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1-2-3

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03-16037

3-29-07

P/P

3/28/07



Entergy

Nuclear Northeast



Procedure Use Is:

Control Copy: _____

Continuous

Effective Date: 1/31/05

Reference

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Information

3-PT-CS032A, Revision **11**

03/27/2007
No TPC's

FLOW TEST OF SW HDR CK VLVS AND FLOW TEST OF UNDERGROUND PORTIONS OF LINE 409

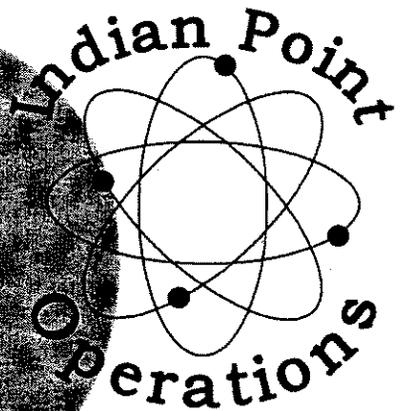


Approved By:

Ne Seabold

Procedure Sponsor, RPO/ Designee

1/19/05
Date



Team 3D

Procedure Owner

REVISION SUMMARY

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1.0 REASON FOR REVISION

- 1.1 Add FI-1142, FI-1143, FI-1144, and FIC-1176 to the Required Equipment List. These instruments were mistakenly deleted in Revision 10.

2.0 SUMMARY OF CHANGES

- 2.1 Prerequisite 3.1: Added FI-1142, FI-1143, FI-1144, and FIC-1176 with * in Cal Due Date column for these instruments. Added * Note stating: For installed instrumentation, this may be performed by verifying NO overdue calibration PMs or surveillances exist and documenting this in Section 5.0, Comments. These changes are editorial in nature per Step 4.6.13 of IP-SMM-AD-102. (No change bars used)

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1.0 PURPOSE

1.1 This procedure establishes requirements for the following:

- Demonstrating operational readiness of 31, 32, and 33 Service Water Pump discharge check valves and 1-2-3 Service Water to Nuclear Header check valve in accordance with IP3 Inservice Test (IST) Program (Technical Specifications Section 5.5.7).
- Demonstrating integrity of underground portion of Line 409 through performance of a flow test in accordance with IP3 IST Program.

1.2 This procedure applies to the following components:

CHECK VALVES	TESTING REQUIREMENT *
SWN-1-1	EO
SWN-1-2	EO
SWN-1-3	EO
SWN-100-2	EO

* EO: Exercise Open

2.0 PRECAUTIONS AND LIMITATIONS

2.1 Precautions and Limitations

2.1.1 This test may be performed in Mode 3, 4, 5, or 6.

2.1.2 1-2-3 Service Water Header SHALL be aligned as Essential Header with sufficient flow available for testing.

- 2.1.3 Technical Specifications Bases 3.7.9 states: In Mode 5 or 6, the operability requirements of the Service Water System are determined by the systems it supports. IF in Mode 5 or 6, THEN the following Technical Specifications LCOs may be applicable:
- 3.4.7, RCS Loops – Mode 5, Loops Filled
 - 3.4.8, RCS Loops – Mode 5, Loops Not Filled
 - 3.8.2, AC Sources – Shutdown
 - 3.9.4, Residual Heat Removal (RHR) and Coolant Circulation – High Water Level
 - 3.9.5, Residual Heat Removal (RHR) and Coolant Circulation – Low Water Level
- 2.1.4 IF Section 4.2, Nuclear SW Header Check Valve SWN-100-2 and Flow Test of Underground Portion of Line 409, will be performed in Modes 3 or 4, THEN TRO 3.7.B.1 SHALL be reviewed for 38 SWP.
- 2.1.5 Motor starting requirements in SOP-EL-004A, Electric Motor Operation, SHALL be observed.
- 2.1.6 Pressure in each SW header SHALL be maintained between 60 and 97.5 psig by any of the following methods:
- Starting a SWP
 - Stopping a SWP
 - Starting a SWP Zurn Strainer backwash by placing the selected Zurn Strainer control switch in HAND
 - Stopping a SWP Zurn Strainer backwash by placing the selected Zurn Strainer control switch in AUTO
 - Opening TCV bypass valves on various SW loads
 - Closing TCV bypass valves on various SW loads
- 2.1.7 SWPs should NOT be run at a flowrate greater than 7500 gpm.
- 2.1.8 During testing if system response is NOT as expected, abnormal system conditions are encountered or a plant emergency condition exists, this test SHALL be terminated and the Service Water System placed in normal operating condition or as directed by the Control Room (CCR).

