

JUL 13 1994

MEMORANDUM FOR: Joseph A. Murphy, Acting Director  
Division of Safety Issue Resolution  
Office of Nuclear Regulatory Research

FROM: Brian W. Sheron, Director  
Division of Engineering  
Office of Nuclear Reactor Regulation

SUBJECT: DOCUMENTATION OF GENERIC SAFETY ISSUES ON DEGRADED  
VOLTAGE PROTECTION

In response to diagnostic evaluation team findings at Quad Cities Nuclear Power Station, NRR was assigned lead responsibility for determining the need for generic action on an issue related to degraded voltage protection. The Electrical Engineering Branch of the Division of Engineering has concluded, with input from the Probabilistic Safety Assessment Branch, that no further generic action is warranted on this issue. See Enclosure 1.

Although we acknowledge that RES does not need to assign priorities to items for which NRR has taken the lead role, we believe that this issue and the resolution/conclusion should be documented within the generic issue resolution process. Therefore, we recommend that you take the steps necessary to include it in NUREG-0933, "A Prioritization of Generic Safety Issues."

If you need further information on this issue, please contact M. Trehan at 504-2777.

Original signed by

Brian W. Sheron, Director  
Division of Engineering  
Office of Nuclear Reactor Regulation

Enclosure:  
As stated

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504-2777

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**TABLE 1.5.1-1  
CORE DAMAGE FREQUENCY BY INITIATING EVENT**

<u>INITIATING EVENT</u>	<u>INITIATING EVENT FREQUENCY (/YR)</u>	<u>CORE DAMAGE FREQUENCY (/YR)</u>	<u>PERCENT CONTRIBUTION</u>
Dual Unit LOSP <sup>1</sup>	1.61E-02	6.74E-07	56.2
Single Unit LOSP	3.20E-02	1.92E-07	16.1
Medium LOCA <sup>2</sup>	8.00E-04	1.72E-07	14.3
ATWS <sup>3</sup>	1.16E-04	7.61E-08	0.4
General Transient	3.87	4.69E-08	3.9
Large LOCA	3.00E-04	2.46E-08	2.0
Small LOCA	3.00E-03	1.14E-08	1.0
IORV <sup>4</sup>	1.06E-01	8.71E-10	0.1
ISLOCA <sup>5</sup>	1.20E-07	6.30E-10	0.1
TOTAL		1.20E-06	100

- |    |        |   |                                     |
|----|--------|---|-------------------------------------|
| 1. | LOSP   | = | Loss of Offsite Power               |
| 2. | LOCA   | = | Loss of Coolant Accident            |
| 3. | ATWS   | = | Anticipated Transient Without Scram |
| 4. | IORV   | = | Inadvertent Open Relief Valve       |
| 5. | ISLOCA | = | Interfacing System LOCA             |

*Manu Patil PM IPE from 13D10*