CATEGORY 1

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AUTH.NAME AUTHOR AFFILIATION
WIDAY,J.A. Rochester Gas & Electric Corp.
RECIP.NAME RECIPIENT AFFILIATION
VISSING,G.S.

2nd Copy

SUBJECT: Revised "Ginna Station Emergency Operating Procedures." With 990125 ltr.

DISTRIBUTION CODE: A002D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 24
TITLE: OR Submittal:Inadequate Core Cooling (Item II.F.2) GL 82-28

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AREA CODE 716 546-2700

January 25, 1999

U.S. Nuclear Regulatory Commission
Document Control Desk
Attn: Guy S. Vissing
Project Directorate I-1
Washington, D.C. 20555

Subject: Emergency Operating Procedures.
R.E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Mr. Vissing:

As requested, enclosed are Ginna Station Emergency Operating Procedures.

1/1

Very truly yours,

Terry White for
Joseph A. Widay

A502

JAW/jdw

xc: U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406-1415

Ginna USNRC Senior Resident Inspector

Enclosure(s):

AP Index
ATT Index
AP-RHR.1, Rev 13
ATT-3.0, Rev 5
ATT-3.1, Rev 3

030016

REPORT NO. 01 GINNA NUCLEAR POWER PLANT 01/25/99 PAGE: 1
REPORT: NPSP0200 PROCEDURES INDEX
DOC TYPE: PRAP ABNORMAL PROCEDURE

PARAMETERS: DOC TYPES - PRAP PRATT STATUS: EF QU 5 YEARS ONLY:

PROCEDURE NUMBER	PROCEDURE TITLE	REV	EFFECT DATE	LAST REVIEW	NEXT REVIEW	ST
AP-CCW.1	LEAKAGE INTO THE COMPONENT COOLING LOOP	013	10/30/98	05/01/98	05/01/03	EF
AP-CCW.2	LOSS OF CCW DURING POWER OPERATION	012	02/24/96	08/30/94	08/30/99	EF
AP-CCW.3	LOSS OF CCW - PLANT SHUTDOWN	010	03/29/96	08/30/94	08/30/99	EF
AP-CR.1	CONTROL ROOM INACCESSIBILITY	015	01/26/98	11/17/94	11/17/99	EF
AP-CVCS.1	CVCS LEAK	012	05/01/98	05/01/98	05/01/03	EF
AP-CW.1	LOSS OF A CIRC WATER PUMP	010	07/16/98	05/01/98	05/01/03	EF
AP-ELEC.1	LOSS OF 12A AND/OR 12B BUSSES	016	05/01/98	05/01/98	05/01/03	EF
AP-ELEC.2	SAFEGUARD BUSSES LOW VOLTAGE OR SYSTEM LOW FREQUENCY	008	01/26/98	02/11/94	02/11/99	EF
AP-ELEC.3	LOSS OF 12A AND/OR 12B TRANSFORMER (BELOW 350 F)	005	05/01/98	05/01/98	05/01/03	EF
AP-ELEC.14/16	LOSS OF SAFEGUARDS BUS 14/16	000	06/09/97	06/09/97	06/09/02	EF
AP-ELEC.17/18	LOSS OF SAFEGUARDS BUS 17/18	001	02/27/98	06/09/97	06/09/02	EF
AP-FW.1	PARTIAL OR COMPLETE LOSS OF MAIN FEEDWATER	011	02/27/98	02/27/98	02/27/03	EF
AP-IA.1	LOSS OF INSTRUMENT AIR	015	05/01/98	05/01/98	05/01/03	EF
AP-PRZR.1	ABNORMAL PRESSURIZER PRESSURE	009	06/03/96	09/29/94	09/29/99	EF
AP-RCC.1	CONTINUOUS CONTROL ROD WITHDRAWAL/INSERTION	006	02/24/96	05/14/98	05/14/03	EF
AP-RCC.2	RCC/RPI MALFUNCTION	008	11/16/98	02/06/97	02/06/02	EF
AP-RCC.3	DROPPED ROD RECOVERY	004	11/16/98	02/27/98	02/27/03	EF
AP-RCP.1	RCP SEAL MALFUNCTION	012	05/01/98	05/01/98	05/01/03	EF
AP-RCS.1	REACTOR COOLANT LEAK	013	05/01/98	05/01/98	05/01/03	EF
AP-RCS.2	LOSS OF REACTOR COOLANT FLOW	010	12/14/98	05/01/98	05/01/03	EF
AP-RCS.3	HIGH REACTOR COOLANT ACTIVITY	007	08/05/97	08/05/97	08/05/02	EF
AP-RCS.4	SHUTDOWN LOCA	009	05/01/98	05/01/98	05/01/03	EF
AP-RHR.1	LOSS OF RHR	013	01/25/99	05/01/98	05/01/03	EF
AP-RHR.2	LOSS OF RHR WHILE OPERATING AT RCS REDUCED INVENTORY CONDITIONS	007	05/15/97	03/21/95	03/21/00	EF

