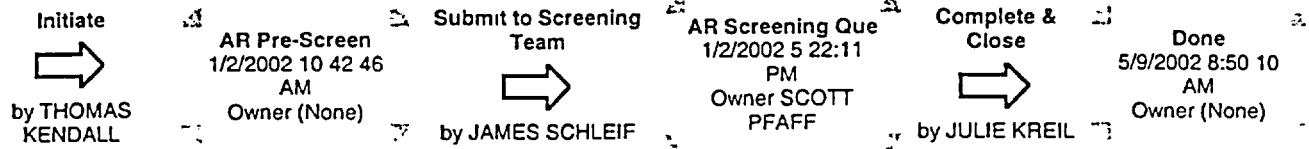


STATE CHANGE HISTORY



SECTION 1

Activity Request Id: CAP001763
 Activity Type: CAP Submit Date: 1/2/2002 10:42:46 AM

One Line Description: ISI scoping of AF-117, AF-4035, classification of AFW recirc lines.

Detailed Description: 1/2/2002 9:42AM - THOMAS KENDALL:
 During review of AFW system recirculation line design for continuing risk assessment, it was identified that a check valve (AF-117) in the common recirculation line is a source of a possible single active failure (failure to open) that could render all 4 pumps inoperable. A disc separation of manual isolation valve AF-1 could have similar effects (although this valve is not required to actively reposition, and is therefore not considered to be a failure contributor).

This concern will need to be reviewed in light of the final resolution for the recirculation lines from the pumps. If it is determined that minimum flow recirculation is a necessary design feature to maintain operability of the pump(s), then this valve will likely have to be removed and/or tested as a safety related valve.

Note that while relief valve AF-4035 is also in this common line, it may not provide protection to all running pumps if the common recirculation line downstream is blocked / isolated. This is due to the phenomenon of the higher head pumps (1 or more turbine driven pumps) shutting off flow from the lower head pumps. This aspect was described in full in NRC Bulletin IE 88-04 "Potential Safety-Related Pump Loss".

This AR is to identify a concern, and to track it's resolution. Discussion with PRA Engineering staff confirms that the aggregate risk of the common mode failure is acceptably low. This is a mechanistic issue that may result from reclassification of the line, and is not considered a risk significant issue at this time.

Initiator: KENDALL, THOMAS Initiator Department: EDT Engineering Design Thermal/Hydraulic Analysis PB

Date/Time of Discovery: 1/2/2002 10:33:47 AM Date/Time of Occurrence: 1/2/2002 10:33:47 AM

Identified By: Site-identified System: AF PB

Equipment # (1st): (None) Equipment Type (1st): (None)

Equipment # (2nd): (None) Equipment Type (2nd) : (None)

Equipment # (3rd): (None) Equipment Type (3rd) : (None)

Site/Unit: Point Beach - Common

Why did this occur?: 1/2/2002 9:42AM - THOMAS KENDALL:
 The common recirculation line has not historically been considered to have a Safety Related function.

Immediate Action Taken: 1/2/2002 9:42AM - THOMAS KENDALL:
 None

Recommendations: 1/2/2002 9:42AM - THOMAS KENDALL:
 Upon final resolution of design functions of the recirculation line(s), review IST documentation of AF-117 and AF-4035 to determine if further changes are needed.

Handwritten signature: A/142

1/2/2002 4:22PM - JAMES SCHLEIF:

Conduct an engineering review to ensure the AFW recirculation line design is adequate. This review needs to include the system/component classification, single failure analysis, relief valve performance and capability in event of check valve failure and adequacy of check valve and relief valve maintenance and testing. Results of this evaluation will determine any additional corrective actions as stated in the initiators recommendation.

