion that if the NRC Staff approves Entergy Vermont Yankee, LLC and Entergy Nuclear Operations, Inc.'s (collectively, "Entergy" or "Applicant") application for an extended power uprate ("EPU"), the time from initiating event to core uncover would be reduced by approximately 15%. *Id.* at 1-2. As evidence of this assertion, DPS attached Table 6-5 of Attachment 6 of Entergy's Application, which shows a reduction in the time required to initiate RCIC from 25.3 minutes to 21.3 minutes. *See* DPS Exhibit 39, General Electric Nuclear Energy, Safety Analysis Report for Vermont Yankee Nuclear Constant Pressure Power Uprate, (Sept. 2003), at 6-19. DPS also asserts that the basis upon which Entergy previously assumed that operator action could be taken in sufficient time to prevent core uncover has been withdrawn, the procedure upon which that assumption was based has been modified, and that Entergy will not verify the bases for this assumption until at least December 1, 2004. Request at 2. As supporting evidence for these assertions, DPS attached an RAI Response from the Applicant. *See* DPS Exhibit 38, Application, Supplement 17, (Sept. 30, 2004).

C. Staff Analysis of Proposed Late-Filed Contention 6

As stated, good cause for filing late is accorded the most weight when considering the late-filing contention standards. *See supra* at 2. DPS claims to have received Entergy's RAI Response on October 11, 2004. Request at 2. The RAI Response provides DPS' basis for the proposed contention - - that Entergy "revised the procedure for governing operator actions and is in the process of verifying this assumption." DPS also bases the contention on the statement in the RAI Response that the Applicant will verify the basis for its assumption and train operator crews by December 1, 2004. These two statements by the Applicant were not previously available. DPS filed this Request seven days after learning of the revised operator actions and the Applicant's

need to verify its assumptions. The Staff does not oppose DPS' assertion that this proposed contention was submitted in a timely fashion based on the availability of the subsequent information, as required by 10 C.F.R. § 2.309 (f)(2).

Beyond satisfying this timeliness requirement, however, a proposed contention must satisfy additional criteria to be admitted. See 10 C.F.R. §§ 2.309(c)(ii)-(vii), 2.309(f)(1); see also, e.g., *Rancho Seco*, CLI-93-12, 37 NRC at 362-63. Although DPS does not individually address each of the § 2.309(c) factors in its Request, the Staff weighed these additional factors and herein concludes that such a balancing does not preclude admission of DPS' proposed contention. The importance of factors (ii) through (iv) in § 2.309(c) diminishes upon consideration that the Staff did not oppose DPS' standing in this proceeding, nor did the Staff oppose all of DPS' initially-proposed contentions. See NRC Answer at 5, 16, 21. Also important, especially with respect to factor (vii), is that this proceeding is in an early stage and the Board has not yet made a determination as to which, if any, contentions will be admitted, or if there will even be a hearing. Accordingly, this proceeding would suffer little, if any, delay by admission of this late-filed contention.

DPS' proposed late-filed contention must also satisfy the Commission's contention admissibility standards delineated in 10 C.F.R. § 2.309(f)(1)(i)-(vi), including a demonstration that a genuine dispute exists with the Applicant on a material issue of law or fact. Regulations in 10 C.F.R. Part 50, Appendix R require that boiling water reactors be capable of maintaining the reactor coolant level above the top of the core. 10 C.F.R. Part 50, Appendix R, III.L.2.b. The Applicant, via its SSCA,⁴ assured that the RCIC system would be operable within fifteen minutes of an initiating event in order to meet that requirement. However, in its RAI Response, the

⁴ Entergy's SSCA is referenced in the Vermont Yankee Nuclear Power Station Updated Final Safety Analysis ("UFSAR") as one of the documents that detail the plant's compliance with the requirements of 10 C.F.R. Part 50, Appendix R. See UFSAR, Revision 18, at section 10.11.3 (appended hereto as Attachment 1).

Applicant indicated that it is "in the process of verifying this assumption"⁵ as the procedure governing operator actions had been altered. DPS Exhibit 38 at 1. As DPS identifies a genuine issue, for which it has provided supporting bases and sufficient information to show that a dispute exists with the Applicant, the NRC Staff does not oppose admission of this proposed contention.

CONCLUSION

Based upon the foregoing discussion, the Staff does not oppose admission of DPS' proposed late-filed contention.