PARAMETERS: DOC TYPES - PRAP PRATT STATUS: EF QU 5 YEARS ONLY:

PROCEDURE NUMBER	PROCEDURE TITLE	REV	EFFECT DATE	LAST REVIEW	NEXT REVIEW	ST
AP-SW.1	SERVICE WATER LEAK	014	01/14/99	06/03/98	06/03/03	EF
AP-TURB.1	TURBINE TRIP WITHOUT RX TRIP REQUIRED	009	10/10/97	10/10/97	10/10/02	EF
AP-TURB.2	TURBINE LOAD REJECTION	016	02/27/98	05/13/98	05/13/03	EF
AP-TURB.3	TURBINE VIBRATION	008	12/04/96	02/10/98	02/10/03	EF
AP-TURB.4	LOSS OF CONDENSER VACUUM	014	05/01/98	05/01/98	05/01/03	EF
AP-TURB.5	RAPID LOAD REDUCTION	003	02/27/98	07/10/95	07/10/00	EF

TOTAL FOR PRAP 30

PARAMETERS: DOC TYPES - PRAP PRATT STATUS: EF QU 5 YEARS ONLY:

PROCEDURE NUMBER	PROCEDURE TITLE	REV	EFFECT DATE	LAST REVIEW	NEXT REVIEW	ST
ATT-1.0	ATTACHMENT AT POWER CCW ALIGNMENT	001	07/26/94	02/10/98	02/10/03	EF
ATT-2.1	ATTACHMENT MIN SW	004	06/26/98	02/10/98	02/10/03	EF
ATT-2.2	ATTACHMENT SW ISOLATION	005	10/30/98	08/11/98	08/11/03	EF
ATT-2.3	ATTACHMENT SW LOADS IN CNMT	003	01/25/95	01/25/95	01/25/00	EF
ATT-3.0	ATTACHMENT CI/CVI	005	01/25/99	01/06/99	01/06/04	EF
ATT-3.1	ATTACHMENT CNMT CLOSURE	003	01/25/99	02/11/94	02/11/99	EF
ATT-4.0	ATTACHMENT CNMT RECIRC FANS	003	07/26/94	05/13/98	05/13/03	EF
ATT-5.0	ATTACHMENT COND TO S/G	004	01/25/95	01/25/95	01/25/00	EF
ATT-5.1	ATTACHMENT SAFW	006	07/07/98	11/08/94	11/08/99	EF
ATT-5.2	ATTACHMENT FIRE WATER COOLING TO TDAFW PUMP	003	01/14/99	01/14/99	01/14/04	EF
ATT-6.0	ATTACHMENT COND VACUUM	003	12/18/96	02/10/98	02/10/03	EF
ATT-7.0	ATTACHMENT CR EVAC	004	05/04/98	02/10/98	02/10/03	EF
ATT-8.0	ATTACHMENT DC LOADS	005	01/14/99	01/14/99	01/14/04	EF
ATT-8.1	ATTACHMENT D/G STOP	004	11/03/95	02/10/98	02/10/03	EF
ATT-8.2	ATTACHMENT GEN DEGAS	005	07/26/94	02/11/94	02/11/99	EF
ATT-8.3	ATTACHMENT NONVITAL	003	07/26/94	02/10/98	02/10/03	EF
ATT-8.4	ATTACHMENT SI/UV	004	04/24/97	02/10/98	02/10/03	EF
ATT-9.0	ATTACHMENT LETDOWN	006	04/07/97	01/06/99	01/06/04	EF
ATT-9.1	ATTACHMENT EXCESS L/D	002	07/26/94	02/10/98	02/10/03	EF
ATT-10.0	ATTACHMENT FAULTED S/G	005	10/03/96	05/13/98	05/13/03	EF
ATT-11.0	ATTACHMENT IA CONCERNS	002	04/07/97	08/11/98	08/11/03	EF
ATT-11.1	ATTACHMENT IA SUPPLY	002	04/07/97	08/11/98	08/11/03	EF
ATT-11.2	ATTACHMENT DIESEL AIR COMPRESSOR	000	04/03/98	04/03/98	04/03/03	EF
ATT-12.0	ATTACHMENT N2 PORVS	003	03/24/97	02/10/98	02/10/03	EF