☛ Notify Me During Eval?: Y ☛ SRO Review Required?: Y

SECTION 2

Operability Status: Operable ☛ Compensatory Actions: N

Basis for Operability: 1/2/2002 4:22PM - JAMES SCHLEIF:

AF-117, AFW Recirculation Line Check Valve is a non-QA and non-Safety Related component. The AFW System however is safety related and relies on the recirculation flow under low AFW flow conditions to maintain pump cooling and operation. A search of CHAMPS history shows no work orders have been written against AF-117, AFW Recirculation Line Check Valve. Discussion with the Shift Manager also revealed no recollection of any previous problems with this valve. This recirculation line is also protected with a relief valve upstream of AF-117, AFW Recirculation Line Check Valve however, the capacity of the relief valve, AF-4035 is questioned based on the initiator's comments. Flow through AF-117, AFW Recirculation Line Check Valve is verified during each AFW pump quarterly test (four tests per quarter). Recent operator training and enhancements to operating procedures have heightened attention to the necessity to maintain adequate AFW pump flow/recirculation flow, or shutdown the AFW pumps to prevent damage to the AFW pumps. All AFW pumps have successfully completed all required testing within the current periodicity and are therefore operable.

☛ Unplanned TSAC Entry: N ☛ External Notification: N

SECTION 3

Screened?: Y ☛ Significance Level: B

INPO OE Req'd?: N Potential MRFF?: N

☛ QA/Nuclear Oversight?: N ☛ Licensing Review?: N

Good Catch/Well Doc'd?: NA

SECTION 4

Inappropriate Action: 9/5/2002 6:50:36 AM - KEVIN BENNETT:

This is a legacy item. The site has decided to make the recirculation function of these pumps safety related. In order to ensure that flow is maintained in this line the internals of the check valve are being removed.

Process: N/A - Not Applicable Activity: N/A - Not Applicable

Human Error Type: N/A - Not Applicable Human Perf Fail Mode: N/A - Not Applicable

Equip Failure Mode: (None) Process Fail Mode: N/A - Not Applicable

Org/Mgt Failure Mode: N/A - Not Applicable ☛ Group Causing Prob: (None)


Hot Buttons: (None)




SECTION 5

CAP Admin: KEVIN BENNETT Prescreener: (None)



☛ Project: Corrective Action

Process (CAP) 

State: Done Active/Inactive: Inactive
 Submitter: THOMAS KENDALL  Owner: (None)
 AR Type: Parent Last Modified Date: 9/5/2002 6:50:36 AM
 Last Modifier: KEVIN BENNETT  Last State Change Date: 5/9/2002 8:50:10 AM
 Last State Changer: JULIE KREIL  Close Date: 5/9/2002 8:50:10 AM

NUTRK ID:

of Children: 0

References: MR 01-144
MR 02-001
NPM 2002-0228

Update: CLOSED TO COMPLETED ACTION.

Prescreen Comments:

Import Memo Field:

OPR Completed?: N

OLD_ACTION_NUM:


sub_tsid: 0 original_project_id: 32

original_issue_id: 001763

Site: Point Beach

Cartridge and Frame:

ATTACHMENTS AND PARENT/CHILD LINKS

 [Linked To CE000022](#)

CHANGE HISTORY

8/16/2002 1:24:16 PM by SCOTT PFAFF

Last Modifier Changed From JULIE KREIL To SCOTT PFAFF

9/5/2002 6:50:36 AM by KEVIN BENNETT

Inappropriate Action Changed From * To '[Appended.] This is a legacy item. The site has decided to make the recirculation function of these pumps safety related. In order to ensure that flow is maintained in this line the internals of the check valve are being removed '

