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HINTZ,D.C. Wisconsin Public Service Corp.
RECIP.NAME RECIPIENT AFFILIATION
VARGA,S.A. Operating Reactors Branch 1

SUBJECT: Forwards response to 840725 request for addl info re procedures generation package for emergency operating procedures.

DISTRIBUTION CODE: A003D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 65
TITLE: OR/Licensing Submittal: Suppl 1 to NUREG-0737(Generic Ltr 82-33)

NOTES: See "84 Reports 05000305
OL:12/21/73

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NRC-84-163

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NOTE NEW ADDRESS:
P.O. BOX 19002, GREEN BAY WI 54307-9002

October 1, 1984

Director of Nuclear Reactor Regulation
Attention: Mr. S. A. Varga, Chief
Operating Reactors Branch No. 1
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Gentlemen:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
TAC# 44311
Supplement to Procedures Generation Package

References: 1) Letter from C. W. Giesler to D. G. Eisenhut dated December 28, 1983
2) Letter from S. A. Varga to C. W. Giesler dated July 25, 1984

In our letter dated December 28, 1983 (reference 1) we provided you with a procedures generation package for our Emergency Operating Procedures (EOP's) development program. In reference 2 you requested additional information to aid in your review of the package.

The attachment to this letter provides the requested information in the format as presented in reference 2.

Very truly yours,

Carl W. Giesler for

D. C. Hintz
Manager-Nuclear Power

DSN:jks

Attach.

cc - Mr. Robert Nelson, US NRC

A003
1/1

50-305

RESPONSE TO JULY 25, 1984 REQUEST FOR ADDL INFO RE PROCEDURES GENERATION PACKAGE FOR EMERGENCY OPERATING PROCEDURES.

Attachment

to

Letter from D. C. Hintz to S. A. Varga

dated

October 1, 1984

References

1) Memorandum from H. Brent Clayton (NRC) to Dennis L. Ziemann Subject: Meeting Summary-Task Analysis Requirements of Supplement 1 to NUREG-0737, March 29, 1984 meeting with Westinghouse Owner's Group (WOG) Procedures Subcommittee and Other Interested Persons dated April 5, 1984.

2) Letter from S. A. Varga to C. W. Giesler dated June 22, 1984.

3) Westinghouse Emergency Response Guidelines Validation Program Final Report (WCAP-10599) dated June, 1984

PLANT-SPECIFIC TECHNICAL GUIDELINES (PSTG)

NRC Request

1. The process described on Pages 1 and 2 of the PSTG (Items 1.0 and 2.0) describes the basics of a program for translating generic technical guidelines to plant-specific technical guidelines. The discussion needs to be expanded to address the following items:

   a. The criteria for determining the composition of the EOP Writing Team needs to be described. The EOP Writing Team should include human factors expertise;

   b. The criteria to be used to determine if a step "significantly differs from the corresponding ERG step;"

   c. Each such deviation from the generic guideline, along with appropriate analytical or other technical justification, needs to be submitted to the NRC for review and approval. This will enable the staff to complete its review of the technical bases to be used for the Kewaunee EOPs, as required by Supplement 1 to NUREG-0737, "Requirements for Emergency Response Capability."

WPSC Response

1.

   a. The EOP Writing Team consists of licensed personnel. The use of licensed personnel will provide plant specific technical knowledge and past procedural implementation experience.

   The human factors experience was included in the original ERG writing team. Since we are following the generic guidelines as closely as possible, the original human factors input is still applicable. The human factors expertise that is available as part of the Detailed Control Room Design Review (DCRDR) will provide input during the EOP/DCRDR validation program.

   b. All deviations were considered significant except for those minor changes that are required to comply with the Writers Guide (i.e.

procedure title block, plant procedure conventions, etc.). A significant deviation therefore is not necessarily a technical deviation.

c. The information provided on the EOP Step Documentation Form includes: the EOP Step, the corresponding ERG step, the justification of differences, and the signature approvals.

Appendix A to this attachment provides the EOP Step Documentation Forms that have been generated to date. We expect further changes to be forthcoming during the training and validation phases of the program.

NRC Request

2. The PGP should be expanded to provide a description of the process that has been, or will be, used to identify the information and control needs of the operators. In addition, the PGP needs to include a description of the analysis or process used to ensure the availability and adequacy of the instrumentation and controls to meet the identified needs. This is necessary to complete the requirements for the function and task analysis required by Supplement 1 to NUREG-0737.

WPSC Response

On March 29, 1984 the Westinghouse Owners Group (WOG) met with representatives of the NRC Staff to discuss the task analysis requirements of Supplement 1 to NUREG-0737 (Generic Letter 82-33). A summary of the meeting was documented in reference 1.

The staff concluded that "based on the presentations by Mr. McKinney and Mr. Surman, it appears that Revision 1 of the ERG and background documents do provide an adequate basis for generically identifying information and control needs".

Since we followed the ERG's as closely as possible when developing the plant specific EOP's, the background documents are applicable to the EOP's. Where plant specific input was required the KNPP Updated Safety Analysis Report and the ERG background documents were referenced to identify the plant specific instrumentation and control needs.

The System Review and Task Analysis that was performed as part of the DCRDR identified the instrumentation necessary to implement the selected EOP's. The objective of the review was to ensure the availability and adequacy of the instrumentation and controls identified. The SRTA process is described and documented in the DCRDR program reports.