PARAMETERS: DOC TYPES - PRAP PRATT STATUS: EF QU 5 YEARS ONLY:

PROCEDURE NUMBER	PROCEDURE TITLE	REV	EFFECT DATE	LAST REVIEW	NEXT REVIEW	ST
ATT-13.0	ATTACHMENT NC	002	07/26/94	02/10/98	02/10/03	EF
ATT-14.0	ATTACHMENT NORMAL RHR COOLING	002	04/07/97	10/19/94	10/19/99	EF
ATT-14.1	ATTACHMENT RHR COOL	004	05/01/98	05/01/98	05/01/03	EF
ATT-14.2	ATTACHMENT RHR ISOL	001	07/26/94	02/10/98	02/10/03	EF
ATT-14.3	ATTACHMENT RHR NPSH	002	08/01/97	01/06/99	01/06/04	EF
ATT-14.4	ATTACHMENT RHR SAMPLE	001	07/26/94	01/06/99	01/06/04	EF
ATT-14.5	ATTACHMENT RHR SYSTEM	002	07/26/94	02/10/98	02/10/03	EF
ATT-14.6	ATTACHMENT RHR PRESS REDUCTION	001	01/14/99	01/14/99	01/14/04	EF
ATT-15.0	ATTACHMENT RCP START	005	05/22/97	04/20/95	04/20/00	EF
ATT-15.1	ATTACHMENT RCP DIAGNOSTICS	003	04/24/97	02/10/98	02/10/03	EF
ATT-15.2	ATTACHMENT SEAL COOLING	003	05/22/97	02/10/98	02/10/03	EF
ATT-16.0	ATTACHMENT RUPTURED S/G	008	03/17/98	11/08/94	11/08/99	EF
ATT-17.0	ATTACHMENT SD-1	006	11/03/95	02/03/95	02/03/00	EF
ATT-17.1	ATTACHMENT SD-2	005	09/26/96	01/26/94	01/26/99	EF
ATT-18.0	ATTACHMENT SFP - RWST	004	10/08/97	02/10/98	02/10/03	EF
ATT-20.0	ATTACHMENT VENT TIME	003	07/26/94	02/10/98	02/10/03	EF
ATT-21.0	ATTACHMENT RCS ISOLATION	001	07/26/94	02/10/98	02/10/03	EF
ATT-22.0	ATTACHMENT RESTORING FEED FLOW	000	03/24/97	03/24/97	03/24/02	EF

TOTAL FOR PRATT 42

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

CONTROLLED COPY NUMBER 23

RESPONSIBLE MANAGER

1-25-99

EFFECTIVE DATE

CATEGORY 1.0

REVIEWED BY: _____

A. PURPOSE - This procedure provides guidance in the event of a loss of RHR cooling at or above normal loop levels. (i.e. RCS loop levels of 64 inches or greater)