Process Changed From (None) To N/A - Not Applicable

Activity Changed From (None) To N/A - Not Applicable

Human Error Type Changed From (None) To N/A - Not Applicable

Human Perf Fail Mode Changed From (None) To N/A - Not Applicable

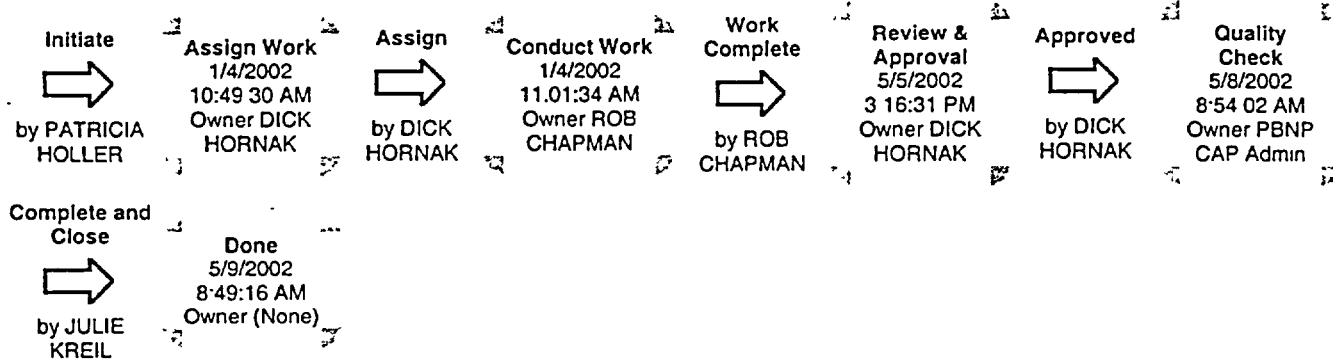
Process Fail Mode Changed From (None) To N/A - Not Applicable

Org/Mgt Failure Mode Changed From (None) To N/A - Not Applicable

Last Modified Date Changed From 8/16/2002 1:24:16 PM To 9/5/2002 6.50 36 AM

Last Modifier Changed From SCOTT PFAFF To KEVIN BENNETT

STATE CHANGE HISTORY



SECTION 1

Activity Request Id: CE000022
 Activity Type: Condition Evaluation Submit Date: 1/4/2002 10:49:30 AM
 Site/Unit: Point Beach - Common
 Activity Requested: Perform Condition Evaluation per NP 5.3.1.

Extent of Condition problem is addressed by Root Cause Evaluation from AF recirc line investigation. No ACE required.

☉ CATPR: N Initiator: KENDALL, THOMAS
 Initiator Department: EDT Engineering Design Thermal/Hydraulic Analysis Responsible Group Code: EDMP Engineering Design Mechanical PB
 Responsible Department: Engineering Activity Supervisor: DICK HORNAK
 Activity Performer: ROB CHAPMAN

SECTION 2

Priority: 3 Due Date: 2/4/2002
 Mode Change Restraint: (None) Management Exception From PI?: N
 ☉ QA/Nuclear Oversight?: N ☉ Licensing Review?: N
 NRC Commitment?: N ☉ NRC Commitment Date:

SECTION 3

☉ Condtn Eval: 1. Condition Assessment / Issue Summary - describe the present condition.
 2. Potential Solutions - describe solution options.
 3. Solution to Implement - identify chosen solution
 Activity Completed: 5/5/2002 3:16:31 PM - ROB CHAPMAN
 The AFP mini-recirc valves do not have a safety function in the open position. Modifications MR 01-144 and MR 02-001 were installed to provide backup pneumatic supplies to these valves so that they may open as needed during an event where instrument air was lost. These

modifications were installed to reduce the CDP, not to support a safety function.

However, these modifications were installed safety related. MR 01-144 was installed safety related because the existing backup nitrogen system for the MDAFP discharge valves was used, and this system was already safety related with the check valves part of the IST program. MR 02-001 was installed AQ with safety-related components, but later classified as safety-related (with check valves added to IST program) per memo NPM 2002-0228 as a conservative measure due to the significant regulatory issues involved.

As stated before, there is not a safety function for the mini-recirc valves in the open position. The minimum recirculation lines downstream of the flow restricting orifices do not have a safety function, and are not scoped safety related. Therefore, there is no need to scope AF-117 and AF-4035 as safety related components or put these valves in the IST program

In the future, if it is decided to give the AFP mini-recirc valves a safety function in the open position, then it is likely that modifications will be required to the common portion of the mini-recirc piping as part of the upgrade.

This item may be closed with no further actions required.