VALIDATION/VERIFICATION PROGRAM

NRC Request

1. A more detailed description of the validation/verification program needs to be provided. The description should identify the objectives of the program, the methods you intend to use, and how the methods will meet the objectives. In addition, the description should address the composition of the teams performing and evaluating the validation/verification, which should be based on the methods and objectives already described.

WPSC Response

The validiation/verification phase of the EOP development program will be done in conjunction with the DCRDR validation program. The integration of the EOP and DCRDR programs provides assurance that the operators are able to adequately implement the new procedures on the plant specific control boards.

The technical validation of Revision 1 of the Westinghouse ERG's was performed at the Seabrook Simulator and documented in reference 3. The

technical validation concluded that the procedures were effective in restoring the plant to a safe and stable condition for a broad range of complex plant transients. Since the plant specific EOP development program is following the ERG's as closely as possible, a reevaluation of the technical content of the ERG's is not necessary.

The objective of the KNPP plant specific EOP validation is to provide assurance that the new plant specific EOP's can be adequately implemented on the KNPP control boards. By integrating the DCRDR and EOP validation programs we can better evaluate the predicted operator performance during emergency conditions.

The EOP/DCRDR validation will be performed near the end of the operator requalification program. The effort will include the development of a scenario, implementation of procedures by the operators on the KNPP simulator, videotaping of the scenario implementation, and a postexercise evaluation of the actions and events. The video tapes will be reviewed following the simulator exercise to provide an opportunity for discussion of the actions and events in a more controlled environment.

The post exercise evaluation will provide the training department, the operators and the DCRDR review team an opportunity to discuss the operators' actions and evaluate the effectiveness of the new procedures. Comments and recommendations will be documented and evaluated by the DCRDR review team to determine resolutions. Possible methods of resolution include procedure revision, control board modification, or increased training.

The teams performing and evaluating the validation effort will include members of the KNPP training staff, the procedure writing team, and the DCRDR Review Team. Final resolution of all observations will be done by the DCRDR team and will be documented in a summary report.

NRC Request

2. The scenarios to be used in the validation/verification are very important to its success. The PGP should describe the criteria to be used in selecting appropriate scenarios, and should ensure that multiple failures are addressed. The scenarios should provide a rigorous exercise of the EOP's and should cover the full range of emergency operations, including design basis, less than design basis, and beyond design basis events. The execution of the scenarios should simulate the unpredictability expected during actual operation (i.e., the operators should not be aware of the scenario before it starts, and the initiating events should not be predictable).

WPSC Response

Reference 2 stated "the staff suggests the licensee demonstrate that all operator functions during the execution of the Emergency Operations Procedures have been included in the SRTA. This does not mean that all Emergency Procedures have to be included in the SRTA provided that all operator functions are included in the set of EOP's selected by the licensee".

As part of the DCRDR, we performed a System Review and Task Analysis (SRTA). The objective of the SRTA was to evaluate the instrument and control needs and locations by performing operator walkthroughs of the EOP's on the KNPP simulator.

The procedures used during the SRTA were selected such that all the major operator functions were included in the set. We will develop a scenario which will require use of the selected procedures thereby assuring that the

major functions are evaluated during the validation program. The operators will not have any pre-exercise exposure to the scenario contents.

TRAINING PROGRAM

NRC Request

1. A description of the program for training on the upgraded EOPs needs to be submitted. It is not intended that this description provide all the details of your entire training program, but rather provide adequate details to assure the staff that appropriate training on the EOPs will be conducted.

WPSC Response

The operator requalification program for the current cycle includes initial training to provide the operators with an introduction to the new EOP format and a detailed step by step review of the major procedures. The program is scheduled to include eight days of training for each shift crew. Each day of training is designed to provide four hours of classroom training followed by four hours of simulator exercises. During the classroom portion of the training a detailed step by step talk-through of the procedures will be performed with the opportunity for questions and discussion. The simulator portion of the training will include walkthroughs and accident scenario runs on the simulator for the procedures discussed during the classroom session. The simulator can be put in "freeze" should questions arise or discussion be necessary.

The training program will conclude with the validation effort previously discussed. This effort provides the operators the opportunity to implement the new procedures in a "real time" situation on the plant specific simula-

tor. The postexercise evaluation will provide the opportunity to further discuss any questions or comments.

In subsequent requalification cycles, more specific details of EOP steps and their background documentation will be incorporated into the training sessions.

We expect the training program to be completed and the procedures to be implemented by the end of the Spring 1985 outage.

Appendix A

EOP STEP DOCUMENTATION FORMS

E-0
E-1 N1-27.1
E-2
EOP E-3 Rev. Orig.-1

EOP STEP DOCUMENTATION FORM

EOP STEP: (Applicable to above EOP's)

NOTE The Emergency Plan Implementing Procedures should be reviewed periodically to evaluate if the emergency response organization should be activated.

CORRESPONDING
ERG STEP:

None

JUSTIFICATION OF DIFFERENCES:

Added note per commitment to NRC

EOP WRITER G. H. Ruiter DATE 10-28-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT T H Evers DATE 9-25-84

EOP E-0 Rev. Orig.-1

EOP STEP DOCUMENTATION FORM

EOP STEP:

2	VERIFY TURBINE TRIP:	
	a. All turbine stop valves - CLOSED	a. Manually trip turbine.
	b. Verify TGP OR EOP has started	b. Manually start turbine oil pump.