2.2 General Information

- 2.2.1 Personnel directing this test SHALL read it in its entirety prior to performing the test. Personnel otherwise involved SHALL read applicable sections.
- 2.2.2 Test personnel SHALL complete Sections 3.0, 4.0, 5.0, 6.0, and 7.0, as applicable.
- 2.2.3 Any discrepancies found SHALL be identified in Comments, Section 5.0.
- 2.2.4 Operation of valves FCV-1176, FCV-1176A and TCV-1104, TCV-1105 may cause low service water pressure alarms to annunciate.
- 2.2.5 SWPs may be tested in any order to limit pump start and stop cycles.
- 2.2.6 Three service water pumps SHALL be available to supply service water to support testing and prevent pump runout (7500 gpm).
- 2.2.7 Additional copies of Attachment 2 may be added if more than one Alternate Flow Indicator is used.
- 2.2.8 It is acceptable to perform the test if the date that the test is to be performed is within the calibration due date plus 6 months for the permanent plant equipment required for the test.
- 2.2.9 For ISI Class 3 piping, Section 4.2, Nuclear SW Header Check Valve SWN-100-2 and Flow Test of Underground Portion of Line 409, SHALL be performed at least once each inspection period (3 1/3 years) to meet the requirements of IWA-5244.
- 2.2.10 Either Section 4.2, Nuclear SW Header Check Valve SWN-100-2 and Flow Test of Underground Portion of Line 409, or Section 4.3, Nuclear Service Water Header Check Valve SWN-100-2, will be performed as determined by the IST Engineer, but NOT both.
- 2.2.11 This test establishes flow into an underground pipe and determines the flow out. This is done in lieu of a visual inspection of the piping by VT-2 qualified personnel to meet the requirement of IWA-5244.
- 2.2.12 Test instruments may be installed or removed out of the sequence specified in the test and in parallel with other test preparation or completion steps.
- 2.2.13 An upper case "V" used as a column header in lineup tables or beneath an initial line for a step denotes the requirement for verification by a second individual. This verification may be performed concurrently or independently at the discretion of the SM/Designee.

**FLOW TEST OF SW HDR CK VLVS AND
FLOW TEST OF UNDERGROUND PORTIONS
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3.0 PREREQUISITES

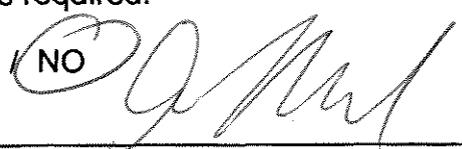
3.1 Equipment required for test:

EQUIPMENT	SERIAL #	CAL DUE DATE	INITIALS
#31 Service Water Pump Flow	FI-1144	* 09/12/2008	JK
#32 Service Water Pump Flow	FI-1143	* 01/30/2008	JK
#33 Service Water Pump Flow	FI-1142	* 01/23/2008	JK
EDG SW Flow Indicator	FIC-1176	* 07/03/2006	JK CS
Vibrometer	PPM 3523	11/6/7	M
Ultrasonic Flowmeter	CEO-IC-913	4/24/7	W
Ultrasonic Flowmeter	PPM-3969	3/2/9	W
Ultrasonic Flowmeter	LEFM-5	3/5/9	W
Ultrasonic Flowmeter	PPM-3970	4/6/8	W
Ultrasonic Flowmeter	LEFM-7	11/4/7	W

* For installed instrumentation, this may be performed by verifying NO overdue calibration PMs or surveillances exist and documenting this in Section 5.0, Comments.

- 3.2 ENSURE Service Water System is aligned with the 1-2-3 header as Essential header. M
- 3.3 ENSURE 5 Fan Cooler Units (FCUs) and 3 EDGs are available to provide flow for testing. M
- 3.4 DETERMINE if performance of Flow Test of Underground Portion of Line 409 is required.

YES NO

 3/27/07
IST Engineer or Designee Signature / Date

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3.5 Reason for Test – CHECK applicable listing:

- Normal Surveillance WR # IP3-03-16037
- Post Maintenance Test WR # _____
WR # _____
WR # _____
- Increased Test Frequency WR # _____
- Other _____

JH

3.6 IF Section 4.2, Nuclear SW Header Check Valve SWN-100-2 and Flow Test of Underground Portion of Line 409, will be performed, THEN:

3.6.1 ENSURE SWN-96, SWP's 37, 38 And 39 Discharge Isolation To SWP's 31, 32 And 33 Discharge Header, can be closed.

N/A

3.6.2 COORDINATE with Programs and Components Engineering (P&CE) to have ultrasonic flowmeters installed on the following lines:

<u>Line</u>	<u>Diameter</u>	<u>Material</u>	<u>Schedule</u>
1196 (SW to IA CC Hx)	3"	6% Moly Stainless Steel	40
1223 (SW to CCR AC)	3"	6% Moly Stainless Steel	40
409 (SW to FCUs)	18"	Carbon Steel, Cement lined 5/16"	Std
Line to MBFP Lube Oil Coolers	6"	Carbon Steel, Cement lined 1/4"	40
Line to Turbine Lube Oil Coolers	10"	Carbon Steel, Cement lined 1/4"	40

N/A

**FLOW TEST OF SW HDR CK VLVS AND
FLOW TEST OF UNDERGROUND PORTIONS
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- 3.7 IF Section 4.3, Nuclear Service Water Header Check Valve SWN-100-2, will be performed, THEN:

NOTE

Line 10" – 12b is in a locked and gated radiation area.

