NMC
Committed to Nuclear Excellence

Kewaunee Nuclear Power Plant
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Kewaunee, WI 54216-9511
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Kewaunee / Point Beach Nuclear
Operated by Nuclear Management Company, LLC

NRC-02-043

May 9, 2002

10 CFR 50, App. E

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Ladies/Gentlemen:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
Radiological Emergency Response Plan Implementing Procedures

Pursuant to 10 CFR 50 Appendix E, attached is the latest revisions to the Kewaunee Nuclear Power Plant Radiological Emergency Response Plan Implementing Procedures (EPIPs). These revised procedures supersede the previously submitted procedures.

Pursuant to 10 CFR 50.4, two additional copies of this letter and attachment are hereby submitted to the Regional Administrator, U. S. Nuclear Regulatory Commission, Region III, Lisle, Illinois. As required, one copy of this letter and attachment is also submitted to the Kewaunee Nuclear Power Plant NRC Senior Resident Inspector.

Sincerely,

Thomas J. Webb
Regulatory Affairs Manager

SLC

Attachment

cc - US NRC Senior Resident Inspector, w/attach.
US NRC, Region III (2 copies), w/attach.
Electric Division, PSCW, w/o attach.
QA Vault, wo/attach.

A045

DOCUMENT TRANSMITTAL

KEWAUNEE NUCLEAR POWER PLANT

FROM: **DIANE FENCL - KNPP** TRANSMITTAL DATE 05-09-2002

EMERGENCY PLAN IMPLEMENTING PROCEDURES TRANSMITTAL FORM

OUTSIDE AGENCY COPIES (1-20)

T. Webb - NRC Document Control Desk (1)*
T. Webb - NRC Region III (2, 3)*
T. Webb - NRC Resident Inspector (4) (receives Appx. A phone numbers)*
T. Webb - State of Wisconsin (5)*
T. Webb - KNPP QA Vault (NRC Letter & Memo Only) (15)*
Krista Kappelman - PBNP - EP (10)*
Craig Weiss - Alliant Energy (11)*
Jim Holthaus - Nuclear Management Company (12)*

PERSONAL COPIES (21-40) These copies are for the personal use of the listed individuals for reference or emergency response.

J. Bennett (33) D. Seebart (24) J. Ferris (13) T. Coutu (28)

REFERENCE COPIES - CUSTODIAN (41-100) These copies are for general reference by anyone. They are distributed throughout the plant and corporate offices. The named individual is the responsible custodian for the procedures and shall insure they are properly maintained.

NO Library - KNPP (59)
C. Sternitzky - ATF-2 (44)
M. Daron - Security Building (46)
M. Lambert - EOF (81)
M. Lambert - OSF (52)
LOREB - STF (62, 66, 67, 68, 70, 72, 73, 74)
STF Library (43)
Resource Center - Training (82)
D. Krall - CR/SS Office (51, 56)
J. Ferris - TSC (50)
W. Galarneau - RAF (53)
W. Galarneau - SBF/EMT (54)
W. Galarneau - RPO (55)
STF (86, 87, 88)

WORKING COPIES (101-199) These copies of procedures are kept in the areas designated for use in response to an emergency.

W. Galarneau - RAF/RPO (106, 107)
W. Galarneau - SBF/ENV (108, 109)
W. Galarneau - SBF/EM Team (110, 111, 111A)
W. Galarneau - Aurora Medical Center (118, 119)
W. Flint - Cold Chem/HR Sample Room (113)
M. Kuether - SBF/SEC (114)
D. Krall - CR/Communicator (116)(Partial Distribution)
Simulator/Communicator (117)
M. Fencl - Security (121)
M. Kuether - Security Building (120)
J. Stoeger (126)

Originals to KNPP QA Vault

Please follow the directions when updating your EPIP Manual. WATCH FOR DELETIONS!!! These are controlled procedures and random checks may be made to ensure the manuals are kept up-to-date.

*THIS IS NOT A CONTROLLED COPY. *IT IS A COPY FOR INFORMATION ONLY.*

KEWAUNEE NUCLEAR POWER PLANT
REVISION OF EMERGENCY PLAN IMPLEMENTING PROCEDURES
May 09, 2002

Please follow the directions listed below. If you have any questions regarding changes made to the EPIPs, please contact Dave Seebart at ext. 8719.

