

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of	)	
	)	
Philadelphia Electric Company	)	Docket Nos. 50-352
	)	50-353
(Limerick Generating Station,	)	
Units 1 and 2)	)	

APPLICANT'S ANSWER TO LIMERICK ECOLOGY ACTION'S  
RESPECIFICATION OF CONTENTION I-42

Preliminary Statement

The Atomic Safety and Licensing Board's Memorandum and Order Confirming Schedules Established During Prehearing Conference (May 16, 1983) at 7 permitted Limerick Ecology Action ("LEA") to respecify Contention I-42 regarding the qualification of electric equipment exposed to harsh environments. By letter dated July 11, 1983, LEA forwarded a revised Contention I-42 with an accompanying statement of its bases. As discussed below, Applicant opposes the admission of this contention at this time.

Discussion

The issue of environmental qualification of electric equipment important to safety for nuclear power plants is governed by the provisions of 10 C.F.R. §50.49, as published in the Federal Register on January 21, 1983 (48 Fed. Reg. 2729). As previously addressed on the record of this

proceeding, the Applicant is in the process of responding to the requirements of this regulation.<sup>1/</sup> By Amendment 51 to the License Application, Applicant submitted "Environmental Qualification Report for Limerick Generating Station" ("Environmental Qualification Report") dated May 24, 1983. This document is in partial response to the requirements of 10 C.F.R. §50.49. This report, inter alia, discusses what equipment is to be environmentally qualified and the criteria that will be utilized for such qualification.

In responding to the respecification inasmuch as the statement of Contention I-42 is quite general, Applicant will address the specific matters raised in the bases. There is no dispute between the Applicant and LEA that the new rule expands requirements relating to environmental qualification beyond "safety-related electrical equipment" to include the class of equipment termed as "important to safety" in the rule which, inter alia, subsumes the class "safety related."<sup>2/</sup> As previously noted, the Environmental Qualification Report presents the methodology for meeting the requirements of 10 C.F.R. §50.49 and will demonstrate, when complete, compliance with the requirements of the rule. The development of this report predated the new rule and for

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<sup>1/</sup> See, for example, Letter from Mark J. Wetterhahn to the Licensing Board dated May 3, 1983, attachment at 4.

<sup>2/</sup> 10 C.F.R. §50.49(a)(1)-(3).

this reason some of the terminology utilized therein remains unchanged. As a result, the scope of the intended coverage of the environmental qualification report submitted to the NRC may be confusing. That report continues to utilize the term "safety-related" as referring to the equipment to be qualified.<sup>3/</sup> However, the term "safety-related" as used by the Applicant in the Equipment Qualification Report encompasses all items which are "important to safety".<sup>4/</sup>

Therefore, the environmental qualification action taken by Applicant does meet the requirements of the new rule. For example, Appendix B, which is designated "Safety Related Equipment List," should be considered as a list of equipment which is "important to safety" as determined by the implementation of the definition contained in 10 C.F.R. §50.49(b). It is counsel's understanding that such list contained in Appendix B is approximately 90% complete in that when originally submitted the process of

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<sup>3/</sup> The rules for determining what electrical equipment must be qualified to meet the requirements of 10 C.F.R. §50.49 are contained in a document entitled Philadelphia Electric Company Q\*5 Component Classification Program Rules. This document is proprietary to the Quadrex Corporation which has performed analyses for the Applicant in the area of equipment qualification. As soon as arrangements have been made regarding the protection of this document from disclosure, it will be forwarded to LEA in order to attempt to dispose of this portion of the contention.

<sup>4/</sup> See n.2, supra.

identification of equipment for inclusion in the list had not been completed and is continuing. A complete listing for inclusion in Appendix B of the Environmental Qualification Report will be included in the October Supplement.<sup>5/</sup>

With regard to the assertion in the contention and section (a) of the basis that the analysis required by §50.49(i) has not been presented in the Environmental Qualification Report, this matter is clearly premature. Until the Equipment Qualification Review Records ("EQRR") (Appendix E to the Environmental Qualification Report) are completed, which requires the finalization of Appendix B, it will not be possible to determine which of the particular environmental qualification tests, if any, will not be complete by the time operation begins. Therefore, it is premature to consider whether some equipment qualification will not be complete by the time the plant is ready to operate.

With regard to the examples which are given at the bottom of page 2 in the bases which LEA asserts should be reviewed for inclusion in the environmental program, intervenor has failed to give any basis whatsoever that

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<sup>5/</sup> A draft copy of the list of remaining equipment to be added to this list will also be forwarded to LEA within the next three weeks. It should be noted that the complete list is being reviewed and may be slightly modified in October.

these plant features, i.e., feedwater control, emergency lighting and communications systems, the plant process computer and computer software, fit within the definition of "important to safety" and need be qualified under the provisions of 10 C.F.R. §50.49. Applicant's position as to why these items play no safety function is based on the description of the components and the analyses contained in the Final Safety Analysis Report.<sup>6/</sup> Therefore, the mere assertion that these should be included lacks specificity and basis when viewed in light of the material in the Application.