B. ENTRY CONDITIONS/SYMPTOMS

1. ENTRY CONDITIONS - This procedure is entered from;

   a. FR-C.3, RESPONSE TO SATURATED CORE COOLING, or

   b. AP-ELEC.3, LOSS OF 12A AND/OR 12B TRANSFORMER (BELOW 350°F), when RHR flow can NOT be restored, or

   c. AP-CCW.3, LOSS OF CCW - PLANT SHUTDOWN when CCW is inadequate for RHR cooling

2. SYMPTOMS - The following are symptoms of LOSS OF RHR;

   a. No RHR pumps running, or

   b. Annunciator A-20, RESIDUAL HEAT REMOVAL LOOP LO FLOW 2900 GPM (Set at 400 GPM per 0-2.2 in RHR Cooling mode), lit, or

   c. Unexpected increase in temperature while on RHR cooling, or

   d. Erratic or no flow on FI-626, RHR Loop Flow, or

   e. Annunciator J-9, SAFEGUARD BREAKER TRIP, lit.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

CAUTION

DO NOT START ANOTHER RHR PUMP UNTIL THE CAUSE OF THE ABNORMAL RHR INDICATIONS HAS BEEN DETERMINED. IF A RUNNING PUMP HAS TRIPPED FOR REASONS OTHER THAN LOSS OF SUCTION FLOW, THEN REDUNDANT PUMP MAY BE STARTED.

NOTE: Conditions should be evaluated for site contingency reporting (Refer to EPIP-1.0, GINNA STATION EVENT EVALUATION AND CLASSIFICATION).

1	Check PRZR Wide Range Level - GREATER THAN 0 INCHES	IF RCS loop level indicator in service and loop level less than 64 inches, THEN go to AP-RHR.2, LOSS OF RHR WHILE OPERATING AT RCS REDUCED INVENTORY CONDITIONS.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
2	Check If RHR Pump(s) Should Be Stopped:	
	a. RHR pump - ANY RUNNING	a. Go to Step 3.
	b. Check RHR pump flow - LESS THAN 1500 GPM PER PUMP	b. Decrease RHR flow as necessary. IF RHR flow can NOT be controlled, THEN perform the following: 1) Stop running RHR pump. 2) Dispatch an AO with a locked valve key to locally throttle RHR Hx outlet manual valves to approximately half open. • V-715, B RHR Hx • V-717, A RHR Hx 3) Start an RHR pump. 4) Direct AO to locally adjust RHR flow to less than 1500 gpm.
	c. RHR pumps cavitating: o RHR pump flow - OSCILLATING -OR- o RHR pump NPSH - APPROXIMATELY ZERO (PPCS group GD NPSH)	c. Go to Step 17.
	d. Stop RHR pumps	

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

CAUTION

- DO NOT INITIATE ANY ACTIONS WHICH MAY ADD POSITIVE REACTIVITY TO THE CORE.
- NOTIFY S/G OFFICE THAT CNMT BREATHING AIR MAY BE LOST.
- IF REFUELING IN PROGRESS, THEN STOP REFUELING OPERATIONS (NOTIFY REFUELING SRO).

NOTE: Personnel remaining in CNMT to assist in event mitigation should consult Health Physics for changes in radiological concerns.

3	Initiate Actions To Protect Personnel In CNMT:	
	a. Evacuate non-essential personnel from CNMT	
	b. Verify all available CNMT RECIRC fan(s) - RUNNING	b. Manually start available CNMT RECIRC fans.
	c. Initiate monitoring of CNMT area and process radiation monitors.	c. Refer to appropriate alarm response procedures for required actions.
	d. Verify CNMT penetrations with direct access to outside atmosphere - CLOSED (Refer to Attachment CNMT CLOSURE)	d. Within 4 hours, close all CNMT penetrations to outside atmosphere.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
4	Check RHR Cooling Valve Alignment - NORMAL (Refer to Attachment NORMAL RHR COOLING)	Manually or locally align valves as necessary.