EPIP Index, dated 05-09-2002.

REMOVE		INSERT	
PROCEDURE	REV.	PROCEDURE	REV.
EPIP-AD-05	C	EPIP-AD-05	D
EPIP-OSF-03	O	EPIP-OSF-03	P
EPIP-TSC-04	M	EPIP-TSC-04	N
EPIP-TSC-10	J	EPIP-TSC-10	K
Form EPIPF-TSC-04-01	F	Form EPIPF-TSC-04-01	G
Form EPIPF-TSC-04-02	F	Form EPIPF-TSC-04-02	Delete

Return a signed and dated copy of this transmittal letter, within 10 days of transmittal date, to the sender. If you have any questions or comments, please contact Dave Seebart at ext. 8719.

I CERTIFY Copy No._____ (WPSC No.) of the Kewaunee Nuclear Power Plant's EPIPs has been updated.

_____
SIGNATURE **DATE**

Please return this sheet to *DIANE FENCL*.

Diane Fencl

Enclosure

EMERGENCY PLAN IMPLEMENTING PROCEDURES

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EPIP-AD-03	KNPP Response to an Unusual Event	AE	02-06-2002
EPIP-AD-04	KNPP Response to Alert or Higher	AH	02-27-2002
EP-AD-5	Site Emergency	**Deleted**	04-27-87
EPIP-AD-05	Emergency Response Organization Shift Relief Guideline	D	05-09-2002
EP-AD-6	General Emergency	**Deleted**	04-24-87
EPIP-AD-07	Initial Emergency Notifications	AP	02-27-2002
EP-AD-8	Notification of Alert or Higher	**Deleted**	02-26-96
EP-AD-9	Notification of Site Emergency	**Deleted**	04-27-87
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EP-AD-13A	Limited Area Evacuation	**Deleted**	03-01-83
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EP-ENV-3D	Revision and Control of ISODOSE II	**Deleted**	02-14-95
EP-ENV-3E	Manual Determination of X/Q	**Deleted**	04-24-87
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EP-ENV-3G	Manual Dose Projection Calculation	**Deleted**	06-02-89
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EPIP-ENV-04D	Plume Tracking for Environmental Monitoring Teams	N	10-02-2001
EP-ENV-5A	LCS-1 Operation	**Deleted**	04-14-86
EP-ENV-5B	MS-3 Operation	**Deleted**	04-14-86
EP-ENV-5C	SAM II Operation	**Deleted**	04-14-86
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EP-ENV-6A	Relocation of Site Access Facility (Habitability)	**Deleted**	03-23-84
EP-ENV-6B	SAF Environmental Sample Analysis Relocation	**Deleted**	03-23-84
EP-ENV-7	Site Access Facility Communications	**Deleted**	09-26-84
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EP-EOF-7	Notification of Unusual Event	**Deleted**	04-06-94
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EP-RET-4B	Radiological Controls at Site Access Facility	**Deleted**	07-12-94
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EPIP-SEC-03	Personnel Assembly and Accountability	AD	04-25-2002
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* EP-TSC-8B was totally deleted; therefore, EP-TSC-8C was changed to EP-TSC-8B			
EP-TSC-9	Core Damage Assessment Using Released Radionuclides	**Deleted**	09-30-86
EP-TSC-9A*	Core Damage Assessment	I	02-23-99
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* EP-TSC-9A, Rev. D was totally deleted; therefore, EP-TSC-9B became EP-TSC-9A. EP-TSC-9B was previously EP-TSC-9C.			
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RET 2B.1	Containment Stack Release (Grab Sample)	C	04-16-96
RET 2B.2	Auxiliary Building Stack (Grab Sample)	C	04-16-96
RET 2B.3	Auxiliary Building Stack (Sping Reading)	C	04-16-96
RET 2B.4	Containment Stack (Sping Reading)	B	04-16-96
RET 2B.5	Steam Release	C	04-16-96
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RET 8.3	Hospital Survey 1	**Deleted**	06-05-2001
RET 8.4	Hospital Survey 2	**Deleted**	07-25-97
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TSC-03-03	Environmental Status Board	J	06-12-2001
TSC-03-04	Radiation Monitors	I	01-08-2002
TSC-04-01	Emergency Physical Change Request	G	05-09-2002
TSC-04-02	Emergency Physical Change Safety Review	**Deleted**	05-09-2002
TSC-04-03	Emergency Physical Change Index	F	08-29-2000
TSC-07-01	Head Venting Calculation	F	10-31-2000
TSC-08A-01	Steam Release Data Sheet (Energy Balance)	H	12-14-2001
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TSC-08A-03	Steam Release Data/Calculation Sheet (Open Valve)	E	12-14-2001
TSC-08A-04	Steam Release Data/Calculation Sheet (STMRLS Program)	D	12-14-2001
TSC 9A.1	Core Damage Based on Reactor Vessel Level & Fuel Rod Temp.	C	02-14-95
TSC 9A.2	Core Damage Based on Radiation Monitors	C	02-14-95
TSC 9A.3	Cs-134 and Cs-137 PCF Determination	D	04-16-96
TSC 9A.4	Core Damage Based on Activity Ratios	C	02-14-95
TSC 9A.5	Core Damage Assessment (Monitoring Data)	D	04-16-96
TSC 9A.6	Core Damage Summary	C	02-14-95