CORRESPONDING ERG STEP:

2	Verify Turbine Trip:	
	a. All turbine stop valves - CLOSED	a. Manually trip turbine.

JUSTIFICATION OF DIFFERENCES:

Added item b. based on existing plant procedure.

EOP WRITER G. H. Ruiter DATE 10-28-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

3	VERIFY BUS 1-5 OR 1-6 IS ENERGIZED:	IF NOT energized, THEN GO TO ECA-0.0, LOSS OF ALL AC POWER, STEP 1.
	a. Bus 1-5 OR 1-6 voltage normal.	

CORRESPONDING ERG STEP:

3	Verify Power to AC Emergency Busses:	
	a. AC emergency busses - AT LEAST ONE ENERGIZED	a. Try to restore power to at least one ac emergency bus. IF power can NOT be restored to at least one ac emergency bus, THEN go to ECA-0.0, LOSS OF ALL AC POWER, Step 1.
	b. AC emergency busses - ALL ENERGIZED	b. Try to restore power to deenergized ac emergency busses.

JUSTIFICATION OF DIFFERENCES:

Power only to one emergency bus is required to meet immediate safeguard's concerns.

EOP WRITER G. H. Ruiter DATE 10-28-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT K H E [illegible] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

6	VERIFY CONTAINMENT ISOLATION:	
	a. CI active status panel lights - LIT	a. Manually close valves.

CORRESPONDING ERG STEP:

6	Verify Containment Isolation Phase A:
	a. Phase A - ACTUATED
	b. Phase A valves - CLOSED

JUSTIFICATION OF DIFFERENCES:

Kewaunee does not have phase A/B containment isolation.

EOP WRITER G. H. Ruiter DATE 1-28-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP E-0 Rev. Orig-1

EOP STEP DOCUMENTATION FORM

EOP STEP:

7	VERIFY AFW PUMPS RUNNING:	
	a. Motor-driven pump breaker indicator lights - LIT	a. Manually start pumps.
	b. Turbine-driven pump steam supply valves - OPEN, IF NECESSARY.	b. Manually open valves, if necessary.

CORRESPONDING ERG STEP:

7	Verify AFW Pumps Running:	
	a. MD pumps - RUNNING	a. Manually start pumps.
	b. Turbine-driven pump - RUNNING IF NECESSARY	b. Manually open steam supply valves.

JUSTIFICATION OF DIFFERENCES:

Used more direct indications of running pumps.

EOP WRITER G. H. Ruiter DATE 10-28-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [illegible] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

8	VERIFY SI PUMPS RUNNING:	
	a. SI pump breaker indicator lights - LIT	a. Manually start pumps.
	b. RHR pump breaker indicator lights - LIT	b. Manually start pumps.
	c. SI Active Status Panel lights - LIT	c. Manually align valves as necessary.

CORRESPONDING ERG STEP:

8	Verify SI Pumps Running:	Manually start pumps.
	° High-head SI pumps - RUNNING	
	° Low-head SI pumps - RUNNING	
18	Verify SI Valve Alignment PROPER EMERGENCY ALIGNMENT	Manually align valves as necessary.

JUSTIFICATION OF DIFFERENCES:

Used Kewaunee wording for pumps included status panel to verify SI system running and proper alignment.

EOP WRITER G. H. Ruiter DATE 10-28-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT K H E vr DATE 9-25-84

EOP E-0 Rev. Orig-1

EOP STEP DOCUMENTATION FORM

EOP STEP:

14	VERIFY CONTAINMENT SPRAY NOT REQUIRED:	
	a. Pressure has remained below 23 psig.	a. Verify containment spray initiated. IF NOT initiated, THEN manually initiate.

CORRESPONDING ERG STEP:

14	Verify Containment Spray Not Require:	
	a. Containment Pressure - HAS REMAINED LESS THAN (1) PSIG	a. Perform the following: 1) Verify containment spray initiated. IF NOT, THEN manually initiate. 2) Verify containment isolation Phase B valves closed. IF NOT, THEN manually close valves. 3) Stop all RCPs

JUSTIFICATION OF DIFFERENCES:

KNPP does not have phase B isolation. KNPP RCPs do not trip upon ICS actuation.

EOP WRITER G. H. Ruiter DATE 10-28-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [illegible] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP: 15

VERIFY CI VALVES AND DAMPERS NOT ON THE CONTAINMENT ISOLATION STATUS PANEL ARE CLOSED:

Manually close valves.

a. RC-402 Pressurizer steam space sample line

b. RC-403 Pressurizer steam space sample line

c. RC-412 Pressurizer liquid space sample line

d. RC-413 Pressurizer liquid space sample line

CORRESPONDING ERG STEP:

None

e. RC-422 RCS hot leg, loop B sample line

f. RC-423 RCS hot leg, loop B sample line

g. AS-1 Containment Atmosphere Sample Isolation

h. AS-2 Containment Atmosphere Sample Isolation

i. AS-32 Containment Atmosphere Sample Isolation

j. TAV-12 Cont. Purge and Vent Supply Damper

k. RBV-5 Cont. Purge and Vent Exhaust Damper

JUSTIFICATION OF DIFFERENCES:

Added ICS Valves not on status panel, per existing KNPP procedure

EOP WRITER G. H. Ruiter DATE 10-28-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

None

CORRESPONDING
ERG STEP:

17	Verify AFW Valve Alignment - PROPER EMERGENCY ALIGNMENT	Manually align valves as necessary

JUSTIFICATION OF DIFFERENCES:

Verifying AFW flow in KNPP step 17 assures proper alignment (ERG step 16).