CAUTION

THE RHR HX OUTLET VALVES (HCV-624 AND HCV-625) WILL FAIL OPEN ON LOSS OF INSTRUMENT AIR PRESSURE.

5	Check IA System:	
	a. Verify 2 IA compressors - RUNNING	a. Manually start IA compressors as necessary (75 kw each). IF IA compressors can NOT be started manually, THEN dispatch AO to locally reset and start compressors (75 kw each).
	b. Check IA supply o Pressure - GREATER THAN 60 PSIG o Pressure - STABLE OR INCREASING	b. IF IA pressure can NOT be restored, THEN perform the following: 1) Dispatch AO with a locked valve key to locally throttle RHR Hx outlet manual valves to approximately half open. • V-715, B RHR Hx • V-717, A RHR Hx 2) WHEN conditions permit, THEN refer to AP-IA.1, LOSS OF INSTRUMENT AIR, to restore IA.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
* 6	Monitor RCS Temperature - GREATER THAN 200°F	Go to Step 8.

CAUTION

- CHANGES IN RCS PRESSURE COULD RESULT IN INACCURACIES IN RCS LOOP LEVEL INDICATION
- UNSTABLE OR FLUCTUATING LEVEL INSTRUMENTS SHOULD NOT BE RELIED ON FOR INDICATION OF RCS INVENTORY.

7	Verify RCS Intact: o PRZR level - GREATER THAN 5% AND STABLE o RCS pressure - STABLE o RCS subcooling based on core exit T/Cs - GREATER THAN 0°F USING FIGURE MIN SUBCOOLING o RCS vent paths - CLOSED	Perform the following: a. Verify charging line flow control valve, HCV-142, open as necessary. b. Ensure charging line valve to loop B cold leg, AOV-294, open. c. Start charging pumps as necessary. d. Control charging pump speed and letdown flow as necessary to stabilize RCS conditions. • PRZR pressure • PRZR level • Loop level IF charging flow greater than 75 gpm with letdown isolated OR unable to verify RCS inventory, THEN go to AP-RCS.4, SHUTDOWN LOCA.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
8	Establish Conditions To Start RHR Pump:	
	a. RHR pump - AVAILABLE	a. Perform the following: 1) Start trending core exit TCs. 2) IF RCS closed, THEN go to Step 10. IF RCS open to atmosphere, THEN go to Step 16.
	b. Verify CCW cooling to RHR system in service o CCW pumps - AT LEAST ONE RUNNING o CCW to RHR Hxs, MOV-738A AND MOV-738B - OPEN AS NECESSARY	b. Perform the following: 1) Ensure at least one CCW pump running. 2) Open MOV-738A and MOV-738B as necessary. IF CCW can NOT be restored, THEN continue with Step 9 while attempting to restore CCW (Refer to AP-CCW.3, LOSS OF CCW - PLANT SHUTDOWN).
	c. Close RHR pump flow control valves (controllers at 100% demand) • HCV-624 • HCV-625	
	d. Place RHR Hx bypass valve, HCV-626, to MANUAL and close valve	

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

CAUTION

STARTING AN RHR PUMP MAY RESULT IN AN RCS LEVEL OR PRESSURE DECREASE DUE TO SHRINK OR VOID COLLAPSE.

9	Restore RHR Flow:	
	a. Start one RHR pump - RHR PUMP RUNNING	a. Go to Step 9e.
	b. Check RHR flow - LESS THAN 1500 GPM PER PUMP	b. Manually adjust RHR flow as necessary.
	c. Adjust RHR Hx bypass flow control valve, HCV-626, to desired flowrate	
	d. Place RHR Hx bypass flow control valve, HCV-626, controller in AUTO	
	e. RHR flow - RESTORED	e. Perform the following: 1) Start trending core exit T/Cs. 2) IF RCS closed, THEN go to Step 10. IF RCS vented to atmosphere, THEN go to Step 16.
	f. Open RHR Hx outlet valves as necessary to control RCS temperature. • HCV-624 • HCV-625	

