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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of )

Vermont Yankee Nuclear )  
Power Corporation )

(Vermont Yankee Nuclear )  
Power Station) )

Dkt. No. 50-271-OLA

**MASSACHUSETTS ATTORNEY GENERAL'S COMMENTS IN OPPOSITION TO  
PROPOSED FINDING OF NO SIGNIFICANT HAZARDS CONSIDERATION**

The Commonwealth of Massachusetts by its Attorney General, Scott Harshbarger, joins in the comments submitted by the New England Coalition on Nuclear Pollution ("NECNP") in opposing the proposed determination of no significant hazards consideration for the license amendment requested by Vermont Yankee Nuclear Power Corporation for the Vermont Yankee Nuclear Power Station. Notice of the proposed license amendment is found at Fed. Reg. Vol. 58, No. 12, page 5435.

For the reasons set forth in NECNP's Comments in Opposition to Proposed Finding of No Significant Hazards Consideration, attached hereto as an exhibit, and incorporated herein by reference, the Massachusetts Attorney General requests that the proposed finding be rejected and an order issue requiring a

hearing on the proposed license amendment.

Respectfully submitted,

SCOTT HARSHBARGER  
ATTORNEY GENERAL

*Leslie B. Greer*

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Dated: 2/22/93

UNITED STATES OF AMERICA  
BEFORE THE NUCLEAR REGULATORY COMMISSION

In the Matter of

Vermont Yankee Nuclear  
Power Corporation

(Vermont Yankee Nuclear  
Power Station)

Docket No. 50-271-OLA

NEW ENGLAND COALITION ON NUCLEAR POLLUTION'S  
COMMENTS IN OPPOSITION TO PROPOSED FINDING OF  
NO SIGNIFICANT HAZARDS CONSIDERATION

Introduction

On January 21, 1993, the Nuclear Regulatory Commission ("NRC" or "Commission") issued public notice of an operating license amendment request by the Vermont Yankee Nuclear Power Corporation ("Vermont Yankee"), which would permit Vermont Yankee to perform extensive maintenance on the Vermont Yankee Nuclear Power Station's ("VYNPS's") "B" diesel generator for fourteen days during the current operating cycle, while the reactor is operating at power.<sup>1</sup> 58 Fed. Reg. 5,435. The NRC proposes to make a determination of no significant hazards consideration regarding the proposed license amendment.

The New England Coalition on Nuclear Pollution ("NECNP") opposes the proposed finding of no significant hazards consideration. NECNP's Opposition is supported by the affidavit of Robert D. Pollard, a nuclear safety engineer. Attachment 1. As dis-

<sup>1</sup> NECNP has requested a hearing on the proposed license amendment. New England Coalition's Request for Hearing on Proposed Operating License Amendment (February 22, 1993).

9302260079 EXHIBIT A

cussed below, the intentional disabling of one of Vermont Yankee Nuclear Power Station's ("VYNPS's") two diesel generators would violate General Design Criterion ("GDC") 17, the NRC's fundamental requirement that onsite electric power supplies must "have sufficient independence, redundancy, and testability to perform their safety functions assuming a single failure." 10 C.F.R. Part 50, Appendix A, GDC 17. In addition, the proposed amendment violates the technical specifications for VYNPS, which contain no provision for deliberate removal of the diesel generators from service during power operation. On its face, ty, 2-2 the intentional disabling of an essential safety system, in violation of the NRC's General Design Criteria, NRC regulatory guidance, and VYNPS technical specifications, raises significant hazards considerations. Accordingly, pursuant to Section 189a(2)(A) of the Atomic Energy Act, 42 U.S.C. § 2239(a)(2)(A), the NRC must provide a hearing on the proposed license amendment before it can be issued.

#### I. STATEMENT OF FACTS

VYNPS has two standby diesel generators which constitute the onsite electrical power supply for the plant's structures, systems, and components important to safety. GDC 17 requires that each of the diesel generators must be safety grade and designed to "provide sufficient capacity and capability" to maintain plant safety during design basis accidents, assuming a loss of offsite power.

Pursuant to GDC 17 and the plant's Limiting Conditions for Operation ("LCO's"), VYNPS cannot be operated at power unless

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both diesel generators are functional. As provided by Technical Specification ("TS") 3.10.A.1,

Both emergency diesel generators shall be operable and capable of starting and reaching rated voltage and frequency in not more than 13 seconds.

A limited exception to this requirement is provided in TS

3.5.H.1:

During any period when one of the standby diesel generators is inoperable, continued reactor operation is permissible only during the succeeding seven days, provided that all of the Low Pressure Core Cooling and Containment Cooling Subsystems connecting to the operable diesel generator shall be operable.