- 3.7.1 Coordinate with RES for access to perform ultrasonic flowmeter installation and removal.
- 3.7.2 **COORDINATE** with P&CE to have an ultrasonic flowmeter(s) (transducer track center) installed on Line 10"-12a through 12e upstream of discharge valves SWN-44-1 through SWN-44-5, 31 through 35 FCU Outlet Isolation, 6-12" below the centerline of thermowell, TE-1415 - 1 through TE-1415 - 5:

<u>Line</u>	<u>Diameter</u>	<u>Material</u>	<u>Schedule</u>
12a	10.75" OD	Carbon Steel, Cement lined 1/4"	40
12b	10.75" OD	Carbon Steel, Cement lined 1/4"	40
12c	10.75" OD	Carbon Steel, Cement lined 1/4"	40
12d	10.75" OD	Carbon Steel, Cement lined 1/4"	40
12e	10.75" OD	Carbon Steel, Cement lined 1/4"	40

*OH
STA
03/22/07*

Initials

4.0 PROCEDURE

4.1 Initial Conditions

4.1.1 OBTAIN permission from Shift Manager (SM) or CRS to perform test:


03/28/2007

 SM or CRS Signature / Date

4.2 Nuclear SW Header Check Valve SWN-100-2 and Flow Test of Underground Portion of Line 409

4.2.1 IF in Mode 3 OR 4, THEN ENTER TRO 3.7.B.1 action statement for 38 SWP.

N/A

4.2.2 CLOSE SWN-96, SWP's 37, 38 And 39 Discharge Isolation To SWP's 31, 32 And 33 Discharge Header.

N/A

NOTE

Step 4.2.3 may cause SW header pressure to go above 97.5 psig and initiate SERVICE WTR. HDR (31, 32, 33) HIGH LOW PRESS alarm on Panel SJF. Entry into ARP-012, Panel SJF – Cooling Water and Air, is NOT required.

4.2.3 ENSURE Zurn Strainer control switches are in OFF: (✓)

- 31 Zurn Strainer N/A
- 32 Zurn Strainer N/A
- 33 Zurn Strainer N/A N/A

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NOTE

Steps 4.2.4 and 4.2.5 may cause SW header pressure to drop below 60 psig and initiate SERVICE WTR. HDR (31, 32, 33) HIGH LOW PRESS alarm on Panel SJF. Entry into ARP-012, Panel SJF – Cooling Water and Air, is NOT required.

4.2.4 ENSURE only one SWP (31,32,33) is in operation.

N/A

4.2.5 OPEN either of the following valves by placing the Open-Auto-Closed SI position switch in the OPEN position (EDG SW valve room):

(✓)

• FCV-1176

N/A

• FCV-1176A

N/A

N/A

4.2.6 PLACE SW Flow Annubar for running SWP in service in accordance with Attachment 1 (FI-1144, 1143, and 1142), or Attachment 2, if required.

N/A

4.2.7 ADJUST SWN-TCV-1103, Containment Air Temp Controller, as necessary.

N/A

4.2.8 RECORD the following indicated flows and CALCULATE total flow:

Ultrasonic Flowmeter on Line 1196 N/A gpm
(SW to IA CC Hx)

Ultrasonic Flowmeter on Line 1223 N/A gpm
(SW to CCR AC)

Ultrasonic Flowmeter on Line 409 N/A gpm
(SW to FCUs)

Ultrasonic Flowmeter on Line to MBFP Lube Oil Coolers N/A gpm

Ultrasonic Flowmeter on Line to Turbine Lube Oil Coolers N/A gpm

31, 32, 33 EDG SW Flow (FIC-1176) N/A gpm

Total Flow N/A gpm

N/A

Initials

4.2.9 RECORD flow on annubar for operating SWP:
 n/a gpm n/a

4.2.10 CALCULATE minimum required flow to verify integrity of underground portion of Line 409 as follows:
 Total Flow recorded in Step 4.2.9 X 0.85 = Minimum Flow
 n/a gpm X 0.85 = n/a gpm n/a
 (Step 4.2.9)

NOTE

IF SWP Flow recorded in Step 4.2.8 is greater than or equal to the Minimum Flow calculated in Step 4.2.10, **THEN** Flow Test of Line 409 is considered satisfactory.

4.2.11 VERIFY Flow Test of Line 409 is satisfactory.

Flow Test of Line 409	Satisfactory	YES / NO	<u> n/a </u>
-----------------------	--------------	----------	------------------------

4.2.12 IF Flow Test of Line 409 is **NOT** satisfactory, **THEN** immediately NOTIFY IST Engineer. n/a

4.2.13 ENSURE that at least 2 SWPs (31,32,33) are in operation. n/a

NOTE

Step 4.2.14 may cause SW header pressure to drop below 60 psig and initiate SERVICE WTR. HDR (31, 32, 33) HIGH LOW PRESS alarm on Panel SJF. Entry into ARP-012, Panel SJF – Cooling Water and Air, is **NOT** required.