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
10	Monitor RCS Temperature: a. RCS temperature - STABLE OR DECREASING b. Go to Step 19	a. IF RCS closed, THEN go to Step 11. IF RCS open to atmosphere, THEN go to Step 16.
11	Check Any S/G Level - GREATER THAN 17%	Verify at least 200 gpm AFW flow available. IF NOT, THEN go to Step 17.
12	Check RCS Pressure - GREATER THAN 300 PSIG	Increase RCS pressure to greater than 300 psig. IF RCS pressure can NOT be increased, THEN go to Step 17.
13	Check RCP Status - ANY RCP RUNNING	Perform the followig: a. Establish conditions for starting an RCP. o Verify bus 11A or 11B energized. o Refer to Attachment RCP START. b. Start one RCP. IF an RCP can NOT be started, THEN verify natural circulation. (Refer to Attachment NC.) IF natural circulation NOT verified, THEN increase dumping steam.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
14	Establish Condenser Steam Dump Manual Control:	
	a. Verify condenser available: o Any MSIV - OPEN o Annunciator G-15, STEAM DUMP ARMED - LIT	a. Perform the following: 1) Place S/G ARV controller in MANUAL and open ARVs as necessary to stabilize RCS temperature. 2) Go to Step 15.
	b. Place condenser steam dump controller HC-484 in MANUAL	
	c. Place steam dump mode selector switch to MANUAL	
	d. Open steam dump valves as necessary to stabilize RCS temperature	
15	Monitor RCS Temperature:	
	a. RCS temperature - STABLE OR DECREASING	a. IF dumping steam does NOT provide adequate cooling, THEN perform the following: 1) Initiate S/G blowdown from both S/Gs. 2) Maintain both S/G levels stable by controlling AFW flow. 3) Go to Step 17.
	b. Go to Step 18	

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
16	Check RCS Conditions:	
	a. Rx vessel head - REMOVED	a. Go to Step 17.
	b. Stop refueling operations if in progress	
	c. Verify Refueling Cavity Level - GREATER THAN 23 FEET ABOVE VESSEL FLANGE	c. Increase refueling cavity level to greater than 23 feet (Refer to O-15.3, FILLING REFUELING CANAL).
	d. Verify refueling cavity sweep fans - RUNNING	d. Locally start refueling cavity sweep fans if available.
17	Check CCW System Operation: o CCW pumps - AT LEAST ONE RUNNING o CCW to RHR Hxs, MOV-738A AND MOV-738B - OPEN AS NECESSARY o Annunciator A-21, COMP COOLING HX OUT HI TEMP - EXTINGUISHED o Annunciator A-22, CCW PUMP DISCHARGE LO PRESS - EXTINGUISHED o Annunciator A-30, CCW PUMP INLET HEADER HI TEMP - EXTINGUISHED	To restore CCW cooling to RHR Hxs, perform the following: a. Ensure the standby CCW pump is running. b. Open MOV-738A and MOV-738B as necessary. IF CCW can NOT be restored, THEN continue attempts to restore CCW (Refer to AP-CCW.3, LOSS OF CCW - PLANT SHUTDOWN).

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTE: Consult with Plant Staff to determine alternatives for long term cooling.

18 Monitor RHR Cooling:

- o RHR cooling - RESTORED
- o RCS temperature - STABLE OR DECREASING

Perform the following:

a. Evaluate alternatives for long term cooling (Consult Plant Staff)
   - Consider establishing secondary heat sink
   - Refer to ER-RHR.1, RCDT PUMP OPERATION FOR CORE COOLING
   - Consider RCS feed and bleed

b. Continue attempts to restore RHR to operable.

c. Return to Step 3.

NOTE: Refer to O-9.3, NRC IMMEDIATE NOTIFICATION, for reporting requirements.