However, TS 3.5.H.1 also states that "If this requirement cannot be met, an orderly shutdown shall be initiated and the reactor shall be in the cold shutdown condition within 24 hours."

On three previous occasions, Vermont Yankee has invoked TS 3.5.H.1 for the purpose of repairing diesel generators at power. In 1990, the NRC granted Vermont Yankee permission to intentionally disable and overhaul one of its diesel generators while operating at power, on the ground that a local hydroelectric station was available to provide backup power.<sup>2</sup> See Memorandum from Thomas E. Murley, Office of Nuclear Reactor Regulation, to Thomas T. Martin, Regional Administrator, Region I (May 18, 1990) and enclosures, Attachment 2.

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<sup>2</sup> As discussed below, the practice of intentionally disabling diesel generators while at power in order to make routine repairs is not permitted by either GDC 17 or the technical specifications for VYNPS. Thus, NECNP believes that the NRC erred when it granted permission for the 1990 repairs.

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Last year, on two separate occasions a month apart, Vermont Yankee declared its "A" diesel generator inoperable after "abnormalities were encountered with the jacket cooling system." Letter from Warren P. Murphy, Vermont Yankee, to United States Nuclear Regulatory Commission re: Proposed Change No. 166, One-Time Extended Emergency Diesel Generator (EDG) LCO Period to Support Maintenance Activities at 2 (December 15, 1992) (hereinafter "Murphy Letter"), Attachment 3. On May 28, 1992, and again on June 23, 1992, Vermont Yankee began diesel generator repairs while the reactor was at power, as permitted by TS 3.5.H.1 for "inoperable" diesel generators. When Vermont Yankee found that these repairs could not be completed within 7 days, as required by TS 3.5.H.1, it applied for and received temporary waivers which allowed a one-day extension for the repairs begun in May, and a two-day extension for the repairs begun in June. See BVY 92-068, Letter from Warren P. Murphy, Vermont Yankee, to United States Nuclear Regulatory Commission (June 3, 1992); BVY 92-074, Letter from Warren P. Murphy, Vermont Yankee, to United States Nuclear Regulatory Commission (June 29, 1992), Attachments 4 and 5, respectively.

According to Vermont Yankee, surveillance of the "B" diesel generator "has not revealed any indication" of the problems which rendered "A" diesel generator inoperable. Murphy Letter at 2. Nevertheless, Vermont Yankee deemed it "prudent" to make the same repairs to the "B" diesel generator that it had made to the "A" diesel generator "at the earliest opportunity." Id. Rather than

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waiting until the next refueling outage or scheduling an outage to make the repairs, Vermont Yankee submitted a letter to NRC requesting a change to TS 3.5.H.1 which would allow a "one-time extension" from the LCO of 7 days to 14 days in which to make those repairs, as well as to conduct the routine 18-month overhaul of the diesel generator. Murphy Letter, Attachment 3. On January 21, 1993, the NRC published a Federal Register notice of the proposed license amendment, along with a proposed finding that no prior hearing on the amendment is required because it poses no significant hazards consideration.

## II. THE PROPOSED LICENSE AMENDMENT POSES SIGNIFICANT HAZARDS CONSIDERATIONS.

### A. Statutory and Regulatory Framework

Pursuant to Section 189a(2)(A) of the Atomic Energy Act and 10 C.F.R. 50.92(c), the NRC may not issue an operating license amendment before granting a public hearing unless it determines that the proposed amendment poses "no significant hazards consideration," i.e., that the amendment would not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated;
- (2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or
- (3) Involve a significant reduction in the margin of safety.

In passing the enabling legislation for this regulatory provision, Congress recognized that

issuing the order in advance of a hearing would as a practical matter, foreclose the public's right to have its views considered. In addition, the licensing board would often be unable to order any substantial relief as a result of an after-the-fact hearing.

Conf. Rep. No. 97-884, 97th Cong., 2d Sess., at 37-38 (1982).

Thus, the conferees noted their intent that

in determining whether a proposed license amendment involves no significant hazards consideration, the Commission should be especially sensitive to the issues posed by license amendments that have irreversible consequences (such as those permitting an increase in the amount of effluents or radiation emitted from a facility or allowing a facility to operate for a period of time without full safety protections.)

Id. (emphasis added)

In response to Congress' expression of concern, the Commission "made clear" in the preamble to § 50.92 that

an amendment which allows a plant to operate at full power during which one or more safety systems are not operable would be treated in the same way as other examples considered likely to involve a significant hazards consideration.

