



Notification 20462034
Notification type N1
Description Basis AFW Discharge Line Design Pressure
Nuc. Maint. Request
Reporter CRAWFORD2754 10:49:34
Notification date 05/05/2010
Start date 06/17/2010 End date 07/01/2010
Start time 11:27:49 End time 11:27:49
Priority 5 C-Routine Sig. Level 5 Main WorkCtr. S-EDMOO
Funct. location SCAF
AUXILIARY FEEDWATER (SALEM)
Equipment
Assembly
Order 70110267
PM planner grp 099 Nuclear Default

*****Long Text Object Identification*****

Notification 000020462034 Long text

05/05/2010 10:49:34 NUCLEARNOT (NUCLEARNOT)

Notification submitted by: Michael Crawford 856-339-2754 ENTNBU\NUMEC:

CONDITION DESCRIPTION/LOCATION (THE INAPPROPRIATE ACTION AND ITS NEGATIVE EFFECT/INCLUDE A DETAILED LOCATION DESCRIPTION):##

During the Unit 1 1R20 Outage the buried AFW discharge piping was found to have heavy external corrosion resulting in piping having less than minimum wall thickness based on the design pressure for the piping. The Pipe Specification S-C-MPOO-MGS-0001, SPS54E lists the design pressure as 1950 psi and the maximum normal operating pressure as 1195 psi. An evaluation determined that the maximum credible operating pressure for this piping was approximately 1300 psi. This raised the question as to the design basis for the 1950 psi design pressure and whether it is higher than necessary. A search has not found a definitive basis for the 1950 psi number. Several possibilities exist, although the best estimate is the turbine driven AFW pump operating at shutoff head at 4000 rpm, but this event has not been fully investigated to determine if it is credible. Notification is to provide the design basis for the 1950 psi design pressure for the AFW common discharge piping.

ACTIVITIES, PROCESSES, PROCEDURES INVOLVED:

Substantiation of the Design Basis for the AFW piping design pressure.

WHY DID CONDITION HAPPEN?

The need to substantiate AFW common discharge pipe minimum wall thickness resulted in challenging the design pressure as higher than necessary because basis for 1950 psi could not be definitively established.

CONSEQUENCES:

Corroded pipe in Unit 1 was replaced. Establishment of the design basis essential for configuration control.

At this point there is no consequence as AFW system restored to original condition and 1950 psi remains the design pressure.

REQUIREMENTS IMPACTED:

None.

ADVERSE PHYSICAL CONDITIONS:

None.

WHO WAS NOTIFIED:

Design Engineering Director, Manager and Mechanical Branch Manager.

KNOWLEDGEABLE INDIVIDUALS:

Pat Ayers, Michael Crawford, Kevin King, Mohammad Ahmed -- Design Engineering

REPEAT OR SIMILAR CONDITION:

6-12



PSEG

Nuclear LLC

Notification Overview

Run Date: 09/21/2010

Run Time: 08:11:36

Page: 2 of 2

Notification 20462034

Not a repeat condition. Similar condition exists at Unit 2 with same design pressure for AFW common discharge pipe having design pressure of 1950 psi.

IMMEDIATE ACTIONS AND RECOMMENDED ACTIONS:

No immediate actions necessary. Recommended action as follows:

Assign to Design Engineering: establish the design basis for 1950 psi design pressure.

4	Not Applicable	TSCO
STEVEN B MILLER		
NFF	Not a Functional Failure	TSCO

End of report

70110267

Order: 70110267 Basis AFW Discharge Line Design Pressure
Order Type NUCR
Status
Notification 20462034
Unit SC
Functional Location SCAF AUXILIARY FEEDWATER (SALEM)
Equipment
Assembly
Location
Room
System AF
Priority 5 C-Routine
Main Work Center S-EDM00 HENNESSY, PHIL (Mech/Structural Mgr)

Status
Basic Dates: Start: 09/08/2010 Finish: 09/08/2010 Overdue:

Sfty Rltd/QA Reqd
Sfty Class

Mrule Code NFF
SEISMIC
EQ

Permission to Begin Work Date: 00:00:00
Time: 00:00:00

Description of Work Basis AFW Discharge Line Design Pressure
*****Long Text Object Identification*****
Notification 000020462034 Long text

05/05/2010 10:49:34 NUCLEARNOT (NUCLEARNOT)
Notification submitted by: Michael Crawford 856-339-2754 ENTNBU\NUMEC:
CONDITION DESCRIPTION/LOCATION (THE INAPPROPRIATE ACTION AND ITS
NEGATIVE EFFECT/INCLUDE A DETAILED LOCATION DESCRIPTION):##

C.H.O.I.C.E. SAFETY: The Only

Commitment Help Oversight Involvement



During the Unit 1 1R20 Outage the buried AFW discharge piping was found to have heavy external corrosion resulting in piping having less than minimum wall thickness based on the design pressure for the piping. The Pipe Specification S-C-MPOO-MGS-0001, SPS54E lists the design pressure as 1950 psi and the maximum normal operating pressure as 1195 psi. An evaluation determined that the maximum credible operating pressure for this piping was approximately 1300 psi. This raised the question as to the design basis for the 1950 psi design pressure and whether it is higher than necessary. A search has not found a definitive basis for the 1950 psi number. Several possibilities exist, although the best estimate is the turbine driven AFW pump operating at shutoff head at 4000 rpm, but this event has not been fully investigated to determine if it is credible. Notification is to provide the design basis for the 1950 psi design pressure for the AFW common discharge piping.