WISCONSIN PUBLIC SERVICE CORP. Kewaunee Nuclear Power Plant *Emergency Plan Implementing Procedure*	No. EPIP-AD-05	Rev. D
	Title Emergency Response Organization Shift Relief Guideline	
	Date MAY 9 2002	Page 1 of 5
Reviewed By Jeanne Ferris	Approved By Bill Yarosz	

Nuclear Safety Related	☐ Yes ☑ No	PORC Review Required	☐ Yes ☑ No	SRO Approval Of Temporary Changes Required	☐ Yes ☑ No

1.0 Purpose

1.1 This procedure provides instruction for conducting shift relief of the Emergency Response Organization (ERO) and support staff during a declared emergency.

2.0 General Notes

2.1 The shift relief process is a method used by ERO members and supporting plant staff to provide relief from their emergency response tasks by personnel replacement while maintaining the functions of the emergency organization.

3.0 Precautions and Limitations

3.1 None

4.0 Initial Conditions

4.1 This procedure should be implemented during the preparation for, conduct of, and closure of a shift relief when a plant emergency of alert or higher has been declared or when directed by the Emergency Director or Emergency Response Manager.

5.0 Procedure

Note

Operating Crews in the Control Room will follow established Operation's shift relief procedures.

5.1 **Directors** shall:

5.1.1 Prepare for shift relief

5.1.1.1 Determine the level of ERO support needed for your area of responsibility for the next shift.

5.1.1.2 Identify the individual(s) available for comprising the relief shift. Sources include individuals sent home at the start of the event for relief and individuals who were not available when the initial event notification was made.

5.1.1.3 Identify a location (preferably outside the response facility) where briefings and debriefings can be conducted.

5.1.1.4 With the concurrence of the Emergency Director, set a relief shift briefing date and time.

5.1.1.5 Obtain information from the Site Protection Director concerning travel routes to or from the plant through Kewaunee and Manitowoc Counties in areas that have been evacuated.

5.1.1.6 Instruct the ERO members under your direction to contact their ERO position's relief to provide them with relief briefing date, time, and travel route instructions.

5.1.2 Conduct a shift relief briefing

5.1.2.1 Gather all relief shift personnel in the designated location.

5.1.2.2 Provide a briefing that includes, but is NOT limited to:

- Brief history of the event and milestones
- Current plant status
- Expected relief shift activities

5.1.2.3 Send relief staff to their respective workstations in small numbers, so that the operation of the facility as a whole is not disrupted.

5.1.3 Conduct a debriefing for the off-going shift

5.1.3.1 Gather all off-going ERO members in the designated location.

5.1.3.2 Designate an individual to record comments made by the off-going shift.

5.1.3.3 Provide an opportunity for all members to identify problems, concerns, and strengths encountered during the shift just completed.

5.1.3.4 Ensure a copy of the recorded comments are given to the on-coming facility directors, and a copy for the event file created in each facility.

5.1.3.5 Inform the off-going shift of travel routes and monitoring expectations established by Kewaunee and Manitowoc Counties for evacuated areas around the plant.