EOP WRITER G. H. Ruiter DATE 10-28-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT KHE ver DATE 9-25-84

EOP E-0 Rev. Orig

EOP STEP DOCUMENTATION FORM

EOP STEP:

None

CORRESPONDING ERG STEP:

37	Check Power Supply to Charging Pumps - OFFSITE POWER AVAILABLE	Verify adequate diesel capacity to run charging pumps. If necessary, shed sufficient non-essential loads.

JUSTIFICATION OF DIFFERENCES:

Deleted as allowed by ERG Background - D/Gs have capacity to supply safeguards equipment and charging pumps.

EOP WRITER G. H. Ruiter DATE 08-21-84

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

36 B. Establish normal charging AND seal injection flow

1) Labyrinth seal differential pressure 15 to 70 inches H_2O

CORRESPONDING ERG STEP:

38 b. Establish flow as necessary:

[Enter plant specific means]

JUSTIFICATION OF DIFFERENCES:

Included establishing seal injection flow with charging flow.

EOP WRITER G. H. Ruiter DATE 10-28-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [illegible] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

1	CHECK RCS AVERAGE TEMPERATURE - STABLE AT OR TRENDING TO 547 °F	a.	IF temperature less than 547°F and decreasing, THEN: 1) Stop dumping steam 2) IF cooldown continues, THEN control total feed flow. Maintain total feed flow slightly greater than 200 gpm until narrow range level greater than 2% in at least one SG. 3) CLOSE manual steam supply to the reheaters (MS 200A1, A2, B1, B2) AND OPEN leakoff isolation valves (MS-205A1, A2, B1, B2) 4) IF cooldown continues, THEN close the Main Steamline Isolation Valves. IF condenser vacuum is to be maintained, THEN throttle the MSIV bypass valves to maintain Main Steam Header pressure at 300 PSIG. IF NOT, THEN close the MSIV bypass valves.
		b.	IF temperature greater 547°F AND increasing, THEN: 1) Dump steam to condenser _____ OR 2) Dump Steasm using atmospheric steam dumps. _____ OR 3) Dump steam using SG PORVS _____

EOP STEP DOCUMENTATION FORM

CORRESPONDING
ERG STEP:

1	Check RCS Average Temperature - STABLE AT OR TRENDING TO (1) °F	IF temperature less than (1) °F and decreasing, THEN, a) stop dumping steam. b) IF cooldown continues, THEN control total feed flow. Maintain total feed flow greater than (2) gpm until narrow range level greater than (3)% in at least one SG. c) IF cooldown continues, THEN close main steamline isolation and bypass valves. IF temperature greater than (1) °F and increasing, THEN: ° Dump steam to condenser. -OR- ° Dump steam using SG PORVs

JUSTIFICATION OF DIFFERENCES:

Add KNPP - specific instructions for operation of MSIV Bypass valves when excessive cooldown is occurring.

EOP WRITER G. H. Ruiter DATE 09-06-84

REVIEWED BY OPERATIONS ENGINEER GH Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT KHE ver DATE 9-25-84

EOP ES-0.1 Rev. Orig - 1

EOP STEP DOCUMENTATION FORM

EOP STEP:

5 b.

3) Verify PRZR heaters on. IF NOT, THEN manually turn on.

CORRESPONDING ERG STEP:

None

JUSTIFICATION OF DIFFERENCES:

Substep carried from earlier ERG Rev to maintain good operating practice in pressure control

EOP WRITER G. H. Ruiter DATE 11-11-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT KHE DATE 9-25-84

N1-27.16

ES-0.1
ES-0.2
ES-1.2
E-3
ECA-2.1
ECA-3.1
ECA-3.2
EOP FR-1.3 Rev. Orig -1

EOP STEP DOCUMENTATION FORM

EOP STEP:

None

CORRESPONDING
ERG STEP: (Applicable to ERG's corresponding to above EOP's)

NOTE RCPs should be run in order of priority to provide normal PRZR spray.

JUSTIFICATION OF DIFFERENCES:

Not applicable to KNPP

EOP WRITER G. H. Ruiter DATE 10-28-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:		
	13	RETURN TURBINE REHEATER STEAM SUPPLY CONTROLLER CAM TO ZERO
	14	OPEN TURBINE CASING DRAIN
	15	VERIFY GLAND STEAM TO THE MOISTURE SEPARATOR RELIEF VALVES (MS-312A-1 and MS-312BV-1) ARE OPEN. Manually open valves.
	16	IF OFF-SITE POWER IS AVAILABLE, THEN SHUTDOWN BOTH DIESEL GENERATORS 30 SECONDS APART.
	17	INVESTIGATE CAUSE OF TRIP: a. Notify System Operations
	18	VERIFY THAT RELAY RTA IN RR-129 AND RELAY RTB IN RR-127 ARE ENERGIZED: a. Button on the front of the relay is flush with the relay surface
	19	TAKE AUXILIARY MWH READINGS IN THE RELAY ROOM.
	20	MAKE OUT A SYSTEM DISTURBANCE REPORT
	21	PLACE THE HEATING BOILER IN OPERATION IF REQUIRED.
	22	MAKE OUT AN INCIDENT REPORT.
	23	CONTACT STA AND MAKE NOTIFICATION FOR 10 CFR 50.72.