4.2.14 OPEN either of the following valves from Panel SBF-1: (✓)

- SWN-TCV-1104, Containment Temperature Control Valve n/a
- SWN-TCV-1105, Containment Temperature Control Valve n/a n/a

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4.2.15 IF SW header pressure indicated on PI-1190R is less than 60 psig OR SERVICE WTR. HDR (31, 32, 33) HIGH LOW PRESS alarm on Panel SJF is anounced, THEN START third SWP.

N/A

4.2.16 IF SW header pressure indicated on PI-1190R is greater than 97.5 psig OR SERVICE WTR. HDR (31, 32, 33) HIGH LOW PRESS alarm on Panel SJF is anounced, THEN:

4.2.16.1 TERMINATE testing.

N/A

4.2.16.2 NOTIFY SM.

N/A

4.2.17 PLACE SW Flow Annubars for running SWPs in service in accordance with Attachment 1 (FI-1144, 1143, and 1142), or Attachment 2, if required.

N/A

4.2.18 RECORD the following indicated flows and CALCULATE total flow:

Ultrasonic Flowmeter on Line 1196 N/A gpm
(SW to IA CC Hx)

Ultrasonic Flowmeter on Line 1223 N/A gpm
(SW to CCR AC)

Ultrasonic Flowmeter on Line 409 N/A gpm
(SW to FCUs)

Ultrasonic Flowmeter on Line to MBFP Lube Oil Coolers N/A gpm

Ultrasonic Flowmeter on Line to Turbine Lube Oil Coolers N/A gpm

31, 32, 33 EDG SW Flow (FIC-1176) N/A gpm

Total Flow N/A gpm

N/A

**FLOW TEST OF SW HDR CK VLVS AND
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NOTE

Total Flow of greater than or equal to 9000 gpm in Step 4.2.18 verifies EO of SWN-100-2.

4.2.19 VERIFY EO of SWN-100-2:

SWN-100-2

EO

YES / NO

N/A

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4.3 Nuclear Service Water Header Check Valve SWN-100-2

NOTE

Following step may cause SW header pressure to go above 97.5 psig and initiate SERVICE WTR. HDR (31, 32, 33) HIGH LOW PRESS alarm on Panel SJF. Entry into ARP-012, Panel SJF – Cooling Water and Air, is NOT required.

4.3.1 ENSURE that at least 2 SWPs (31,32,33) are in operation.

CV

NOTE

Steps 4.3.2 and 4.3.3 may cause SW header pressure to drop below 60 psig and initiate SERVICE WTR. HDR (31, 32, 33) HIGH LOW PRESS alarm on Panel SJF. Entry into ARP-012, Panel SJF – Cooling Water and Air, is NOT required.

4.3.2 OPEN either of the following valves from Panel SBF-1:

- SWN-TCV-1104, Containment Temperature Control Valve
- SWN-TCV-1105, Containment Temperature Control Valve

(✓)

CV

4.3.3 OPEN either of the following valves by placing the Open-Auto-Closed SI position switch in the OPEN position (EDG SW valve room):

- FCV-1176
- FCV-1176A

(✓)

CV

4.3.4 IF SW header pressure indicated on PI-1190R is less than 60 psig OR SERVICE WTR. HDR (31, 32, 33) HIGH LOW PRESS alarm on Panel SJF is annunciated, THEN START third SWP.

WA CV

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4.3.5 IF SW header pressure indicated on PI-1190R is greater 97.5 psig OR SERVICE WTR. HDR (31, 32, 33) HIGH LOW PRESS alarm on Panel SJF is announced, THEN:

4.3.5.1 TERMINATE testing.

N/A

4.3.5.2 NOTIFY SM.

N/A

4.3.6 RECORD the following indicated flows and CALCULATE total flow:

Ultrasonic Flowmeter on Line 12a	<u>1840</u>	gpm
Ultrasonic Flowmeter on Line 12b	<u>1715</u>	gpm
Ultrasonic Flowmeter on Line 12c	<u>1554</u>	gpm
Ultrasonic Flowmeter on Line 12d	<u>1530</u>	gpm
Ultrasonic Flowmeter on Line 12e	<u>2000</u>	gpm
31, 32, 33 EDG SW Flow (FIC-1176)	<u>1225</u>	gpm
Total Flow	<u>9864</u>	gpm

EG

NOTE

Total Flow of greater than or equal to 9000 gpm in Step 4.3.6 verifies EO of SWN-100-2.

4.3.7 VERIFY EO of SWN-100-2:

SWN-100-2	EO	<u>YES</u> / NO
-----------	----	-----------------

EG

4.3.8 PLACE SW Flow Annubars for running SWPs in service in accordance with Attachment 1 (FI-1144, 1143 and 1142), or Attachment 2, if required.