Final Procedures and Standards on No Significant Hazards Considerations, 51 Fed. Reg. 7,744, 7,750, Col. 3 (March 6, 1986). In addition, the Commission "charge[d] the NRC staff to assure that doubtful or borderline cases are not found to involve no significant hazards consideration." 51 Fed. Reg. at 7,753, Cols. 2-3.

#### B. The Proposed License Amendment Raises Significant Hazards Considerations

The circumstances of this case, involving the disabling of a major safety component in violation of NRC General Design Criteria and VYNPS technical specifications, raise significant hazards considerations in the starkest terms. Even were these violations more "doubtful or borderline" [51 Fed. Reg. at 7,753, Cols. 2-3], the serious safety questions raised by the proposed

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amendment would dictate against the issuance of a no significant hazards consideration finding, and require the granting of a prior hearing on Vermont Yankee's proposed license amendment.

1. **The Proposed Amendment Involves the Intentional Disabling of A Safety System, In Violation of GDC 17.**

Under the Commission's standards for finding no significant hazards considerations, see 51 Fed. Reg. at 7,750, Col. 3, there can be no question that the proposed amendment raises "significant hazards" considerations, because it would allow the VYNPS to operate "at full power during which one or more safety systems [i.e., the "B" diesel generator] are not operable," in direct violation of GDC 17. The importance of compliance with GDC 17 cannot be gainsaid. GDC 17 is one of the NRC's "minimum requirements" that establishes the "principal design criteria" for "structures, systems, and components that provide reasonable assurance that the facility can be operated without undue risk to the health and safety of the public." Introduction to 10 C.F.R. Part 50, Appendix A. In evaluating the sufficiency of the onsite power supply to power safety systems, GDC 17 assumes that offsite power systems are unavailable, and requires the provision of onsite power supplies "with sufficient independence, redundancy, and testability to perform their safety functions assuming a single failure." Thus, in evaluating whether Vermont Yankee's diesel generators comply with GDC 17, it must be assumed that (a) no offsite power is available and (b) one of the two diesel generators has failed. If the remaining diesel generator were in-

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tentionally disabled, as proposed in Vermont Yankee's license amendment application, VYNPS would have no protection against a single failure of a diesel generator, in direct violation of GDC 17.

Moreover, it is clear that such a violation of GDC 17 could increase accident risk at VYNPS in all three of the aspects by which NRC judges "significant hazards" under 10 C.F.R. § 50.92(c)(1)-(3). With respect to the first criterion, the intentional disabling of the "B" diesel generator would significantly compound the "probability or consequences" associated with a "previously evaluated" accident -- i.e., the unavailability of one of the diesel generators during a loss of offsite power, as contemplated by GDC 17. If the "B" diesel generator is intentionally disabled and the "A" diesel generator must be assumed to be disabled as required by GDC 17, this would leave VYNPS without any source of onsite power. Under such circumstances, a design basis accident would be transformed to a beyond design basis accident, with the potential for meltdown and catastrophic consequences. Thus, the proposed amendment raises significant hazards considerations under the second criterion of § 50.92(c). Finally, the significantly increased probability and consequences of a serious accident would obviously involve a "significant reduction in the margin of safety" at the plant, thus establishing a significant hazard under § 50.92(c)(3).

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2. The Intentional Disabling of a Diesel Generator for Repairs at Power Violates Vermont Yankee's Technical Specifications and NRC Regulatory Guidance.

Vermont Yankee's operating license amendment application is based on the assumption that it is already entitled, through its technical specifications, to disable and repair the "B" diesel generator at power, and that all it requires is an extension of the seven-day period for repairs allowed by TS 3.5.H.1. See Murphy letter at 1. However, Vermont Yankee's position is based on an incorrect interpretation of VYNPS's technical specifications. In fact, the intentional disabling of a diesel generator for repairs that could otherwise be postponed until a planned outage violates the VYNPS technical specifications.

Pursuant to GDC 17, the principal VYNPS technical specification governing standby diesel generators, TS 3.10.A.1, requires that both diesel generators must be "operable and capable of reaching rated voltage and frequency in not more than 13 seconds." TS 3.5.H.1, upon which Vermont Yankee relies, creates a limited exception to this rule, providing that "During any period when one of the standby diesel generators is inoperable, continued reactor operation is permissible only during the succeeding seven days . . ."