19 Notify Higher Supervision

20 Return to Procedure Or Guidance In Effect

-END-

AP-RHR.1 APPENDIX LIST

TITLE

1) FIGURE MIN SUBCOOLING (FIG-1.0)
2) ATTACHMENT NORMAL RHR COOLING (ATT-14.0)
3) ATTACHMENT RCP START (ATT-15.0)
4) ATTACHMENT NC (ATT-13.0)
5) ATTACHMENT CNMT CLOSURE (ATT-3.1)

EOP: ATT-3.0	TITLE: ATTACHMENT CI/CVI	REV: 5 PAGE 1 of 3

Responsible Manager R Siddiqui Date 1-25-99

NOTE: Locked valve key may be required for local operations.

AUTO ISOL VALVE	ALTERNATE ISOL	ALTERNATE ISOL LOCATION
AOV-200A	AOV-371/133	MCB
AOV-200B	AOV-371/133	MCB
AOV-202	AOV-371/133	MCB
AOV-5392	V-5397/5410	IB BASEMENT CLEAN SIDE
AOV-371	V-204A/820	NRHX ROOM (locked area)
MOV-313	V-315A/315C	SWRF ROOM (reach rods)
AOV-9227 (1)	V-9225	IB BASEMENT CLEAN SIDE
AOV-508	AOV-548/550A/550B	MCB
AOV-5738	V-5701	IB BASEMENT CLEAN SIDE
AOV-5737	V-5702	IB BASEMENT CLEAN SIDE
AOV-5735	V-5733	SAMPLE HOOD
AOV-5736	V-5734	SAMPLE HOOD
SOV-921	V-928A	INSIDE A H2 MON PNL (AFW PUMP AREA) (key 59)
SOV-922	V-928B	INSIDE A H2 MON PNL (AFW PUMP AREA) (key 59)
SOV-923	V-929A	INSIDE B H2 MON PNL (AFW PUMP AREA) (key 59)
SOV-924	V-929B	INSIDE B H2 MON PNL (AFW PUMP AREA) (key 59)
AOV-539	V-546	BY SFP HX
AOV-1789	V-1655	BY SFP HX
AOV-1786	AOV-1787	MCB
AOV-1787	AOV-1786	MCB

(1) does not receive Auto closure signal on CI

AUTO ISOL VALVE	ALTERNATE ISOL	ALTERNATE ISOL LOCATION
AOV-1721	AOV-1003A/1003B/1722	WASTE DISPOSAL PANEL/AB SUB-BASEMENT
AOV-1003A	AOV-1721	WASTE DISPOSAL PANEL
AOV-1003B	AOV-1721	WASTE DISPOSAL PANEL
AOV-1597	V-1596	IB BASEMENT CLEAN SIDE
AOV-1598	AOV-1599	MCB
AOV-1599	AOV-1598 (2)	MCB
MOV-813	MOV-817	MCB
MOV-814	V-815A	AB INT LEVEL
AOV-1723 (3)	AOV-1728	WASTE DISPOSAL PANEL
AOV-1728 (3)	AOV-1723	WASTE DISPOSAL PANEL
AOV-951	AOV-966A	MCB
AOV-953	AOV-966B	MCB
AOV-955	AOV-966C	MCB
AOV-959	V-957	PRIMARY SAMPLE ROOM
AOV-966A	V-956F	SAMPLE HOOD
AOV-966B	V-956E	SAMPLE HOOD
AOV-966C	V-956D	SAMPLE HOOD
AOV-846	V-8629/944A	BY SFP HX
AOV-8418	V-5021	IB BASEMENT CLEAN SIDE
AOV-7971	AOV-7970	MCB REAR
AOV-7970	AOV-7971	MCB REAR

(2) AC power normally off

(3) Place CNMT sump pumps in pull-stop

AUTO ISOL VALVE	ALTERNATE ISOL	ALTERNATE ISOL LOCATION
AOV-7445	AOV-7478	MCB REAR
AOV-7478	AOV-7445	MCB REAR
PEVO-5879	N/A FLANGED	
PSVO-5869	N/A FLANGED	
SOV-1B (10214S1) (4)	V-1080A	SAMPLE HOOD
SOV-2B (10214S) (4)	V-1080A	SAMPLE HOOD
SOV-3B (10211S1) (4)	V-1076B	SAMPLE HOOD
SOV-5B (10213S1) (4)	V-1084B	SAMPLE HOOD
SOV-1A (10215S1) (4)	V-1080A	SAMPLE HOOD
SOV-2A (10215S) (4)	V-1080A	SAMPLE HOOD
SOV-3A (10205S1) (4)	V-1076A	IB BASEMENT CLEAN SIDE
SOV-5A (10209S1) (4)	V-1084A	IB BASEMENT CLEAN SIDE

(4) Valves normally deenergized with manual isolation valve locked closed.