M

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4.4 31 Service Water Pump Discharge Check Valve SWN-1-1

4.4.1 ENSURE 31 SWP in operation.

M

4.4.2 ENSURE FI-1144 or Alternate Annubar is in service.
(Attachment 1 or 2)

M

CAUTION

Limit pump operation below 2500 gpm. Pump flow may be reduced to 2000 gpm provided operation at this flow rate does NOT exceed 30 minutes and vibration near top of motor parallel and vertical to discharge nozzle does NOT exceed 0.7 in/sec.

4.4.3 THROTTLE discharge valve on running SWPs (32, 33) as necessary to ensure 31 SWP flow rate is equal to or greater than 6000 gpm:

- SWN-2-2, 32 SWP Discharge Isolation
- SWN-2-3, 33 SWP Discharge Isolation

(✓)

M

4.4.4 RECORD SWP 31 flow rate:

31 SWP flow 6300 gpm
≥ 6000 gpm indicates SWN-1-1 EO

SWN-1-1

EO

YES / NO

M

4.4.5 ENSURE the following valves are open:

- SWN-2-2, 32 SWP Discharge Isolation
- SWN-2-3, 33 SWP Discharge Isolation

(✓)

M

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4.5 32 Service Water Pump Discharge Check Valve SWN-1-2

4.5.1 ENSURE 32 SWP in operation.

CV

4.5.2 ENSURE FI-1143 or Alternate Annubar is in service.
(Attachment 1 or 2).

CV

CAUTION

Limit pump operation below 2500 gpm. Pump flow may be reduced to 2000 gpm provided operation at this flow rate does NOT exceed 30 minutes and vibration near top of motor parallel and vertical to discharge nozzle does NOT exceed 0.7 in/sec.

4.5.3 THROTTLE discharge valve on running SWPs (31, 33) as necessary to ensure 32 SWP flow rate is equal to or greater than 6000 gpm:

(✓)

- SWN-2-1, 31 SWP Discharge Isolation
- SWN-2-3, 33 SWP Discharge Isolation

CV

4.5.4 RECORD SWP 32 flow rate:

32 SWP flow 6100 gpm
≥ 6000 gpm indicates SWN-1-2 EO

SWN-1-2

EO

YES / NO

CV

4.5.5 ENSURE the following valves are open:

(✓)

- SWN-2-1, 31 SWP Discharge Isolation
- SWN-2-3, 33 SWP Discharge Isolation

CV

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4.6 33 Service Water Pump Discharge Check Valve SWN-1-3

4.6.1 ENSURE 33 SWP in operation.

M

4.6.2 ENSURE FI-1142 or Alternate Annubar is in service.
(Attachment 1 or 2).

M

CAUTION

Limit pump operation below 2500 gpm. Pump flow may be reduced to 2000 gpm provided operation at this flow rate does NOT exceed 30 minutes and vibration near top of motor parallel and vertical to discharge nozzle does NOT exceed 0.7 in/sec.

4.6.3 THROTTLE discharge valve on running SWPs (31, 32) as necessary to ensure 33 SWP flow rate is equal to or greater than 6000 gpm:

- SWN-2-1, 31 SWP Discharge Isolation
- SWN-2-2, 32 SWP Discharge Isolation

(✓)



CV

4.6.4 RECORD SWP 33 flow rate:

33 SWP flow 6200 gpm
≥ 6000 gpm indicates SWN-1-3 EO

SWN-1-3

EO

YES / NO

CV

4.6.5 ENSURE the following valves are open:

- SWN-2-1, 31 SWP Discharge Isolation
- SWN-2-2, 32 SWP Discharge Isolation

(✓)



CV

Initials

4.7 RESTORATION

4.7.1 ENSURE the following valves are closed:

(✓)

- SWN-TCV-1104, Containment Temperature Control Valve
- SWN-TCV-1105, Containment Temperature Control Valve

CV

4.7.2 ALIGN SWPs as directed by CRS.

CV

4.7.3 ALIGN Zurn Strainer control switches as directed by CRS.

CV

4.7.4 ENSURE the Open-Auto-Closed SI position switches for the following valves are in the AUTO position (EDG SW valve room):

(✓)

- FCV-1176
- FCV-1176A

CV

4.7.5 OPEN SWN-96, SWP's 37, 38 And 39 Discharge Isolation To SWP's 31, 32 And 33 Discharge Header.

N/A ②

4.7.6 IF TRO 3.7.B.1 was entered in Step 4.2.1, THEN EXIT TRO 3.7.B.1 action statement.

N/A CV

4.7.7 REMOVE SWP flow Annubars from service in accordance with Attachment 1 or 2, as applicable.

CV

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4.7.8 PERFORM Independent Verification of valves in the following table:

VALVE	DESCRIPTION	POSITION	V
SWN-2-1	31 SWP Discharge Isolation	OPEN	CV
SWN-2-2	32 SWP Discharge Isolation	OPEN	CV
SWN-2-3	33 SWP Discharge Isolation	OPEN	CV
SWN-96	SWP's 37, 38 And 39 Discharge Isolation To SWP's 31, 32 And 33 Discharge Header	OPEN	N/A (2)
SWN-TCV-1104	Containment Temperature Control Valve	CLOSED	CV
SWN-TCV-1105	Containment Temperature Control Valve	CLOSED	CV
SWN-FCV-1176 SI SW POSITION	Emergency Diesel Generators SWS Outlet Flow Control Valve	AUTO	CV
SWN-FCV-1176A SI SW POSITION	Emergency Diesel Generators SWS Outlet Flow Control Valve	AUTO	CV

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5.0 COMMENTS

① flow was > 6000 gpm, No need to throttle additional flow.

② SWN-96 Not manipulated in sections 4.3 & 4.4.

Test Performers:

Print Name:

Initials:

Signature/Date:

John Harvey

JH

JH Harvey 03/27/2007

Mike Bowman

M

MB 03/28/07

Chris M. Lyson

a

CL Lyson 3/28/07

6.0 ACCEPTANCE CRITERIA

6.1 Technical Specification Requirements:

None

6.2 IST requirements:

Required Component Actions						
Component	Step	Surveillance Requirement	Acceptance Criteria	Actual Value	Acceptable	Initials
SWN-100-2	4.2.19 or 4.3.7	IST Program (ITS 5.5.7)	Exercise Open	YES / NO	YES / NO	ES
Line 409	4.2.11		Flow Test	YES / NO / N/A	YES / NO / N/A	gb
SWN-1-1	4.4.4		Exercise Open	YES / NO	YES / NO	ES
SWN-1-2	4.5.4		Exercise Open	YES / NO	YES / NO	ES
SWN-1-3	4.6.4		Exercise Open	YES / NO	YES / NO	ES

7.0 TEST ACCEPTANCE

7.1 Technical Specification Acceptance Criteria

None

7.2 IST Acceptance Criteria

7.2.1 Based on the recorded data, are all IST Acceptance Criteria of Section 6.2 satisfied?

YES

NO

N/A

7.2.2 IF valve(s) failed to exhibit required required change of position, THEN:

- NOTIFY CRS/SM to declare the valve(s) inoperable.
- INITIATE a WRT and a CR.
- TAKE applicable action in accordance with Technical Specifications and EVALUATE impact on supported systems.

7.2.3 IF flow test of Line 409 failed to meet minimum flow requirement, THEN:

- NOTIFY CRS/SM.
- INITIATE a CR.
- NOTIFY IST Engineer.

**FLOW TEST OF SW HDR CK VLVS AND
FLOW TEST OF UNDERGROUND PORTIONS
OF LINE 409**

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7.3 IF NO is circled in Step 7.2.1 or , THEN LIST corrective action(s) taken and comments.

Comments: _____

Reviewed By: Eric J. [Signature] 3/28/7
SM or Des. Alt. / Date

8.0 EVALUATION

8.1 IST EVALUATION

Comments: IST data SAT

Reviewed By: M. [Signature] 3-30-07
IST Engineer / Date

8.2 PROGRAMS AND COMPONENTS REVIEW

Comments: NONE

Reviewed By: Victor M. Roman [Signature]
Programs and Component Review / Date 3-29-07

9.0 REFERENCES

9.1 Commitment Documents

None

9.2 Development Documents

- 9.2.1 Flow Diagram 9321-F-20333 (Sheets 1 and 2) and 9321-F-27223
- 9.2.2 ASME Section XI
- 9.2.3 AMSE/ANSI OM (Part 10)
- 9.2.4 PFM-22A, Inservice Testing Program
- 9.2.5 Technical Specifications LCO 3.7.9
- 9.2.6 Ingersoll-Rand Operation and Maintenance Technical Manual Installation (NYPA 209-100000314)
- 9.2.7 Memo IP-PRF-94-58, Full Flow Test Requirements of Various Service Water System Valves (SWN-100-1, 100-2, 1-1, 1-2, 1-3, 1-4, 1-5, 1-6)
- 9.2.8 Ingersoll Rand letter to L. Garofolo dated April 18, 1989, NPSH Testing on Pumps 0586013 to 0586019
- 9.2.9 Record of Telephone Conversation dated March 24, 1994 between NYPA-IP3 (Achille A. Celio) and Ingersoll-Rand (Bob Cornman)
- 9.2.10 Response to Quality Assurance Recommendation (QAR-845), Full Flow Testing of Service Water Valves SWN-100-1, 2 and SWN-1-1 thru 1-6
- 9.2.11 Design Basis Document I.D. 24.0, Service Water System, Table 4.1-1
- 9.2.12 IP-DEE-01-018MC, ENG-648A Flow Balancing Results – Fan Cooler Units/ Service Water Flows, FI-1121 Through FI-1125
- 9.2.13 (3-)IC-PC-I-F-1142, Service Water Pump No. 33 Flow
- 9.2.14 (3-)IC-PC-I-F-1143, Service Water Pump No. 32 Flow
- 9.2.15 (3-)IC-PC-I-F-1144, Service Water Pump No. 31 Flow
- 9.2.16 3-IC-PC-I-F-1176, Service Water to Diesel Generator Cooler Flow