Vermont Yankee apparently interprets the term "inoperable", as used in TS 3.5.H.1, to include the intentional disabling of the diesel generators for routine or non-urgent repairs. Thus, as read by Vermont Yankee, TS 3.5.H.1 permits it to intentionally disable one of its diesel generators for repairs at any time, as

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long as the duration of repairs does not exceed 7 days. However, such a broad interpretation of the exception in TS 3.5.H.1 would swallow the general rule established by GDC 17 and TS 3.10.A.1, that VYNPS cannot operate unless both diesel generators are operable and available. In effect, under Vermont Yankee's interpretation of the technical specifications, a diesel generator could be disabled for repairs every two weeks, as long as the repairs could be finished in seven days.

Vermont Yankee's interpretation of its technical specifications is also inconsistent with the guidance set forth in Reg. Guide 1.93, which contemplates at power repairs only after the risks of shutting down the reactor have been balanced against the risks of continuing to operate with only one diesel generator:

Under certain conditions, it may be safer to continue operation at full or reduced power for a limited time than to effect an immediate shutdown on the loss of some of the required electric power sources. Such decisions should be based on an evaluation that balances the risks associated with immediate shutdown against those associated with continued operation. If, on balance, immediate shutdown is the safer course, the unit should be brought promptly to an orderly shutdown, and to a cold shutdown as soon as possible. For example, the risks associated with an immediate shutdown on the loss of onsite a.c. power supply during a period of light system load would tend to be less than those during a peak load period because the stability of the offsite power system would be relatively higher. If, on balance, continued power operation is the safer course, the period of continued operation should be used to restore the lost source and to prepare for an orderly shutdown, provided, of course, that these activities do not risk further degradation of the electric power system or in any way jeopardize plant safety.

Reg. Guide 1.93 at 1. Under this standard, the only acceptable justification for repairing the diesel generators at power would

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be a showing that it is safer to do that than to shut the plant down -- an argument that could be made only if the diesel generator was unable to function, or so unreliable as to be effectively inoperable. Those circumstances do not exist here, where the "B" diesel generator is functional, and Vermont Yankee seeks permission simply to make non-urgent repairs and to conduct routine maintenance. Thus, under the guidance of Reg. Guide 1.93, the VYNPS technical specifications cannot be read to permit the intentional disabling of the diesel generators in order to perform routine repairs.

Because Vermont Yankee's proposal to intentionally disable the "B" diesel generator during power operation constitutes a departure from its technical specifications governing important safety functions, it necessarily raises "significant hazards considerations." In fact, while the NRC staff concluded (erroneously, NECNP submits) that Vermont Yankee's 1990 bid to overhaul its diesel generator during power operation was sanctioned by its technical specifications, the staff noted its concern that "this maintenance practice poses a noteworthy risk." Memorandum from J. Johnson, Chief, Reactor Projects Branch No. 3, Region I, to R. Wessman, Directorate I-3, NRC (April 6, 1990), Enclosure to Attachment 2.

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3. The Existence of the Vernon Tie-Line Would Not Compensate for the Disabled Diesel Generator Under GDC 17.

Vermont Yankee attempts to satisfy the no significant hazards standard by arguing that there will be no significant change in the types of potential accidents at VYNPS or decrease in the margin of safety of the plant, "because of the availability of other plant electrical systems, including the Vernon tie line" from a local hydropower station. Murphy letter at 5. However, this argument ignores GDC 17, which provides quite clearly that offsite power sources, such as the Vernon tie line, cannot be used as substitutes for onsite power sources in order to satisfy the requirements for backup power supply.

Moreover, even if GDC 17 could be ignored, and the Vernon tie line could be credited as a backup electricity supply, far too many questions exist about the capacity and reliability of the Vernon tie line as a source of backup power to safety systems. For instance, as Vermont Yankee has conceded, it is impossible to test the Vernon tie-line under a full station black-out load. BVY 92-94, Letter from Leonard A. Tremblay, Jr., Vermont Yankee, to United States Nuclear Regulatory Commission, re: 10CFR50.63 Station Blackout (SBO) - Response to NRC Request for Additional Information, Attachment to BVY 92-94 at 3 (July 31, 1992), Attachment 6. Moreover, Vermont Yankee admits that "[d]ue to the vintage of the hydro station generators' voltage regulators," it is unable to "analytically predict" what the voltage levels will be upon application of the largest load to the 4160-volt emergency bus. *Id.* at 3. Instead, Vermont Yankee

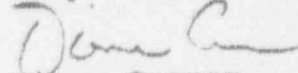
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relies on the engineering judgment of hydro operators and dispatchers from outside Vermont Yankee, who are not licensed by NRC and who have no responsibility for the safety of VYNPS. In sum, Vermont Yankee has neither empirical evidence nor analytical results to demonstrate that the Vernon tie line has "sufficient capacity and capability" to meet the requirements of GDC 17. Accordingly, the existence of the Vernon tie-line provides no basis for a no significant hazards finding in this case.