Respectfully submitted,



Marisa C. Higgins
Counsel for NRC Staff

Dated at Rockville, Maryland
this 10th day of November, 2004

⁵ The Applicant also submitted a Commitment to verify the time when RCIC would be initiated, which is scheduled to be completed by December 1, 2004.

10.11 FIRE PROTECTION SYSTEM

10.11.1 Power Generation Objective

This system is designed to provide fire protection for the station through the use of water; CO₂; dry chemicals; foam; detection and alarm systems; and rated fire barriers, doors, and dampers.

10.11.2 Power Generation Design Bases

The Fire Protection System shall prevent propagation of fire and isolate the areas of the fire by:

- 1 Providing a reliable supply of fresh water for fire fighting purposes

 Providing a reliable system for delivery of the water to potential fire locations.

 Providing automatic fire detection in those areas where the danger of fire is more pronounced.
- 4 Providing fire extinguishment by fixed equipment activated automatically or manually in those areas where danger of fire is most pronounced.
- 5 Providing manually operated fire extinguishing equipment for use by station personnel at selected locations.
6. Providing means to isolate areas so that fires are prevented from propagating from one area to another.

10.11.3 Description

The Vermont Yankee Fire Protection Program makes use of detection and suppression systems, separation criteria, rated fire barriers and seals fire stops, procedures and fire watches, manual hose stations, and training.

The fire protection program has been developed to satisfy the requirements of 10CFR50, Appendix R and BTP APCS 9.5-1, Appendix A. The documents detailing compliance with the subject requirements and forming the basis of the Fire Protection Program are as follows:

- Fire Protection and Appendix R Program
- Fire Hazard Analysis
- Safe Shutdown Capability Analysis

The Safe Shutdown Capability Analysis (Reference 1) demonstrates that Vermont Yankee complies with requirements of 10CFR50, Appendix R, Section III.G, "Fire Protection of Safe Shutdown Capability;" Section III.J, "Emergency Lighting;" Section III.L, "Alternative Shutdown;" and Section III.O, "Oil Collection." The analysis reflects changes in the Appendix R program that have taken place since initial plant upgrades to meet Appendix R requirements. The Safe Shutdown Capability Analysis includes an update reflecting design verification of alternate shutdown strategies as documented in plant calculations. Available safe shutdown systems for a fire in plant areas were determined. Specific components were identified and circuit layouts were examined for separation. Associated circuit tests were applied. Necessary modifications, exemptions and procedure enhancements were developed and implemented to resolve discrepancies identified during the verification effort. Plant walkdowns were conducted to verify cable routings. The results of the Analysis are discussed by designated fire areas or fire zones.

The Fire Protection System is illustrated on Drawing G-191163, Shs. 1 and 2.

Water-type fire protection equipment has been limited in those areas where the potential spread of radioactive contamination due to release of water for the fire fighting would result in more severe consequences than the results of a fire. Fires in these areas will be primarily fought using portable dry chemical or carbon dioxide extinguishers.

Water for the Fire Protection System is provided by two vertical turbine-type pumps, one electric motor-driven and one diesel-driven. Each pump has a capacity of 2,500 gpm at 125 psi discharge pressure. The pumps and drivers are located in the intake structure. They discharge to an underground piping system which serves the exterior and interior Fire Protection Systems.

The motor-driven pump is supplied from a 480 V bus. The diesel engine drive is approved for fire pump service and is provided with its own fuel oil supply and starting equipment.

The pressure in the Fire Main System is maintained at approximately 100 psig by an interconnection to the Service Water System. An orifice in the 1.5 inch pressurizing line limits pressure maintenance flow from the Service Water System to 30 gpm during normal operation. A check valve in the connecting pipe prevents backflow.

Operation of the fire pumps is controlled from pressure switches in the discharge piping. The motor-driven pump starts at a predesignated system pressure (typically 85 psig). The diesel-driven pump starts if the pressure

continues to drop (typically 75 psig). The motor-driven pump automatically shuts down when the Fire System pressure is restored to the normal range (typically 100 psig) for approximately seven minutes. The diesel-driven pump continues to operate until shut down manually.

The yard piping consists of a 12-inch underground piping loop around the entire station, with valved branches serving 10 fire hydrants. Hose houses, located at these hydrants, contain standard hose house equipment. Valved branches from the piping loop supply water for interior fire protection and transformer fire protection purposes. Sectionalizing valves in the yard piping loop permit isolation of portions of the loop, without interruption of service to the entire system.