9.3 Interface Documents

- 9.3.1 Technical Specifications LCOs 3.4.7, 3.4.8, 3.7.9, 3.8.2, 3.9.4, & 3.95 and Section 5.5.7
- 9.3.2 Technical Requirements Manual TRO 3.7.B.1
- 9.3.3 SOP-EL-004A, Electric Motor Operation
- 9.3.4 ARP-012, Panel SJF – Cooling Water and Air

10.0 RECORDS AND DOCUMENTATION

10.1 Records

The following required records resulting from this procedure are controlled and maintained in accordance with the IP3 Records Retention Schedule.

- 10.1.1 When completed this Performance Procedure becomes a Quality Record.

10.2 Documentation

None

**ATTACHMENT 1,
Instructions For Placing Service Water Flow Indicator In-Service**

(Page 2 of 4)

Initials

NOTE

An annubar assembly drawing is provided on Page 4 of 4.

3.0 PLACE Normal Flow Indicator FI-1143 in service as follows:

3.1 VERIFY FI-1143 Hi and Lo side isolation valves are closed.

3.2 OPEN SWN-142, FI-1143 Hi Side Root Isolation.

3.3 OPEN SWN-132, FI-1143 Lo Side Root Isolation.

3.4 VERIFY FI-1143 Hi Side Vent valve is open.

3.5 VERIFY FI-1143 Lo Side Vent valve is open.

3.6 Simultaneously OPEN Hi Side and Lo Side isolation valves for FI-1143.

3.7 CLOSE FI-1143 Lo Side Vent valve.

3.8 CLOSE FI-1143 Hi Side Vent valve.

4.0 WHEN use of Normal Flow Indicator FI-1143 is complete, THEN REMOVE from service as follows:

4.1 OPEN FI-1143 Hi Side Vent.

4.2 OPEN FI-1143 Lo Side Vent.

4.3 Simultaneously CLOSE both Hi side and Lo side isolation valves for FI-1143.

4.4 CLOSE SWN-142, FI-1143 Hi Side Root Isolation.

4.5 CLOSE SWN-132, FI-1143 Lo Side Root Isolation.

M

M

M

M

M

M

M

M

CV

CV

CV

CV

CV

CV

**ATTACHMENT 1,
Instructions For Placing Service Water Flow Indicator In-Service
(Page 3 of 4)**

Initials

NOTE

An annubar assembly drawing is provided on Page 4 of 4.

5.0 PLACE Normal Flow Indicator FI-1142 in service as follows:

5.1 VERIFY FI-1142 Hi and Lo side isolation valves are closed.

CV

5.2 OPEN SWN-143, FI-1142 Hi Side Root Isolation.

CV

5.3 OPEN SWN-133, FI-1142 Lo Side Root Isolation.

CV

5.4 VERIFY FI-1142 Hi Side Vent valve is open.

CV

5.5 VERIFY FI-1142 Lo Side Vent valve is open.

CV

5.6 Simultaneously OPEN Hi Side and Lo Side isolation valves for FI-1142.

CV

5.7 CLOSE FI-1142 Hi Side Vent valve.

CV

5.8 CLOSE FI-1142 Lo Side Vent valve.

CV

6.0 WHEN use of Normal Flow Indicator FI-1142 is complete, THEN REMOVE from service as follows:

6.1 OPEN FI-1142 Hi Side Vent.

CV

6.2 OPEN FI-1142 Lo Side Vent.

CV

6.3 Simultaneously CLOSE both Hi side and Lo side isolation valves for FI-1142.

CV

6.4 CLOSE SWN-143, FI-1142 Hi Side Root Isolation.

CV

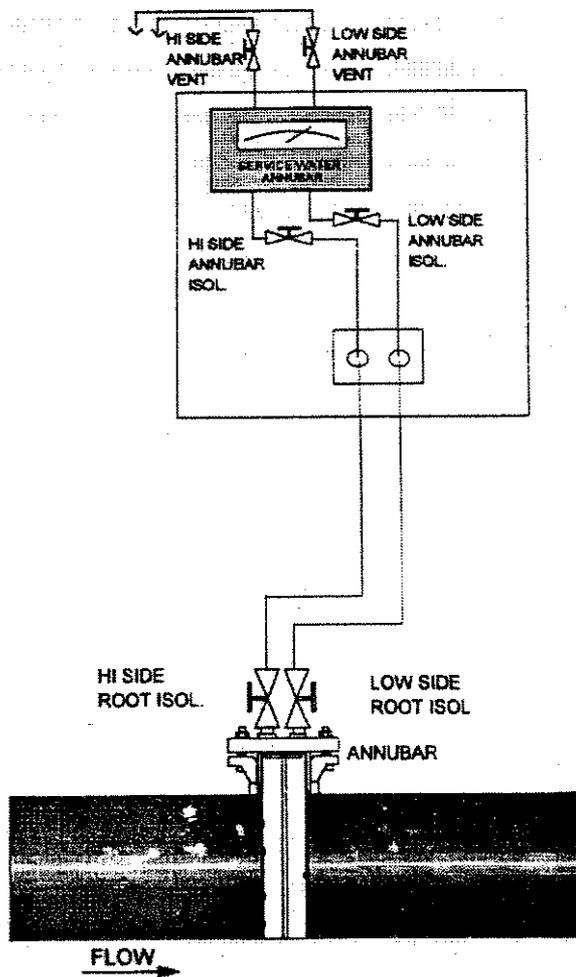
6.5 CLOSE SWN-133, FI-1142 Lo Side Root Isolation.