In subsection (b), it is alleged that in order to determine the list of systems and equipment to be qualified, in addition to the consideration of the consequences of a loss of coolant accident ("LOCA") or a high energy line break ("HELB"), it is necessary to conduct what LEA terms a "human interaction review" in order to determine which equipment failures can mislead the operator. Intervenor points to absolutely no requirement of 10 C.F.R. §50.49 that such a human interaction review be conducted as part of an equipment qualification program. This is an impermissible

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<sup>6/</sup> The feedwater control is described in FSAR Section 7.1.2.1.9. The emergency lighting systems are discussed in FSAR Sections 9.5.3 and 9.5.1.2.10. The communications systems are analyzed in FSAR Section 9.5.2. The plant process computer system is described in FSAR Section 7.7.1.7. The reference to computer software is unclear.

attempt to expand this contention beyond its original scope without a showing of good cause. In any event, LEA has not correctly characterized the scope of the Applicant's environmental qualification review.

Page 2.1 of the Environmental Qualification Report does state that the equipment to be environmentally qualified "was established by considering those systems and equipment required to mitigate the consequences of a Loss of Coolant Accident ("LOCA") or a High Energy Line Break ("HELB")." However, the remainder of the paragraph containing this sentence adds significantly to the scope of the review that was conducted. The remainder of the paragraph reads as follows:

In addition, components required for display information and to perform post-accident sampling and monitoring and radiation monitoring (Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident", Rev. 2, Category I and II Equipment) and TMI upgrades (NUREG 0737, "Clarification of TMI Action Plan Requirements", Rev. 1, Equipment) have been included to the extent required therein. Specifically included, in accordance with NRC guidance, are those systems required to achieve or support:

1. Emergency Reactor Shutdown
2. Containment Isolation
3. Reactor Core Cooling
4. Containment Heat Removal
5. Core Residual Heat Removal



6. Prevention of Significant Release of Radioactive Material to the Environment.

Thus, the review did cover display information and the ability to perform post-accident sampling and monitoring, contrary to the assertion of intervenor. Therefore, this portion of the contention provides no specificity or basis.

Applicant is unsure of the point that intervenors seek to raise regarding the post-accident sampling system ("PASS"). As the response to Question 281.11 as contained in the FSAR clearly states, consideration has been given to inclusion of the PASS system in the equipment qualification program. However, as clearly noted therein, valves which are accessible can be repaired or valves which are not accessible for repair do not contain materials which would prevent the PASS from performing its sampling function. LEA has failed to explain how such system would mislead the operator into misjudging the level of radioactive releases occurring. This system merely allows operator to obtain a sample which is analyzed in the laboratory. We believe that this argument is specious and cannot support the admission of this contention.

In Paragraph (c)(1), LEA alleges that the Environmental Qualification Report is inadequate because EQQRs are provided for only one type of equipment. The intervenor is correct; however, Applicant fails to appreciate the significance of such statement. As Applicant has stated in

the past, this Appendix will be amended in October to include EQQRs for each item identified in Appendix B.

In subsection (c)(2), LEA alleges that where the qualified life of a piece of equipment is less than the 40 year plant life, no action is identified. This contention lacks specificity and basis. Page 8.2 of the Environmental Qualification Report clearly states that the planned maintenance program will be computerized to efficiently handle scheduling and documentation of maintenance requirements and activities. It goes on to state that the "[t]his computerized scheduling program will be used to alert appropriate plant departments of preventive maintenance, surveillance, and replacement requirements of environmentally qualified equipment (emphasis supplied)." Thus, this matter has been adequately taken into account by the Applicant and no issue for litigation remains.

In subsection (c)(3), it is stated that some safety-related equipment is not being qualified. The example given is two components of the standby liquid control system. Intervenor correctly points out that the squib valves of this system were not contained in Appendix B. However, this matter was being reviewed by Applicant and the squib valves were to be included in the amendment of this document scheduled for October. The related keylock switch is located in control room. This is not a harsh environment and therefore does not fall within the purview of the environmental equipment qualification program as



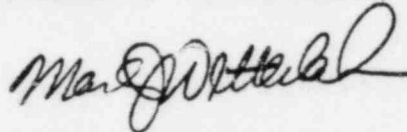
stated in 10 C.F.R. §50.49(c). See also the introduction to the Environmental Qualification Report at ii which states that mild environment equipment qualification is a quality assurance function and as such is addressed using 10 C.F.R. 50 Appendix B and Regulatory Guide 1.33 criteria.

Conclusion

For the above stated reasons, Applicant submits that the contention in its entirety either lacks specificity and basis or is premature for litigation. Therefore this contention should be denied.

Respectfully submitted,

CONNER & WETTERHAHN, P.C.

A handwritten signature in dark ink, appearing to read "Mark J. Wetterhahn", written in a cursive style.

Mark J. Wetterhahn  
Counsel for the Applicant

July 25, 1983

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CERTIFICATE OF SERVICE

I hereby certify that copies of "Applicant's Answer to Limerick Ecology Action's Specification of Contention I-42" and "Applicant's Objection to Certain of Intervenor's Second Set of Interrogatories and Requests for Documents and Calculations," dated July 25, 1983, in the captioned matter have been served upon the following by deposit in the United States mail this 25th day of July, 1983:

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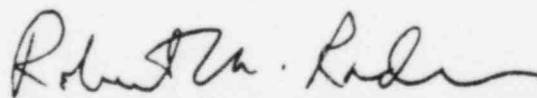
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