5.1.3.6 Inform the off-going shift of their anticipated return time. If this is not known, ensure a list of phone numbers is available for off-going staff so they can be notified of information about the next shift.

5.1.4 WHEN all workstations in the facility have been relieved, conduct a facility briefing to review current conditions, activities, and priorities.

5.1.5 IF Final Conditions (Section 6.0) have NOT been met, THEN return to Step 5.1.

5.1.6 IF Final Conditions (Section 6.0) have been met, THEN stop using this procedure.

5.2 The **Site Protection Director** (or designee) shall:

5.2.1 WHEN directed by the Emergency Director, coordinate the movement of the shift personnel to and from the Kewaunee Nuclear Power Plant (KNPP).

5.2.2 Review relief shift report location(s), time, and expected routes into the plant with Directors in the Technical Support Center (TSC).

!! Caution !!

Plant staff being relieved shall follow the evacuation and reception center check-in requirements of either the Kewaunee County Emergency Government or Manitowoc County Emergency Management when leaving the plant.

5.2.3 Contact the Kewaunee County Emergency Operations Center (EOC) to decide appropriate ingress and egress route(s) for the plant through Kewaunee County.

a. Ask for Law Enforcement.

b. Determine the best routes through Kewaunee County and the EPZ traffic checkpoints.

c. Discuss approximate number of people needing ingress and egress of the plant and the approximate time.

d. Discuss the appropriate mode of transportation (car, bus, etc.).

e. Determine county contact points for coordinating an entrance or exit from the EPZ.

5.2.4 Contact the Manitowoc County Emergency Operations Center (EOC) to decide appropriate ingress and egress route(s) for the plant through Manitowoc County.

a. Ask for the Sheriff.

b. Determine the best routes through Manitowoc County and the EPZ traffic checkpoints.

c. Discuss approximate number of people needing ingress and egress of the plant and the approximate time.

d. Discuss the appropriate mode of transportation (car, bus, etc.).

e. Determine county contact points for coordinating an entrance or exit from the EPZ.

5.2.5 IF bus transportation is needed, THEN contact the Administrative Logistics Director in the Emergency Operations Facility (EOF) to arrange for this service.

5.2.6 Provide the information from Steps 5.2.3 through 5.2.5 to all ERO Directors.

5.2.7 Review AND implement procedure EPIP-SEC-05, "Personnel Evacuation," for staff who will be leaving the plant.

5.2.8 IF Final Conditions (Section 6.0) have NOT been met, THEN return to Step 5.2.

5.2.9 IF Final Conditions (Section 6.0) have been met, THEN stop using this procedure.

5.3 **All ERO members and support staff** shall:

5.3.1 WHEN directed, contact your relief person and give them the following information:

- Reporting location (facility or a designated staging area)
- The route to take to the reporting location
- The time to be at the reporting location

5.3.2 WHEN your relief arrives, perform a one-on-one turnover paying particular attention to:

- Status of events and activities related to the position
- Events and activities that will carry forward into the next shift
- Events and activities to be initiated during the next shift

5.3.3 Work side-by-side for as long as needed to ensure continuity of effort.

5.3.4 Meet for a debriefing with the off-going shift at a location designated by your director.

5.3.5 Provide a phone number where the person relieving you can contact you while off duty.

6.0 Final Conditions

6.1 The Emergency Response Manager has determined that shift rotation will not be required, or the plant emergency has been closed out, or recovery actions have begun and the Emergency Response Manager has suspended the use of EPIPs.

7.0 References

7.1 EPIP-SEC-05, Personnel Evacuation

8.0 Records

8.1 The following QA records and non-QA records are identified in this directive/procedure and are listed on the KNPP Records Retention Schedule. These records shall be maintained according to the KNPP Records Management Program.