CORRESPONDING ERG STEP:

None

JUSTIFICATION OF DIFFERENCES:

Actions for balance-of-plant added per existing procedures.

EOP WRITER G. H. Ruiter DATE 11-17-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP ES-0.1 Rev. Orig-1

EOP STEP DOCUMENTATION FORM

EOP STEP:

24	DETERMINE IF NATURAL CIRCULATION COOLDOWN REQUIRED:	
	a. IF a natural circulation cooldown is required, THEN GO TO ES-0.2, NATURAL CIRCULATION COOLDOWN.	a. IF a natural circulation cooldown NOT required, THEN maintain hot shutdown per appropriate steps of N-0-04, 15% POWER TO HOT SHUTDOWN CONDITION.

CORRESPONDING ERG STEP:

13	Determine If Natural Circulation Cooldown Is Required:	
	a. [Enter plant specific criteria]	a. Go to appropriate plant procedure.
	b. Go to ES-0.2, NATURAL CIRCULATION COOLDOWN, Step 1	

JUSTIFICATION OF DIFFERENCES:

Criteria for Natural Circulatin cooldown not needed, it is plant equipment status dependent and generally avoided if possible - better to hold stable hot S/D.

EOP WRITER G. H. Ruiter DATE 11-17-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT K H E ver DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP: 16

CHECK IF SOAK IS REQUIRED

a. CRDM fans - LESS THAN BOTH RUNNING	a. Soak not required GO TO Step 17.
b. RCS hot leg temperature - LESS THAN 350°F	b. Continue with Step 17. WHEN requirement is met, THEN do Step 16c.
c. Maintain following conditions FOR AT LEAST 9 HOURS	
1) RCS pressure - GREATER THAN 1200 PSIG	
2) RCS hot leg temperature - LESS THAN 350°F	

CORRESPONDING ERG STEP:

None

JUSITIFICATION OF DIRRERENCES:

Made a step using requirements in background document to more exactly state when a "soak" is to be performed.

EOP WRITER G. H. Ruiter DATE 09-06-84

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT K H Evans DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

12 IF a natural circulation cooldown and depressurization must be performed at a rate that may form a steam void in the vessel, THEN GO TO ES-0.4, NATURAL CIRCULATION COOLDOWN WITH STEAM VOID IN VESSEL (WITHOUT RVLIS).

CORRESPONDING ERG STEP:

NOTE before step 12

NOTE If at any time it is determined that a natural circulation cooldown and depressurization must be performed at a rate that may form a steam void in the vessel, guideline (8) should be used.

JUSTIFICATION OF DIFFERENCES:

Statement made by NOTE belongs as a step of the procedure.

EOP WRITER G. H. Ruiter DATE 11-17-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [illegible] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

6	B. Dump steam to condenser.	b. Dump steam with atmospheric steam dumps OR steam generator PORVs.

CORRESPONDING ERG STEP:

6	b. Dump steam to condenser	b. Dump steam using SG PORVs.

JUSTIFICATION OF DIFFERENCES:

Added use of Atmospheric Steam Dump - KNPP specific design.

EOP WRITER G. H. Ruiter DATE 11-17-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

NOTE: Wait approximately one hour, for mixing, before obtaining a boron sample.

3	VERIFY COLD SHUTDOWN BORON CONCENTRATION BY SAMPLING RCS	Return to Step 2.

CORRESPONDING ERG STEP:

None

JUSTIFICATION OF DIFFERENCES:

Added Note before step 3 to assure representative RCS sample.

EOP WRITER G. H. Ruiter DATE 11-17-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [illegible] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

1	IF at any time a RCP can be restarted, THEN GO TO N-RC-36A AND restart a RCP	GO TO Sep 2.

CORRESPONDING ERG STEP:

° If conditions can be established for starting an RCP during this guideline, Step 1 should be repeated.

1	Try to Restart an RCP:	
	a. Establish conditions for starting an RCP: [Enter plant specific list]	a. Go to Step 2.
	b. Start one RCP	b. Go to Step 2.
	c. Go to appropriate plant procedure.	

JUSTIFICATION OF DIFFERENCES:

Note and step combined into more precise statement of intended action.

EOP WRITER G. H. Ruiter DATE 11-17-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP ES-0.2 Rev. Orig-1

EOP STEP DOCUMENTATION FORM

EOP STEP:

None

CORRESPONDING ERG STEP: Caution before step 1

CAUTION If SI actuation occurs during this guideline, E-0, REACTOR TRIP OR SAFETY INJECTION, should be performed.

JUSTIFICATION OF DIFFERENCES:

Caution would needlessly clutter procedure. It should be automatic for operator to go to E-0 upon SI

EOP WRITER G. H. Ruiter DATE 11-17-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

5	CHECK IF STEAM GENERATOR TUBES NOT RUPTURED: 1) R-15 indication - NORMAL AND 2) R-19 indication - NORMAL	GO TO E-3, STEAM GENERATOR TUBE RUPTURE, Step 1.

CORRESPONDING ERG STEP:

4	Check Secondary Radiation - NORMAL [Enter plant specific means]	Go to E-3, STEAM GENERATOR TUBE RUPTURE, Step 1.

JUSTIFICATION OF DIFFERENCES:

Reworded to more accurately state what intended action is.