5/9/2002 8:49:16 AM - JULIE KREIL:

The Condition Evaluation is completed. The AFP mini-recirc valves do not have a safety function in the open position (see update above from 5/5/2002). No further actions required. CLOSED CE000022 to completion of Requested Activity.

SECTION 4


QA Supervisor: (None) Licensing Supervisor: (None)


SECTION 5


Project: Condition Evaluation (CE)

State: Done Active/Inactive: Inactive

Owner: (None) AR Type: Parent

Submitter: PATRICIA HOLLER Assigned Date: 1/4/2002
(Deleted) 

Last Modified Date: 5/9/2002 8:49:16 AM Last Modifier: JULIE KREIL 

Last State Change Date: 5/9/2002 8:49:16 AM Last State Changer: JULIE KREIL 

Close Date: 5/9/2002 8:49:16 AM

One Line Description: ISI scoping of AF-117, AF-4035, classification of AFW recirc lines.

NUTRK ID:

Child Number: 0

References: MR 01-144
MR 02-001
NPM 2002-0228

Update:


Import Memo Field:

CAP Admin: PBNP CAP Admin Site: Point Beach

OLD_ACTION_NUM:

Cartridge and Frame:

ATTACHMENTS AND PARENT/CHILD LINKS

 [Linked From CAP001763](#)

CHANGE HISTORY

5/9/2002 8:49:16 AM by JULIE KREIL

Activity Completed Changed From '[Original Text]' To '[Appended] The Condition Evaluation is completed. The AFP mini-recirc valves do not have a safety function in the open position (see update above from 5/5/2002) No further actions required. CLOSED CE000022 to completion of Requested Activity.'

State Changed From Quality Check To Done Via Transition: Complete and Close

Active/Inactive Changed From Active To Inactive

Owner Changed From PBNP CAP Admin To (None)

Last Modified Date Changed From 5/8/2002 8:54.02 AM To 5/9/2002 8:49:16 AM

Last Modifier Changed From DICK HORNAK To JULIE KREIL

Last State Change Date Changed From 5/8/2002 8 54.02 AM To 5/9/2002 8 49:16 AM

Last State Changer Changed From DICK HORNAK To JULIE KREIL

Close Date Changed From Unassigned To 5/9/2002 8:49:16 AM

References Changed From " To 'MR 01-144 MR 02-001 NPM 2002-0228'



INTERNAL
CORRESPONDENCE

To: File
From: Fred J. Cayia
Date: April 25, 2002
Subject: DESIGNATION OF BACKUP PNEUMATICS FOR AFW MINI-
RECIRCULATION VALVES AS SAFETY-RELATED
Copy To: L. Armstrong
R. Chapman
J. Novak
M.E. Reddemann
M.E. Warner

Modification MR 02-001 installed a backup air supply to the mini-recirculation valves for 1/2 P-29 Turbine-Driven Auxiliary Feed Water (AFW) Pumps. Mini-recirculation valves 1AF-4002 and 2AF-4002 are currently scoped as Safety Related (SR) by the PBNP QA classification process based on requirements for a closed position for the purposes of ensuring sufficient AFW flow to the steam generators. Scenarios that involve a loss of instrument air introduce a potential common mode failure of the auxiliary feedwater pumps. Since the AF-4002 valves fail closed, they will perform their safety function in the closed position in this event. However, it has been identified that these valves will need to open to facilitate AFW pump cooling should the discharge valves require partial or full closure to control steam generator levels. Closure of the AFW pump discharge valves is controlled procedurally, including instructions to ensure that a running AFW pump has sufficient flow to ensure adequate cooling. Therefore, there is no safety related function for the AF-4002 valves in the open position.

Although there is no safety function in the open position for the mini-recirculation valves, PBNP has decided to conservatively scope the backup pneumatic systems required to open these valves as Safety Related. QA Criterion 6 will be applied to the classification as this criterion states "Systems or portions of systems which provide cooling water for SR equipment or components that are required for (1) emergency core cooling, (2) post-accident containment heat removal, or (3) spent fuel pool cooling." as stated in AM 6-3, Systems and Design Functions Covered by the Quality Assurance Program. This upgrade to the backup air installed by MR 02-001 will make the qualification consistent with the backup nitrogen installed by MR 01-144 for the P-38A/B Motor Driven AFW Pumps.