A main fire protection header in the Turbine Building supplies the following fire protection services:

- 1 Automatic dry-pipe deluge systems with fixed water spray nozzles for the start up, the main, and the auxiliary transformers as well as a Turbine Building water curtain. These systems are operated by heat detectors.
- 2 Preaction Fire Protection System for the H₂ seal oil area, the Turbine Lube Oil Room, and the Turbine Building condenser and heater bay area. Heat actuated devices initiate the opening of the deluge valve. The system utilizes sealed sprinkler heads, thus sprinkling only those areas where the heads have been melted.
- 3 Automatic wet pipe sprinkler system for the condensate demineralizer resin storage area.
- 4 Automatic dry-pipe deluge system with fixed water spray nozzles for the Turbine Building loading bay area. This system is operated by ultraviolet and infrared detectors.
- 5 An interior Fire Loop System in the Turbine Building and office area. This loop services eighteen hose stations located within these areas. In addition, three hose stations in the service areas are served from a separate header.
- 6 The interior Turbine Building fire loop also serves a manual foam station which provides protection for the diesel fuel oil storage tank area, the Diesel Day Tank Rooms, the Diesel Rooms, transformers, and the Turbine Lube Oil Storage Rooms.

particularly in the containment, Control Room, and areas containing critical portions of the plant, such as components of the Engineered Safeguards Systems.

Fire barriers have been identified and their integrity assured by self-closing doors (exception: RHR corner room doors at El. 213'-6" are not self-closing), normally locked doors, alarmed doors, doors checked daily, automatic fire dampers, and controlled procedures for penetration sealing and fire barrier repair. This includes the northwest stairwell's ability to function as a fire exit.

Water flow alarms are provided in critical locations and annunciate in the Control Room to provide positive indication of Fire Water System operation.

10.11.4 Inspection and Testing

The fire pumps, water suppression systems, CO₂ systems, foam systems (manual and automatic), fire barriers, fire doors, fire dampers, detection and alarm systems, and portable extinguishers are inspected and tested periodically in accordance with approved station procedures/programs. All equipment is accessible for periodic inspection.

10.11.5

References:

- 1 Vermont Yankee Nuclear Power Plant Safe Shutdown Capability Analysis

- 7 An interior Reactor Building loop This loop services two standpipes and fifteen hose stations.
- 8 The interior Reactor Building loop serves a preaction Fire Protection System for the Reactor Building to cable vault cable penetration area at the Elevation 252' and the upper northwest corner room at the Elevation 232' of the Reactor Building. The system utilizes sealed sprinkler heads and an automatically-actuated deluge valve, thus requiring the trip of both an ionization detector and melting of the heads for system operation.
- 9 The interior Reactor Building loop also serves a Reactor Recirculation Pump Motor Generator Set Foam System. This Foam System is a fully automatic, open nozzle suppression system, actuated by a two-zone detection system. An actuation signal to the system is provided when both a thermal detector and an ionization detector are tripped.
- 10 The interior Turbine Building loop also services a wet pipe spray system for the condemin storage area. This system includes a remote flow alarm

The cable vault and Switchgear Rooms are protected by fully automatic total flooding CO₂ suppression systems initiated by ionization detectors. Bottles located in the West Switchgear Room System may also provide a backup or second shot to the cable vault if desired. The Diesel Fire Pump Fuel Oil Storage Tank Room is protected by a total flooding CO₂ suppression system initiated by heat detectors.

The yard loop supplies a wet pipe sprinkler system for the warehouse and the house-heating Boiler Room. These systems are equipped with alarm check valves.

Fire detection devices are provided in areas which are not normally occupied, in areas where substantial quantities of combustible materials are present, or in other areas determined to be highly sensitive. These detection systems provide local and remote alarms, as well as annunciation in the Main Control Room. In some instances trip signals are provided directly to deluge systems or electrically operated fire dampers.

Portable fire extinguishers are located throughout the buildings at the site. Portable fire extinguishers use dry chemical, CO₂, water, and halon agents.

Buildings are constructed of steel and concrete with fire walls and/or shield walls which isolate separate areas. Consideration has been given to the use of noncombustible and fire-resistant materials throughout the facility,

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CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF RESPONSE TO VERMONT DEPARTMENT OF PUBLIC SERVICE REQUEST FOR LEAVE TO FILE A NEW CONTENTION" in the captioned proceeding have been served on the following by deposit in the United States mail, first class; or as indicated by an asterisk (*), by deposit in the Nuclear Regulatory Commission's internal mail system; and by e-mail as indicated by a double asterisk (**), this 10th day of November, 2004.

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Respectfully submitted,



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