EOP WRITER G. H. Ruiter DATE 10-28-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT K H Evans DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

19	CHECK IF TRANSFER TO COLD LEG RECIRCULATION IS REQUIRED:	
	a. RWST level - LESS THAN 37.5%	a. Return to Step 17.b.
	b. GO TO ES-1.3, TRANSFER TO COLD LEG RECIRCULATION, Step 1	

CORRESPONDING ERG STEP:

19	Check If Transfer To Cold Leg Recirculation Is Required:	
	a. RWST level - LESS THAN (18)	A. Return to Step 17.
	b. Go to ES-1.3, TRANSFER TO COLD LEG RECIRCULATION, Step 1	

JUSTIFICATION OF DIFFERENCES:

Step 17.a only needs to be performed once.

EOP WRITER G. H. Ruiter DATE 10-28-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

None

CORRESPONDING
ERG STEP:

22	At (19) Hours After Event Initiation Prepare for Hot Leg Recirculation:	
	a. Check control room valve switches in the following position: [Enter plant specific list or normally deenergized valves used for transfer to hot leg recirculation with their correct position during cold leg recirculation]	a. Place valve switches in proper position.
	b. Check circuit breakers so that the following valves are energized: [Enter plant specific list of valves used for transfer to hot leg recirculation]	b. Close circuit breakers as necessary.
23	At (20) Hours After Event Initiation, Go to ES-1.4, TRANSFER TO HOT LEG RECIRCULATION, Step 1.	

JUSTIFICATION OF DIFFERENCES:

KNPP does not use Hot Leg Recirculation.

EOP WRITER G. H. Ruiter DATE 10-28-83

REVIEWED BY OPERATIONS ENGINEER GH Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT KHE DATE 9-25-84

EOP ES-1.1 Rev. Orig

EOP STEP DOCUMENTATION FORM

EOP STEP:

13	TRANSFER STEAM DUMP TO PRESSURE CONTROL MODE	
	a. Check for proper operation	a. IF steam dump NOT available, THEN use SG PORVs.

CORRESPONDING ERG STEP:

13	Transfer Condenser Steam Dump to Pressure Control Mode	IF condenser NOT available, THEN use SG PORVs.

JUSTIFICATION OF DIFFERENCES:

Changed to clarify KNPP steam dump usage and assure that contingency is used when appropriate.

EOP WRITER G. H. Ruiter DATE 09-18-84

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT K H E ... DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

1	VERIFY MAIN STEAMLINE ISOLATION	
	a. Main steamline isolatin valve(s) of affected steam generator (s) - CLOSED.	a. Manually close valves.
	b. Main steamline isolation bypass valve(s) of affected steam generator (s) - CLOSED.	b. Manually close valves.

CORRESPONDING ERG STEP:

1	Check Main Steamline Isolation and Bypass Valves of Affected SG(s) - CLOSE	Manually close valves.

JUSTIFICATION OF DIFFERENCES:

Separated 2 valves into sub-steps

EOP WRITER G. H. Ruiter DATE 11-09-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT T H E rea DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

5	Check CST level - greater than 4%	Switch to alternate AFW water supply. 1) Open valve(s) SW-601A, SW601B, or SW-502 to operating AFW Pump(s).

CORRESPONDING ERG STEP:

5	Check CST level - greater than (1)	Switch to alternate AFW water supply

JUSTIFICATION OF DIFFERENCES:

Added valve numbers to contingency step - infrequently used valves.

EOP WRITER G. H. Ruiter DATE 11-09-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

3.c.	WHEN ruptured steam generator pressure LESS THAN 1050 PSIG, THEN verify ruptured steam generator PORV CLOSED	c. Place PORV controller in MANUAL AND close PORV. IF PORV can NOT be closed, THEN locally isolate PORV.

CORRESPONDING ERG STEP:

3.c.	Check ruptured SG PORV-CLOSED	c. WHEN ruptured SG pressure less than (3) PSIG, THEN verify SG PORV closed. IF NOT closed, THEN place PORV controller in manual and close PORV. IF PORV can NOT be closed, THEN locally isolate PORV.

JUSTIFICATION OF DIFFERENCES:

Reordered logic statement is easier to follow.

EOP WRITER G. H. Ruiter DATE 11-09-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT K H E ... DATE 9-25-84

EOP E-3 Rev. Orig-1

EOP STEP DOCUMENTATION FORM

EOP STEP:

21 e. Stop SI PUMPS

f. Set the SI Pump Control Switches to AUTO

CORRESPONDING ERG STEP:

22 Stop High-Head SI Pumps And Place In Standby

JUSTIFICATION OF DIFFERENCES:

Action incorporated with step 21 is more logical and agrees with practice elsewhere in ERGs.

EOP WRITER G. H. Ruiter DATE 11-09-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

20	Check containment pressure has remained less than 23 PSIG	Perform the following: a. Verify containment spray signal actuated. IF NOT, THEN manually actuate. b. Reset containment spray signal

CORRESPONDING
ERG STEP:

21	Check containment pressure - HAS REMAINED LESS THAN (1) PSIG	Perform the following: a. Verify containment spray signal actuated. IF NOT, THEN manually actuate. b. Verify containment isolation Phase B valves closed. IF NOT, THEN manually close valves. IF valves can NOT be manually closed, THEN locally close valves. c. Reset containment spray signal.