ACTIVITIES, PROCESSES, PROCEDURES INVOLVED:

Substantiation of the Design Basis for the AFW piping design pressure.

WHY DID CONDITION HAPPEN?

The need to substantiate AFW common discharge pipe minimum wall thickness resulted in challenging the design pressure as higher than necessary because basis for 1950 psi could not be definitively established.

CONSEQUENCES:

Corroded pipe in Unit 1 was replaced. Establishment of the design basis essential for configuration control. At this point there is no consequence as AFW system restored to original condition and 1950 psi remains the design pressure.

REQUIREMENTS IMPACTED:

None.

ADVERSE PHYSICAL CONDITIONS:

None.

WHO WAS NOTIFIED:

Design Engineering Director, Manager and Mechanical Branch Manager.

KNOWLEDGEABLE INDIVIDUALS:

Pat Ayers, Michael Crawford, Kevin King, Mohammad Ahmed -- Design Engineering

REPEAT OR SIMILAR CONDITION:

Not a repeat condition. Similar condition exists at Unit 2 with same design pressure for AFW common discharge pipe having design pressure of 1950 psi.

IMMEDIATE ACTIONS AND RECOMMENDED ACTIONS:

No immediate actions necessary. Recommended action as follows:

Assign to Design Engineering: establish the design basis for 1950 psi design pressure.

Operation List Summary
09/21/2010



70110267

OP	Sub Op.	Work Center	Description	Start Date	Work	No	Durtn
0001		S-EP03	Downgraded op 10 SL4 to SL5 7/29/10 per	08/02/2010	0.0	0	0.0
0010		S-EDM11	determine basis 1950 design afw press	09/08/2010	1.0	1	1.0
0020		S-EP02	ENTER TREND CODING	09/08/2010	1.0	1	1.0

SAFETY: The Only C.H.O.I.C.E.
Commitment Help Oversight Involvement Communication Empowerment

70110267

Order:	70110267	Basis AFW Discharge Line Design Pressure
Operation: per	0001	Downgraded op 10 SL4 to SL5 7/29/10
Work center:	S-EP03	NNUC
Status:		
Number of People:	0	
Scheduled Dates:	Start: 08/02/2010	Finish: 08/02/2010
Planned Hours:	0.0	
Actual Dates:	Start: 08/02/2010	Finish:08/02/2010
Actual Hours:	0.000	Personnel Number: _____
Completion Confirmation Number:		8423188

Confirmation Text: _____

Downgraded op 10 SL4 to SL5 7/29/10 per
Downgraded op 10 SL4 to SL5 7/29/10 per MRC.

Signature: MICHELE L LANDIS

Description of Work:

Downgraded op 10 SL4 to SL5 7/29/10 per MRC.

*****Long Text Object Identification*****
 Order 00070110267 Operation 0001 Long text

<p>SAFETY: The Only C.H.O.I.C.E. Commitment Help Oversight Involvement Communication Empowerment</p>

Operation Key Info
09/21/2010



Order: 70110267 Basis AFW Discharge Line Design Pressure
Operation: 0010 determine basis 1950 design afw press
Work center: S-EDM11 NNUC
Status:
Number of People: 1
Scheduled Dates: **Start:** 09/08/2010 **Finish:** 09/08/2010
Planned Hours: 1.0
Actual Dates: **Start:** 07/12/2010 **Finish:** 07/12/2010
Actual Hours: 0.000 **Personnel Number:** _____
Completion Confirmation Number: 8252755

Confirmation Text: _____

Extension

Extension

This task is to determine the basis for the AFW design pressure. There is no impact on safety, reliability or system function. Extension to 10/27/10 is IAW LS-AA-125, and has the approval of the Design Engineering Mechanical/Structural Branch Manager.

Signature: KEVIN C KING

Description of Work:

SAFETY: The Only C.H.O.I.C.E.

Commitment Help Oversight Involvement Communication Empowerment

Operation Key Info
09/21/2010



Order: 70110267 Basis AFW Discharge Line Design Pressure
Operation: 0020 ENTER TREND CODING
Work center: S-EPO2 NNUC
Status:
Number of People: 1
Scheduled Dates: Start: 09/08/2010 Finish: 09/08/2010
Planned Hours: 1.0
Actual Dates: Start: Finish:
Actual Hours: 0.000 Personnel Number: _____
Completion Confirmation Number: 8252756
Confirmation Text: _____

Signature: _____

Description of Work:

SAFETY: The Only C.H.O.I.C.E.
Commitment Help Oversight Involvement Communication Empowerment