8.1.1 QA Records

None

8.1.2 Non-QA Records

- Comments recorded in Step 5.1.3.2

WISCONSIN PUBLIC SERVICE CORP. Kewaunee Nuclear Power Plant *Emergency Plan Implementing Procedure*	No. EPIP-OSF-03	Rev. P
	Title Work Orders During an Emergency	
	Date MAY 9 2002	Page 1 of 5
Reviewed By Jeanne Ferris	Approved By Bill Yarosz	

Nuclear Safety Related	☐ Yes ☑ No	PORC Review Required	☐ Yes ☑ No	SRO Approval Of Temporary Changes Required	☐ Yes ☑ No

1.0 Purpose

1.1 This procedure provides instruction for processing Work Orders (WO) in a declared Emergency condition.

2.0 General Notes

2.1 10CFR50.54 (x) and (y) provide that a licensee may take reasonable action that departs from a license condition or a technical specification in an emergency when this action is immediately needed to protect the public health and safety and no action consistent with license conditions and technical specifications that can provide adequate or equivalent protection is immediately apparent. This action shall be approved, as a minimum, by a licensed senior operator prior to taking the action.

2.2 Existing General Nuclear Procedures (GNPs) should be used if time and conditions permit. Once the emergency conditions are terminated or recovery operations initiated, this procedure is NOT applicable.

3.0 Precautions and Limitations

3.1 All work performed should follow the guidelines of the WPSC Safety Rules Book and NMC Safety Guidelines.

3.2 All work performed must have prior approval of the Shift Manager/Event Operations Director (EOD) prior to commencing.

3.3 Any changes to maintenance procedures must be approved by the Support Activities Director (SAD) and the Shift Manager/EOD.

4.0 Initial Conditions

4.1 This procedure is implemented when there is a requirement for corrective maintenance during an emergency at the Kewaunee Nuclear Power Plant (KNPP).

5.0 Procedure

5.1 **OSF Coordinator** shall:

5.1.1 Assign the appropriate Maintenance Group Leader/Supervisor (i.e., electrical, mechanical, I&C) the responsibility of preparing the work package.

5.1.2 Ensure that the SAD, Emergency Director (ED), EOD, and Technical Support Center Director (TSCD) understand the scope of the work and any possible effects on plant conditions and/or parameters that may occur due to the performance of this maintenance.

5.1.3 Immediately inform the SAD when the repair work is completed.

5.1.4 Retain all WOs until the emergency has been terminated or recovery operations implemented, after which all WOs will be put into the normal WO route for processing.

5.2 **Maintenance Group Leaders/Supervisors** shall:

5.2.1 Ensure problem is accurately described on WO Form.

5.2.2 Prepare the work package, specify work instructions and retest requirements.

5.2.3 Determine requirements necessary to perform job.

a. IF a design change is required, THEN an Emergency Physical Change (EPC) Request shall be initiated by the requesting supervisor and forwarded to the TSCD in accordance with EPIP-TSC-04, "Emergency Physical Changes, Major Equipment Repair," prior to starting work.

b. List under "Work Instructions" section references that must be used in performing maintenance action. Add additional reference listings as necessary.

c. Maintain a copy of the work order.

5.2.4 Notify QC Coordinator prior to starting work for possible QC support.

5.2.5 Schedule the maintenance work with knowledge of the ED's priorities.

5.2.6 Select the Repair Team members according to the following criteria:

a. Team members should be knowledgeable of the plant layout.

b. Team members should be knowledgeable of the type maintenance to be performed.

c. At least one member of the team should be a Radiation Technologist when entering any of the following areas:

1. Radiological conditions are adverse or unknown
2. Confined space area
3. Breathable air testing may be required

5.2.7 Assign a Team Coordinator.

5.2.8 If necessary, assign relief team members.

5.2.9 Brief repair teams (Form EPIPF-OSF-03-01) prior to commencing work.

5.2.10 Contact the Radiation Protection Group to brief repair teams on radiological conditions and potential hazards prior to commencing work.

5.2.11 Debrief the repair teams when work is completed (Form EPIPF-OSF-03-01).

5.2.12 Check to ensure maintenance actions have been performed and documented correctly.

5.2.13 Route the completed WO and "Operational Support Facility Team Briefing," Form EPIPF-OSF-03-01, back to the OSF Coordinator.

5.3 **Team Coordinator** shall:

5.3.1 Review with the RPD the protective clothing and respiratory protection equipment necessary for team actions in radiologically controlled areas.

5.3.2 Obtain Shift Manager's/EODs approval prior to starting work. The Shift Manager/EOD should maintain a copy of the work order.