CV

**ATTACHMENT 1,
Instructions For Placing Service Water Flow Indicator In-Service**

(Page 4 of 4)

Annubar Assembly (Typical)



**ATTACHMENT 2,
Procedure For Using An Alternate Flow Indicator
(Page 1 of 2)**

Initials

- 1.0 CONNECT the Alternate Flow Indicator as follows:
 - 1.1 RECORD Alternate Flow Indicator to be used: _____
 - 1.2 ENSURE Normal Flow Indicator Hi and Lo Side Isolations are closed. _____
 - 1.3 ENSURE Alternate Flow Indicator Hi and Lo Side isolations are closed. _____
 - 1.4 DISCONNECT the Hi and Lo Side fittings of the Normal Flow Indicator and the Alternate Flow Indicator. _____
 - 1.5 INSTALL tubing between the Hi Side of the Normal Flow Indicator and the Alternate Flow Indicator. _____
 - 1.6 INSTALL tubing between the Lo Side of the Normal Flow Indicator and the Alternate Flow Indicator. _____
- 2.0 PLACE the Alternate Flow Indicator in service as follows: *N/A*
 - 2.1 VERIFY both Hi and Lo Side Flow Indicator isolation valves are closed. _____
 - 2.2 ENSURE Normal Flow Indicator Hi and Lo Side Root Isolation Valves are open. _____
 - 2.3 VERIFY Alternate Flow Indicator Hi Side vent valve is open. _____
 - 2.4 VERIFY Alternate Flow Indicator Lo Side vent valve is open. _____
 - 2.5 Simultaneously OPEN the Normal Flow Indicator Hi Side and Lo Side isolation valves. _____
 - 2.6 CLOSE Alternate Flow Indicator Lo Side vent. _____
 - 2.7 CLOSE Alternate Flow Indicator Hi Side vent. _____

**ATTACHMENT 2,
Procedure For Using An Alternate Flow Indicator
(Page 2 of 2)**

Initials

- 3.0 WHEN use of Alternate Flow Indicator is complete, THEN REMOVE from service as follows:
- 3.1 OPEN Alternate Flow Indicator Hi Side vent. _____
 - 3.2 OPEN Alternate Flow Indicator Lo Side vent. _____
 - 3.3 Simultaneously CLOSE the Normal Flow Indicator Hi Side and Lo Side isolation valves. _____
 - 3.4 CLOSE the Normal Flow Indicator Hi Side Root Isolation Valve. _____
 - 3.5 CLOSE the Normal Flow Indicator Lo Side Root Isolation Valve. _____
 - 3.6 DISCONNECT and REMOVE the tubing from the Hi and Lo Side of the Normal Flow Indicator and the Alternate Flow Indicator. _____
 - 3.7 CONNECT the Hi and Lo side fittings of the Normal Flow Indicator and the Alternate Flow Indicator as required. _____

N/A



Entergy

IPEC SITE
MANAGEMENT
MANUAL

QUALITY RELATED
ADMINISTRATIVE PROCEDURE

INFORMATIONAL USE

IP-SMM
DC-904

Revision 2

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ATTACHMENT 10.2

PEER REVIEW SHEET

PEER REVIEW SHEET

PROCEDURE NUMBER: PT-CS 32A

DATE PERFORMED: 3/28/07

	YES	NO*	N/A
1. Calibration due dates recorded?	✓		
2. Instrument(s) within calibration?	✓		
3. Changes documented by TPC?			✓
4. All required procedural steps completed?	✓		
5. All steps <u>NOT</u> completed noted & explained in Comments Section?	✓		
6. All corrections lined out, dated and initialed?	✓		
7. All calculations correct?	✓		
8. All data properly transcribed?	✓		
9. Required CRs, WOs, PFs or CTSSs, etc. initiated?			✓
10. Operability conclusions correct?	✓		
11. Overall acceptance conclusions correct?	✓		

* Explain all NOs

COMMENTS:

None

PEER REVIEWER: T. McLee T.M. 3/28/07
Signature/Date