November 29, 2000

MEMORANDUM TO: Gary M. Holahan, Director
Division of Systems Safety and Analysis
Office of Nuclear Reactor Regulation

FROM: John N. Hannon, Chief **/RA/**
Plant Systems Branch
Division of Systems Safety and Analysis
Office of Nuclear Reactor Regulation

SUBJECT: RATIONALE FOR TEMPORARILY HALTING CERTAIN ASSOCIATED CIRCUITS INSPECTION LINES OF INQUIRY DURING FIRE PROTECTION BASELINE TRIENNIAL INSPECTIONS

The purpose of this memorandum is to inform you of the rationale for temporarily halting certain associated circuits lines of inspection inquiry during the ongoing fire protection baseline triennial inspections under IP 71111.05 “Fire Protection.” This rationale is provided in the attachment to this memorandum.

By copy of this memorandum, we are also providing our rationale to the ACRS, who asked for it in a meeting on November 3, 2000. We also plan to post this information on the NRC fire protection Web site.

Attachment: As stated

CONTACT: L. Whitney, SPLB/DSSA/NRR
301-415-3081

November 29, 2000

MEMORANDUM TO: Gary M. Holahan, Director
Division of Systems Safety and Analysis
Office of Nuclear Reactor Regulation

FROM: John N. Hannon, Chief **/RA/**
Plant Systems Branch
Division of Systems Safety and Analysis
Office of Nuclear Reactor Regulation

SUBJECT: RATIONALE FOR TEMPORARILY HALTING CERTAIN ASSOCIATED CIRCUITS INSPECTION LINES OF INQUIRY DURING FIRE PROTECTION BASELINE TRIENNIAL INSPECTIONS

The purpose of this memorandum is to inform you of the rationale for temporarily halting certain associated circuits lines of inspection inquiry during the ongoing fire protection baseline triennial inspections under IP 71111.05 “Fire Protection.” This rationale is provided in the attachment to this memorandum.

By copy of this memorandum, we are also providing our rationale to the ACRS, who asked for it in a meeting on November 3, 2000. We also plan to post this information on the NRC fire protection Web site.

Attachment: As stated

CONTACT: L. Whitney, SPLB/DSSA/NRR
301-415-3081

DISTRIBUTION:

ADAMS	SPLB R/F	LWhitney	EWeiss	JNHannon
TCollins	GHolahan	ASingh	ACRS	PUBLIC
BSheron	SSollins	WRuland, RI	KLandis, RII	RGardner, RIII
PKoltay	DCoe	WDean	JShackelford, RIV	

DOCUMENT NAME:
G:\SPLB\SECTIONB\WHITNEY\ASSOCIATEDCIRCUITSRATIONALELTR.WPD

* See previous concurrence

SPLB:DSSA	SPLB:DSSA	IIPB/DIPM	BC:SPLB:DSSA	D:DSSA:NRR
LWhitney	EWeiss	WDean	JNHannon	GHolahan
11/07/00*	11/07/00*	11/07/00*	11/08/00	11/29/00

OFFICIAL RECORD COPY

ATTACHMENT

ASSOCIATED CIRCUITS INSPECTION CESSATION RATIONALE

Recently, while the nuclear industry resolves circuit analysis issues, the NRC has decided to temporarily halt fire protection inspection of significant portions of licensee "associated circuits" analyses (the major exception being the relatively noncontroversial area of fuse/breaker coordination). The redundant train *protection* and alternative shutdown capability *independence* lines of inspection inquiry for "direct" post-fire safe shutdown circuits are not affected by this temporary change to the fire protection baseline inspection procedure (IP 71111.05 "Fire Protection"). Associated circuits are distinct from the circuits directly required for operation of post-fire safe shutdown trains of equipment. Associated circuits are not required for post-fire safe shutdown, but could *interfere* with post-fire safe shutdown if damaged by fire.

Associated circuits are technically defined in the "Associated Circuit of Concern" section of the March 22, 1982, Generic Letter 81-12 clarification letter on the "Fire Protection Rule - Appendix R" from R. Mattson, Director, Division of Systems Integration, NRR to D. Eisenhut, Division of Licensing, NRR.

One of the Principles of Good Regulation is that they be clear. However, Appendix R and the standard review plan say nothing about what constitutes an adequate associated circuits analysis, and reactor licensees disagree about the matter or profess to be confused. The staff and certain reactor licensees disagree about the intent and application of certain plant-specific associated circuits licensing bases. And, quite significantly, the Boiling Water Reactor Owners Group (BWROG) has informed the staff of certain associated circuit licensing bases that contradict the staff's understanding regarding adequate associated circuits analysis. In these circumstances fire protection baseline inspectors would be in the uncomfortable position of developing associated circuits findings on currently unresolved issues.

The industry, led by the Nuclear Energy Institute (NEI) and the BWROG, has launched a comprehensive, voluntary initiative to determine criteria for associated circuits analysis and the criteria for judging the acceptability of associated circuits configurations. An Enforcment Guidance Memorandum (EGM) has indefinitely postponed associated circuits enforcement activities while the industry works to resolve this issue.

The public may well ask "How will safety be maintained in the meantime?" and "Isn't your most important mission to maintain safety?" In anticipation of such questions we respond:

> We have considered the safety impact of temporarily halting associated circuits inspections in the context of the structure of our overall inspection program. The program focuses on the most risk significant areas. The program expends little or no effort in areas of inherently low risk. Higher risk areas require more discrimination and judgement in the allocation of inspection resources. Relative to the direct fire protection baseline triennial inspection hours available (200 every three years), there are more than enough risk-significant lines of inspection inquiry for which clear, indisputable criteria exist (for example, the large and complex areas of (1) *protection* of redundant safe shutdown trains and their electrical cables through the provision of fire barriers, distance, and detection and suppression devices, and (2) the provision of *independent* alternative shutdown equipment and electrical cables through their location in areas unaffected by postulated fires). We have therefore concluded that it would be

ineffective to expend inspection resources in areas with unresolved issues which are the subject of ongoing industry initiatives. Further, it would also be an *unnecessary regulatory burden* on reactor licensees to have to provide responses on, and develop compensatory measures for, associated circuits related findings in the absence of agreed upon circuit analysis criteria. Focusing our limited inspection resources on important areas will actually enhance safety during the voluntary industry initiative. This is why we have postponed inspections in the narrow area of associated circuits.