5.3.3 During the repair effort,

a. Monitor the radio.

b. If required, record radiation levels.

c. Minimize team members' exposure while they are conducting repair operations by using the principles of ALARA.

d. Maintain surveillance of the doses (DDE) team members are receiving.

e. Compare the dose readings to those expected.

f. IF exposures become significantly higher than expected, THEN report this immediately to the Radiological Protection Director (RPD) by Gai-tronics or radio.

g. Log all significant events including location and time of occurrence.

h. Inform the appropriate supervisor of all significant actions being taken by team members.

5.4 **Repair Teams** shall:

5.4.1 Receive a briefing from the appropriate Leader/Supervisor and Radiation Protection Group.

5.4.2 Follow all briefing instructions, procedural precautions, and RWP instructions.

5.4.3 Return to the Operational Support Facility (OSF) when the work is completed and receive a debriefing (Form EPIPF-OSF-03-01).

6.0 Final Conditions

6.1 Plant Emergency has been Terminated or Recovery actions have begun and the responsible director has suspended the use of EPIPs.

7.0 References

7.1 NAD-08.02, Work Request/Work Order

7.2 EPIP-TSC-04, Emergency Physical Changes, Major Equipment Repair

7.3 COMTRAK 87-153

7.4 GNP-08.02.01, Work Request/Work Order Processing

8.0 Records

8.1 The following QA records and non-QA records are identified in this directive/procedure and are listed on the KNPP Records Retention Schedule. These records shall be maintained according to the KNPP Records Management Program.

8.1.1 QA Records

- Operational Support Facility Team Briefing, Form EPIPF-OSF-03-01

8.1.2 Non-QA Records

None

WISCONSIN PUBLIC SERVICE CORP. Kewaunee Nuclear Power Plant *Emergency Plan Implementing Procedure*	No. EPIP-TSC-04	Rev. N
	Title Emergency Physical Changes, Major Equipment Repair	
	Date MAY 9 2002	Page 1 of 3
Reviewed By Jeanne Ferris	Approved By Bill Yarosz	

Nuclear Safety Related	☐ Yes ☑ No	PORC Review Required	☐ Yes ☑ No	SRO Approval Of Temporary Changes Required	☐ Yes ☑ No

1.0 Purpose

1.1 This procedure provides instruction for establishing the controls and documentation for changes to equipment or systems necessary during a declared emergency.

1.2 This procedure applies to the Engineering Coordinator and other Technical Support Center (TSC) staff members designated by the Technical Support Center Director (TSCD) or Engineering Coordinator implementing physical changes or major equipment or system repairs during a declared emergency.

2.0 General Notes

2.1 10CFR50.54 (x) and (y) provide that a licensee may take reasonable action that departs from a license condition or a technical specification in an emergency when this action is immediately needed to protect the public health and safety and no action consistent with license conditions and technical specifications that can provide adequate or equivalent protection is immediately apparent. This action shall be approved, as a minimum, by a licensed senior operator prior to taking the action.

3.0 Precautions and Limitations

3.1 None

4.0 Initial Conditions

4.1 Plant is in a declared emergency with the Technical Support Center activated.

5.0 Procedure

Note

Normal plant procedures should be used, if time and conditions permit.

5.1 Initiation and Implementation of an Emergency Physical Change (EPC)

5.1.1 Complete EPC Request (Form EPIPF-TSC-04-01).

5.1.2 Complete a 50.59 Screening/Evaluation in accordance with NAD-04.04, "Changes, Tests, and Experiments."

5.1.3 Assign a number to the EPC from the EPC Index (Form EPIPF-TSC-04-03).

5.1.4 Review the EPC with the TSCD, OR

IF the EPC affects plant safety, THEN call necessary PORC members together for an Emergency PORC Meeting.

5.1.5 Following the TSCD or PORC review, ensure all signatures are obtained and dated on the EPC.

5.1.6 Ensure all appropriate prints are clearly marked with the needed modifications and copies are made for distribution to the Technical Support Center (TSC), Control Room (CR), and Operational Support Facility (OSF).

5.1.7 Review the EPC with the Event Operations Director and Shift Manager.

a. Determine that plant conditions are acceptable prior to allowing the installation of the EPC.