It is acknowledged that scoping the backup air sources installed by MR 02-001 as safety-related is inconsistent with current PBNP processes for component classification, given the lack of a safety function in the open position for the recirculation valves. However, given the risk significance associated with this issue, more stringent controls than were originally specified by MR 02-001 (augmented quality) are being applied to the equipment installed by this modification. This decision applies only to the backup air supplies to 1/2AF-4002, and is not intended to apply to other components.

MODINF



Search



EXIT

M: 01-144 System: AF Component:

Outage Work? N Unit: C Priority: LOE Installer: MTN

Resp Engr: SW Stewart A. Wietholter Milestone:

Closeout Assigned to: JJN NOVAK Field Eng:

Description: AFW MOTOR DRIVEN PUMP MINI RECIRC CONTROL VALVE MODIFICATION

Notes: LOE

Long Description: PROVIDE A SAFETY RELATED BACKUP N2 SYSTEM TO THE AFW MTR DRIVEN PMP MINI-FLOW CONTROL VLS , AF-4007 AND AF-4014, SO THE VALVES FUNCTION ON LOSS OF INST AIR.

Work Scope: INSTALL JUMPERS FROM THE AFW MOTOR-DRIVEN PUMP MINI-FLOW RECIRC CONTROL VALVES TO THE AFW MTR DRIVEN PMP DISCH CONT VLVS, AF-4012 AND AF-4019, WHICH CURRENTLY HAVE SEPARATE BACKUP NITROGEN SUPPLIES.

Administrator Notes: 8/13/02 - extend closeout from 5/3 to 9/15, RE transferd from department. Novak assigned to closeout.

Material Status:

Comments: LOE

Status: ACCEPTED Filed: N

Outage: N/O02

Scoping Doc: LOE:

Parent: Count:

Expected Date to Review:

Expected Release Date:

Tentative Sched Date:

TWR: TWR 02-032

Account:

MOD Requester: STEWART WIETHOL

Issue Date: 12/11/2001

In Design: 12/11/2001

In Review:

Released: 1/25/2002

Inst Start: 2/5/2002

Inst Comp: 2/6/2002

Test Start: 2/6/2002

Accepted: 2/6/2002

Target: 9/15/2002

Paper Closed:

From Original Database (not used)

QA		

Last Updated by: XX5467 Refresh Date: 2/8/2002

MODINF



Search



EXIT

Mr: 02-001 System: IA Component:

Outage Work? N Unit: C Priority: LOE Installer: IC

Resp Engr: JJN Jeff J. Novak Milestone: CR 01-3595

Status: RELEASED Filed: N

Outage: N/O02

Scoping Doc: LOE:

Issue Date: 1/2/2002

In Design: 1/2/2002

In Review: 1/30/2002

Closout Assigned to: Field Eng:

Parent: Count: N

Released: 3/1/2002

Description: TDAFP MINI RECIRC VALVE (1/2AF-4002) INSTRUMENT AIR ACCUMULATOR ADDITION

Expected Date to Review:

Inst Start:

Notes: LOE

Expected Release Date:

Inst Comp:

Long Description: PROVIDE A BACKUP SOURCE OF AIR FOR EACH TURBINE DRIVEN AUX-FEED PUMP

Tentative Sched Date: 3/11/2002

Test Start:

Work Scope: INSTALL AN AIR TANK THAT SUPPLIES A SOURCE OF AIR TO 1/2AF-4002 IN THE EVENT OF LOSS OF AIR.

TWR: TWR 02-003

Accepted:

Account:

Target:

MOD Requester: JEFF NOVAK

Paper Closed:

Administrator Notes: LOE

Material Status:

Comments: LOE

From Original Database (no used)

<input type="text"/>	<input type="text"/>	<input type="text"/>
QA	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
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Last Updated by: XX5467 Refresh Date: 2/8/2002