JUSTIFICATION OF DIFFERENCES:

Kewaunee doesn't use phase A/B containment isolation; therefore, ERG step (b) doesn't apply - action is already taken by EOP step 18.

EOP WRITER G. H. Ruiter DATE 08-24-84

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT K H Evers DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

None - Deleted

CORRESPONDING ERG STEP:

22	Check Containment Radiation - LESS THAN (12)	Manually close containment isolation valves as necessary. IF valves can NOT be manually closed, THEN locally close valves.

JUSTIFICATION OF DIFFERENCES:

Since Kewaunee doesn't have phase A & B containment Isolation steps 18 & 19 which verify containment and Contmnt Vent Isolation satisfy objective of this step as stated in background.

EOP WRITER G. H. Ruiter DATE 08-24-84

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP ECA-1.1 Rev._____

EOP STEP DOCUMENTATION FORM

EOP STEP:

Figure ECA 1.1-1

CORRESPONDING
ERG STEP:

Figure prepared per background instructions.

JUSTIFICATION OF DIFFERENCES:

N/A

EOP WRITER G. H. Ruiter DATE 02-24-84

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT K H Evans DATE 9-25-84

E-0
E-1
E-3
ECA-0.2 N1-27.46
ECA-2.1
EOP ECA-3.1 Rev. Orig-1

EOP STEP DOCUMENTATION FORM

EOP STEP:

None.

CORRESPONDING
ERG STEP:

(Applicable to ERG's corresponding to above EOP's)

o If SI is reset before automatic transfer of high-head SI pump suction to RWSI occurs, manual transfer on BAT low level is required.

JUSTIFICATION OF DIFFERENCES:

Not applicable to KNPP

EOP WRITER G. H. Ruiter DATE 10-28-83

REVIEWED BY OPERATIONS ENGINEER G H Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT K H Evers DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

None.

CORRESPONDING
ERG STEP:

STEP 4-16 and STEP 4-19

NOTE RCPs should be run in order of priority to provide normal PRZR spray.

JUSTIFICATION OF DIFFERENCES:

Both RCP's have sprays.

EOP WRITER B. Bergin DATE 11-09-83

REVIEWED BY OPERATIONS ENGINEER [signature] DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

4-7.c Start additional plant equipment as necessary to assist in recovery.

CORRESPONDING ERG STEP:

4-7 c. Evaluate plant equipment:
[Enter plant specific list]

d. Start additional plant equipment to assist in recovery:
[Enter plant specific list]

JUSTIFICATION OF DIFFERENCES:

Combined ERG steps 4-7.c. and d. into one step.
"As necessary" is determined by evaluating plant equipment.

EOP WRITER B. Bergin DATE 11-09-83

REVIEWED BY OPERATIONS ENGINEER [signature] DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

None

CORRESPONDING
ERG STEP:

STEP 4-12

- o RVLIS full range greater than (14) if no RCP running

-OR-

- o RVLIS dynamic range greater than (15) if one RCP running

JUSTIFICATION OF DIFFERENCES:

Not applicable to KNPP

EOP WRITER B. Bergin DATE 11-10-83

REVIEWED BY OPERATIONS ENGINEER [signature] DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

None

CORRESPONDING
ERG STEP:

STEP 4-16

b.	Check RVLIS Indication: o Full range - GREATER THAN (14) IF NO RCP RUNNING -OR- o Dynamic range - GREATER THAN (15) IF ONE RCP RUNNING	b. Manually operate SI pumps as necessary.

JUSTIFICATION OF DIFFERENCES:

Not applicable to KNPP

EOP WRITER B. Bergin DATE 11-10-83

REVIEWED BY OPERATIONS ENGINEER [signature] DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

None.

CORRESPONDING
ERG STEP:

STEP 4-10

o RVLIS full range indication-
GREATER THAN (11)

JUSTIFICATION OF DIFFERENCES:

Not applicable to KNPP

EOP WRITER B. Bergin DATE 11-02-83

REVIEWED BY OPERATIONS ENGINEER [signature] DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

None

CORRESPONDING
ERG STEP:

STEP 4-7

c. RVLIS full range indication-GREATER THAN (11)	c. DO NOT STOP SI PUMPS. Go to ECA-3.1, SGTR WITH LOSS OF REACTOR COOLANT - SUBCOOLED RECOVERY DESIRED, Step 1.

JUSTIFICATION OF DIFFERENCES:

Not applicable to KNPP.

EOP WRITER B. Bergin DATE 11-02-83

REVIEWED BY OPERATIONS ENGINEER [signature] DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP FR-C.1 Rev. Orig-1

EOP STEP DOCUMENTATION FORM

EOP STEP:

CCW to RHR Heat Exchangers must be in service whenever RHR system temperature is Greater Than 200°F

CORRESPONDING
ERG STEP:

STEP 4

CAUTION Low-head SI pumps should not be run longer than (14) without CCW to the RHR heat exchanger.

JUSTIFICATION OF DIFFERENCES:

RHR Heat Exchanger Operaton limited by temperature, not time.

EOP WRITER B. Bergin DATE 11-07-83

REVIEWED BY OPERATIONS ENGINEER G.W. Ruiter DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT K.H. Ever DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

None

CORRESPONDING
ERG STEP:

STEP 4-23

- o RVLIS full range indication-
  GREATER THAN (9)

JUSTIFICATION OF DIFFERENCES:

Not applicable to KNPP

EOP WRITER B. Bergin DATE 11-07-83

REVIEWED BY OPERATIONS ENGINEER [signature] DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

None

CORRESPONDING
ERG STEP:

STEP 4-16

c.	RVLIS full range indication-GREATER THAN (9)	c. Return to Step 14.