Note

For some changes, a DANGER tag is inappropriate and cannot be placed, and therefore, is not required. This should be noted on the EPC Form.

b. Ensure a tagout is prepared for the conditions necessary for installation of the EPC.

c. Ensure the tagout number is recorded on the EPC.

d. Have the Shift Manager sign the EPC.

e. Ensure the original EPC is filed in the Shift Manager's office.

5.1.8 Coordinate with the Support Activities Director to install the EPC in accordance with the applicable Work Request.

5.2 Closing Out an EPC

5.2.1 Upon closeout or entry into the recovery phase, the TSCD will:

a. Review the EPC Index and initiate NAD-04.03, "Plant Physical Change," as applicable for all EPCs that have not been removed, OR

b. Remove the EPC if no longer needed.

6.0 Final Conditions

6.1 Plant Emergency has been Terminated or Recovery actions have begun and the Emergency Response Manager has suspended the use of EPIPs.

7.0 References

7.1 NAD-04.03, Plant Physical Change

7.2 NAD-04.04, Changes, Tests, and Experiments

7.3 EPIP Appendix B, Forms

7.4 COMTRAK 87-153

7.5 GNP-04.03.01, Guide to Safety Review, Safety Evaluations, and Second Level Reviews

7.6 GNP-04.03.03, Plant Physical Change Control

8.0 Records

8.1 The following QA records and non-QA records are identified in this directive/procedure and are listed on the KNPP Records Retention Schedule. These records shall be maintained according to the KNPP Records Management Program.

8.1.1 QA Records

- Emergency Physical Change Request, Form EPIPF-TSC-04-01

8.1.2 Non-QA Records

- Emergency Physical Change Index, Form EPIPF-TSC-04-03

WISCONSIN PUBLIC SERVICE CORP. Kewaunee Nuclear Power Plant *Emergency Plan Implementing Procedure*	No. EPIP-TSC-10	Rev. K
	Title Technical Support for IPEOPs	
	Date MAY 9 2002	Page 1 of 13
Reviewed By Dave Lohman	Approved By Bill Yarosz	

Nuclear Safety Related	☐ Yes ☑ No	PORC Review Required	☐ Yes ☑ No	SRO Approval Of Temporary Changes Required	☑ Yes ☐ No

1.0 Purpose

1.1 This procedure provides instruction for technical guidance to Severe Accident Management Operations (SAMOPs) and Technical Support Center staff members during implementation of the Kewaunee Nuclear Power Plant (KNPP) Integrated Plant Emergency Operating Procedures (IPEOPs).

2.0 General Notes

2.1 This procedure applies to steps in the IPEOPs that require consultation with the Plant Technical Support Engineering staff.

3.0 Precautions and Limitations

3.1 This procedure should only be used as a guide to the Technical Support staff. Plant parameters should be monitored to determine plant conditions prior to implementation of these guidelines.

3.2 Shift Manager and Event Operations Director approval is required to activate the Post-Accident Leakage Control System.

3.3 IPEOP implementation may lead to violation of plant Technical Specifications. The NRC must be notified of any violation per 10CFR50.54(x).

4.0 Initial Conditions

4.1 This procedure is used during a declared emergency when plant conditions require assistance by the Technical Support staff in the execution of IPEOPs.

5.0 Procedure

5.1 IPEOP E-1: LOSS OF REACTOR OR SECONDARY COOLANT

5.1.1 Evaluate Plant Status:

a. This step instructs the operator to consult Technical Support staff to determine if E-MDS-30, Post-Accident Leakage Control System, should be implemented. Post-Accident Leakage Control System is actuated if Auxiliary Building radiation levels are increasing or significant core damage has occurred. Procedure E-MDS-30 should be implemented at this time because the procedure requires local actions which may be prohibited following transfer to Containment sump recirculation due to high radiation levels.

b. Chemistry is contacted to start up the Containment Hydrogen Monitoring System (EPIP-RET-03C) and obtain primary and secondary samples per other EPIPs.

5.2 IPEOP E-1: LOSS OF REACTOR OR SECONDARY COOLANT

5.2.1 Request a dose projection on steaming steam generators from the Technical Support Staff:

a. IF a large break LOCA has occurred, THEN the secondary side may still be relatively hot and at a pressure significantly higher than the Reactor Coolant System (RCS). IF this is the case, THEN the operator should attempt to cooldown and depressurize the steam generators. A dose projection is requested to be performed, per EPIP-RET-05, because radioactivity may have accumulated in the steam generators due to small leaks, existing prior to the LOCA, and that still remains in the steam generators despite any secondary-to-primary back-leakage that may have occurred.