EOP: ATT-3.1	TITLE: ATTACHMENT CNMT CLOSURE	REV: 3 PAGE 1 of 2

Responsible Manager RS Selman Date 1-25-99

A) Ensure at least one door closed in EACH CNMT airlock:
- o Equipment airlock
- o Personnel airlock

B) Verify valves in column 1 closed. IF any valve NOT closed, THEN evaluate penetration and isolate as necessary (Refer to column 2).

NOTE: Locked valve key may be required for local operation.

COLUMN 1 AUTO ISOL VALVE	COLUMN 2 ALTERNATE ISOL	ALTERNATE ISOL LOCATION
AOV-5392 (IA)	V-5397/5410	IB CLEAN BSMT
AOV-371 (L/D)	V-204A/820	NRHX ROOM (locked area)
MOV-313 (RCP Seal)	V-315A/315C	SWRF ROOM (reach rods)
AOV-9227 (Fire Sys)	V-9225	IB CLEAN BSMT
AOV-508 (DI Water)	AOV-548/550A/550B	MCB
AOV-5738 (S/G B/D)	V-5701	IB CLEAN BSMT
AOV-5737 (S/G B/D)	V-5702	IB CLEAN BSMT
AOV-5735 (S/G samp)	V-5733	SAMPLE HOOD
AOV-5736 (S/G samp)	V-5734	SAMPLE HOOD
AOV-539 (PRT gas)	V-546	BY SFP HX
AOV-1789 (RCDT to gas anal)	V-1655	BY SFP HX
AOV-1786 (RCDT/VH)	AOV-1787 (V-1716A)	BY SFP HX
AOV-1721 (RCDT pumps)	AOV-1003A/1003B/1722	WASTE PANEL/AB SUB-BASEMENT
AOV-1597 (CNMT rad)	V-1596	IB CLEAN BSMT
AOV-1598 (CNMT rad)	AOV-1599	MCB
MOV-813 (CCW)	CCW SYSTEM INTACT	AUX BLDG INT (BY RWST)

COLUMN 1 AUTO ISOL VALVE	COLUMN 2 ALTERNATE ISOL	ALTERNATE ISOL LOCATION
MOV-814 (CCW)	CCW SYSTEM INTACT	AUX BLDG INT (BY RWST)
AOV-1723 (CNMT sump)	AOV-1728	WASTE PANEL
AOV-846 (ACCUM N2)	V-8629/944A	BY SFP HX
AOV-8418 (DI water)	V-5021	IB CLEAN BSMT
AOV-7970 (Mini purge)	AOV-7971	MCB REAR
AOV-7445 (Mini purge)	AOV-7478	MCB REAR
AOV-5879 (Purge)	Purge Exhaust Fan OFF	
AOV-5869 (Purge)	Purge Supply Fan OFF	

C) Verify both S/Gs intact in CNMT OR steam and feed headers isolated outside CNMT (Refer to O-15.2, REQUIRED VALVE LINEUP FOR REACTOR HEAD REMOVAL, for specific guidance).

D) Evaluate and isolate any other known openings from CNMT to the outside atmosphere. Contact Outage Coordinator or Maintenance Manager and refer to O-2.3.1A, CONTAINMENT CLOSURE CAPABILITY IN TWO HOURS DURING REDUCED RCS INVENTORY OPERATION, for additional guidance.

E) Verify fuel transfer flange installed or gate valve, V-650J, closed.

F) Contact S/G office to ensure that S/G maintenance penetration is isolated (no openings to outside).