#### CONCLUSION

Vermont Yankee has failed to demonstrate that the proposed license amendment involves no significant hazards considerations; in fact, on its face, it would significantly increase the risk to public health and safety posed by operation of the VYNPS. Accordingly, the NRC should reverse its proposed finding of no significant hazards considerations, and order a prior hearing on the proposed license amendment.

Respectfully submitted,



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February 22, 1993

UNITED STATES OF AMERICA  
BEFORE THE NUCLEAR REGULATORY COMMISSION

In the Matter of

Vermont Yankee Nuclear  
Power Corporation

(Vermont Yankee Nuclear  
Power Station)

Docket No. 50-271-OLA

## AFFIDAVIT OF ROBERT D. POLLARD

I, Robert D. Pollard, do make oath and say:

1) My name is Robert D. Pollard. Since February 1976, I have been employed as a nuclear safety engineer by the Union of Concerned Scientists. My business address is 1616 P Street, N.W., Washington, D.C. 20036. Previously, I was employed by the United States Nuclear Regulatory Commission as a Licensing Project Manager for commercial nuclear power plants.

2) In May 1959, I enlisted in the United States Navy and was selected to serve as an electronics technician in the nuclear power program. After completing the required training, I became an instructor responsible for teaching naval personnel both the theoretical and practical aspects of operation, maintenance and repair for nuclear propulsion plants. From February 1964 to April 1965, I served as the senior reactor operator, supervising the reactor control division aboard the U.S.S. Sargo, a nuclear-powered submarine. In May 1965, I was honorably discharged from the U.S. Navy and attended Syracuse University, where I received the degree of Bachelor of Science magna cum laude in electrical engineering in June 1969.

3) In July 1969, I was hired by the United States Atomic Energy Commission (AEC) and continued as a technical expert with the AEC and its successor, the United States Nuclear Regulatory Commission (NRC) until February 1976. After joining the AEC, I completed a year of graduate studies in advanced electrical and nuclear engineering at the Graduate School of the University of New Mexico in Albuquerque. I subsequently advanced to the positions of Reactor Engineer (Instrumentation) and Project Manager with AEC/NRC. As a Reactor Engineer, I was primarily responsible for performing detailed technical reviews analyzing and evaluating the adequacy of the design reactor protection systems, control systems and emergency electrical power systems in proposed nuclear facilities. In September 1974, I was promoted to the position of Project Manager and became responsible for safety reviews of applications for licenses to construct and operate several commercial power plants.

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4) In the course of my six and a half years with the AEC and NRC, I performed technical reviews, analyses and evaluations of designs of systems and components necessary for safe operation of reactor facilities under normal, abnormal and emergency conditions for the purpose of determining whether such systems complied with NRC rules and provided an acceptable level of safety for the public.

5) For the past fifteen years, I, along with other members of the Union of Concerned Scientists' professional staff, have conducted numerous studies pertaining to the safety and reliability of nuclear power plants, both on a generic and plant-specific basis. I have provided technical analysis for UCS's participation in rulemaking proceedings before the Nuclear Regulatory Commission and for UCS's litigation against the NRC for failure to fulfill its responsibilities under the Atomic Energy Act. I testified before the President's Commission on the Accident at Three Mile Island which investigated that 1979 accident. I participated as an expert witness in the NRC's adjudicatory proceeding on matters pertaining to reactor safety before numerous committees of the United States Congress and various other state and local legislative and administrative bodies. Thus, my 23 years of professional experience on the technical staffs of the AEC, NRC, and UCS have given me first-hand knowledge of NRC regulations and how they are developed, administered, and interpreted.

6) I have reviewed all of the documents referenced in New England Coalition on Nuclear Pollution's Comments in Opposition to Proposed Finding of No Significant Hazards Consideration (February 22, 1993). I am also familiar with NRC regulations and regulatory guidance governing the design and operability of diesel generators.

7) The factual statements made in the attached New England Coalition on Nuclear Pollution's Comments in Opposition to Proposed Finding of No Significant Hazards Consideration are true and correct to the best of my knowledge and belief.

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Robert D. Pollard

Subscribed and sworn to before me this \_\_\_\_ day of February, 1993.

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Notary Public

My Commission expires \_\_\_\_\_.