JUSTIFICATION OF DIFFERENCES:

Not applicable to KNPP

EOP WRITER B. Bergin DATE 11-07-83

REVIEWED BY OPERATIONS ENGINEER [signature] DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

None

CORRESPONDING
ERG STEP:

STEP 4-6

6	Check RVLIS Full Range Indication. a. Indication - GREATER THAN (3) b. Return to guideline and step in effect	a. IF increasing, THEN return to Step 1. IF NOT, THEN go to Step 7.

JUSTIFICATION OF DIFFERENCES:

Not applicable to KNPP

EOP WRITER B. Bergin DATE 11-07-83

REVIEWED BY OPERATIONS ENGINEER [signature] DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

None

CORRESPONDING
ERG STEP:

STEP 4-6

- o RVLIS full range indication-
  GREATER THAN (15)

JUSTIFICATION OF DIFFERENCES:

Not applicable at KNPP

EOP WRITER B. Bergin DATE 11-07-83

REVIEWED BY OPERATIONS ENGINEER [signature] DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

None

CORRESPONDING
ERG STEP:

STEP 4-5

5 Check RVLIS Dynamic Head Indication:

a. Indication - GREATER THAN:

- o (4) IF 4 RCPs RUNNING
  -OR-
- o (5) IF 3 RCPs RUNNING
  -OR-
- o (6) IF 2 RCPs RUNNING
  -OR-
- o (7) IF 1 RCP RUNNING

b. Return to guideline and step in effect

b. IF increasing, THEN return to Step 1. IF NOT, THEN go to Step 6.

JUSTIFICATION OF DIFFERENCES:

Not applicable to KNPP

EOP WRITER B. Bergin DATE 11-07-83

REVIEWED BY OPERATIONS ENGINEER [signature] DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

Setpoint in procedure to control at ≤ 67%

CORRESPONDING
ERG STEP:

Setpoint in procedure to control at ≤ 90% N-R SG level

JUSTIFICATION OF DIFFERENCES:

The standard plant has the feedwater isolation at 90% and was used as the high level plant for FW control. The 67% do not allow enough control band. No automatic functions bypassed.

EOP WRITER Clark Steinhardt DATE 08-02-83

REVIEWED BY OPERATIONS ENGINEER [signature] DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

None

CORRESPONDING
ERG STEP:

STEP 4-3

IF COLD OVERPRESSURE PROTECTION
SYSTEM NOT IN SERVICE

-OR-

- o RCS pressure - LESS THAN COLD OVERPRESSURE LIMIT IF COLD OVERPRESSURE PROTECTION SYSTEM IN SERVICE

JUSTIFICATION OF DIFFERENCES:

Not applicable at KNPP

EOP WRITER B. Bergin DATE 11-10-83

REVIEWED BY OPERATIONS ENGINEER [signature] DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

None

CORRESPONDING
ERG STEP:

STEP 4-5 and STEP 4-12

- o RVLIS full range indication - GREATER THAN (8)

JUSTIFICATION OF DIFFERENCES:

Not applicable at KNPP

EOP WRITER B. Bergin DATE 11-10-83

REVIEWED BY OPERATIONS ENGINEER [signature] DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

None

CORRESPONDING
ERG STEP:

10	Check RVLIS - INDICATES UPPER HEAD FULL	Go to Step 12.

JUSTIFICATION OF DIFFERENCES:

Not applicable to KNPP

EOP WRITER B. Bergin DATE 11-04-83

REVIEWED BY OPERATIONS ENGINEER [signature] DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP FR-I.3 Rev. Orig-1

EOP STEP DOCUMENTATION FORM

EOP STEP:

None

CORRESPONDING
ERG STEP:

-OR-

o RVLIS - INDICATES UPPER HEAD
FULL

JUSTIFICATION OF DIFFERENCES:

Not applicable to KNPP

EOP WRITER B. Bergin DATE 11-04-83

REVIEWED BY OPERATIONS ENGINEER [signature] DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

None

CORRESPONDING
ERG STEP:

20	Check RVLIS - INDICATES UPPER HEAD FULL	Increase RCS pressure to value recorded in Step 14. Return to Step 15.

JUSTIFICATION OF DIFFERENCES:

Not applicable at KNPP

EOP WRITER B. Bergin DATE 11-04-83

REVIEWED BY OPERATIONS ENGINEER [signature] DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84

EOP STEP DOCUMENTATION FORM

EOP STEP:

Added 8c to STEP 7

CORRESPONDING
ERG STEP:

8	Check RVLIS Upper Range Indication:	a.	Go to STEP 9
	a. Indication - INCREASING	b.	Return to STEP 6
	b. Indication - GREATER THAN (6)		
	c. Turn off PRZR heaters as necessary to stabilize RCS pressure		
	d. Return to guideline and step in effect		

JUSTIFICATION OF DIFFERENCES:

RVLIS not applicable to KNPP

EOP WRITER B. Bergin DATE 11-04-83

REVIEWED BY OPERATIONS ENGINEER [signature] DATE SEP 25 1984

APPROVED BY OPERATIONS SUPERINTENDENT [signature] DATE 9-25-84