Received: from igate.nrc.gov
by nrcgwia.nrc.gov; Tue, 09 Dec 2003 16:14:11 -0500
Received: from smtpgw3.bnl.gov (smtpgw3.bnl.gov [130.199.3.20])
by smtp-gateway ESMTPœ id hB9L9GU3029445
for <CFS1@nrc.gov>; Tue, 9 Dec 2003 16:09:16 -0500 (EST)
Received: from exchange02.bnl.gov ([130.199.74.18])
by smtpgw3.bnl.gov with esmtp (Exim 3.36 #1 )
id 1ATpBJ-0000w4-00
for <CFS1@nrc.gov>; Tue, 09 Dec 2003 16:14:09 -0500
Received: by exchange02.bnl.gov with Internet Mail Service (5.5.2657.72)
id <XNAG18XF>; Tue, 9 Dec 2003 16:10:35 -0500
Message-ID: <1655641A03CED411BDCB0002B309452408573145@exchange02.bnl.gov>
From: "Sullivan, Kenneth" <ks@bnl.gov>
To: "'Caswell Smith'" <CFS1@nrc.gov>
Subject: RE: Hatch TFPI "URI 50-366/03-06-06"
Date: Tue, 9 Dec 2003 16:10:34 -0500
MIME-Version: 1.0
X-Mailer: Internet Mail Service (5.5.2657.72)
Content-Type: text/plain;
charset="iso-8859-1"
X-BNL-MailScanner: Found to be clean

Caswell
IN GENERAL: IF the postulated circuit failure would have a direct impact on the operation of the credited SSD system the circuits are considered REQUIRED CIRCUITS and must be provided with protection per III.G.2.

For a fire in FA 2104 (East Cableway) the Hatch SSAR credits the use of SSD Path 1. Path 1 utilizes RCIC and S/RVs to provide eactor protection via depressurization, inventory makeup, and decay heat removal. One S/RV should be opened to begin depressurization before the reactor water level reaches level 8 (approximately 2 1/2 hours). RCIC should be operated to aintain RPV inventory between RPV water level 3 and 8 until the RCS is within the LPCI operability pressure range of pproximately 135 psig (approximately 4 hours into the event), at which time an additional S/RV will be opened to initiate the alternate shutdown cooling mode of operation (ASDC).

As stated in Table 3.1-2 - The required Safe Shutdown Mode for the SRVs is CLOSED Except for SRVs B21-F013G and B21-F013H which are required to be operable in order to manually depressurize the RPV. Two S/RVs are required to remain manually operable. - If all SRVs open then this criterion is obvioulsy not met.

In addition, motive power for the RCIC pump is provided by the RCIC turbine which is driven by steam from the reactor. Therefore, in addition to other concerns, the spurious opening of all SRVs (due to fire damage to circuits ABE019C08 and ABE019C09) would impact the credited SSD (Path 1) by causing a loss of motive steam to RCIC.

If RCIC was the only makeup system credited in the SSAR the SRV circuits shoudl be considered as REQUIRED CIRCUITS and protected per III.G.2. However, the SSAR does recognize the potential for this event (spurious

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opening of all SRVs) and describes methods to prevent occurrence (open liinks) or mitigate its impact on the SSD capability (use of Core Spray Loop A). IF: the opening of links was shown to be an effective method of preventing occurrence and/or CS Loop A was demonstrated (by documented analysis) to be available and capable of mitigating this event I would not have any concerns. However, I am not sure that this is the case. At the time of the inspection we questioned both the licensing basis and technical adequacy/feasibility of manual actions to prevent this occurrence and we were not provided with any objective evidence which demonstrated that CS was capable of mitigating this event.

hope this helps -

Ken

-----Original Message-----
From: Caswell Smith [mailto:CFS1@nrc.gov]
Sent: Thursday, December 04, 2003 7:58 AM
To: Sullivan, Kenneth
Subject: Hatch TFPI "URI 50-366/03-06-06"

Hi, Ken I am working on the licensee's response to our inspection findings and I have a question. The licensee claims that the 4-20 milli-amp instrument circuits are not required for the SRVs to perform their design function and are therefore associated circuits.

The logic developed by these circuits, however, are used in the 125 VDC Class 1E control circuit of of the SRVs which are required post-fire safe shutdown equipment.

The licensee claims that this circuit is made up of two parts, one part is the required circuit which implements the required Appendix R manual opertor action . The other part is not rquired for Appendix R functions, and implements the backup over-pressure protection for the nuclear boiler.

I totally disagree with this definition of an electrical circuit which is not consistent with the definition given in IEEE 100-1977, IEEE Standard Dictionary of Electrical and Electronic Terms.

Based on your vast experience of Appendix R regulations, can the circuit of a required post fire safe shutdown equipment used for establishing hot shutdown conditions be classified this way?

Appendix R, Section III.G.2, requires that the circuits of required post fire safe shutdown equipment be protected from fire damage. Are the instrument circuits required circuits and should they have been protected in accordance with this regulatory requirement?

I would appreciate your comments, Thanks

I would appreciate your interpretation of this

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**Mail Envelope Properties**
(3FD63B26.14B : 15 : 41291)

**Subject:** RE: Hatch TFPI "URI 50-366/03-06-06"
**Creation Date:** Tue, Dec 9, 2003 4:10 PM
**From:** "Sullivan, Kenneth" <ks@bnl.gov>

**Created By:** ks@bnl.gov

**Recipients**
nrc.gov
ATL_PO.ATL_DO
CFS1 (Caswell Smith)

| Post Office | Route |
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| ATL_PO.ATL_DO | nrc.gov |

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| MESSAGE | 4154 | Tuesday, December 9, 2003 4:10 PM |
| Mime.822 | 5208 | |

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| **Reply Requested:** | No |
| **Return Notification:** | None |
| **Concealed Subject:** | No |
| **Security:** | Standard |