5.3 IPEOP E-1: LOSS OF REACTOR OR SECONDARY COOLANT

5.3.1 Determine if Reactor Vessel Head Should Be Vented:

a. The possibility exists for a noncondensable bubble to form in the reactor vessel head region during certain LOCA events (whenever saturation conditions exist in the vessel head or gas is injected into or generated within the RCS). The reactor vessel head might have to be vented using the Reactor Vessel Head Vent System to prevent the bubble from growing to the extent that core cooling flow is adversely affected.

5.3.2 Identify Growth of a Void in the Vessel:

a. The growth of a void in the vessel upper head can be identified by monitoring the Reactor Vessel Liquid Inventory System (RVLIS) upper range. A RVLIS indicating less than a full upper head is the primary means of determining if voids exist. In addition to RVLIS, other indirect indications of voids in the RCS are listed below (these voids are not necessarily located in the reactor vessel head).

1. Pressurizer level response to RCS pressure changes may not be normal if voids exist in the RCS. The pressurizer level may decrease during a RCS pressurization due to void compression or condensation. Also, the level may rise rapidly during a spraying operation due to void expansion or generation.
2. An indication of reactor vessel head temperatures equal to or greater than saturation temperature warrants the assumption that a steam bubble has been generated in the reactor vessel head.
3. The operator may suspect noncondensable voids in the RCS after either a complete SI accumulator tank discharge or an inadequate core cooling condition.

b. IF a steam void is formed during post-LOCA cooldown and depressurization or during a steam generator tube rupture recovery, THEN no attempt should be made to condense the void through repressurization. Only RXCP restart or continued cooling from CRDM fans should be used. Refer to IPEOP FR-I.3 and Section 5.27 of this procedure.

5.4 IPEOP E-1: LOSS OF REACTOR OR SECONDARY COOLANT

5.4.1 Consult with Emergency Director for Additional Recovery Actions:

a. This step instructs the operator to notify the Emergency Director when the hydrogen concentration inside containment is greater than 6% in dry air. The possible actions to be taken with high hydrogen concentrations in containment are dependent on the containment conditions, the event progression, and off-site conditions.

b. Evaluate actions to be taken for high containment hydrogen concentration using SAG-7.

5.5 IPEOP E-1: LOSS OF REACTOR OR SECONDARY COOLANT

5.5.1 Evaluate Long-Term Plant Status:

a. The equipment needed to function following an event has been designed so that operation for extremely long periods of time is possible. This allows the Plant Engineering staff time to evaluate the event and develop recovery procedures so that the plant can be repaired and brought back to service. Priority should be given, however, to ensure that equipment needed for accident mitigation remains operable.

b. Actions must be taken to adjust recirculation sump pH to between 8 and 10.5 within 48 hours of the start of the leak to prevent component stress corrosion cracking.

5.6 IPEOP ES-1.2: POST-LOCA COOLDOWN AND DEPRESSURIZATION

5.6.1 Check if RHR System Should Be Placed in Service:

a. The RHR System is designed to operate below specific RCS pressure and temperature conditions (RCS hot leg temperature less than 400°F and RCS pressure less than 425 psig). Depending on the size of the break, different actions should be taken.

b. For smaller breaks, the SI pumps will have been stopped in most cases and most of the RWST water will still be available by the time the RHR System entry criteria are satisfied. For these cases, the RHR System could be placed in service with the RHR pumps taking suction from the hot legs. Any high-head pump left running would remain aligned in the cold leg injection mode taking suction from the RWST. When charging flow is established, the injection source is also from the RWST.

c. For larger breaks, the RWST level will eventually decrease to the recirculation transfer setpoint and at least one RHR pump must be used for containment sump recirculation. IF the RHR System is not placed in service, THEN the system can remain in the long-term recirculation mode with the core residual heat being dissipated through the safeguards (RHR) heat exchangers.

5.6.2 Consider These Three Important Factors:

a. The RWST (or alternate) source of injection (make-up) water must be available for operating high-head SI, charging pumps, and RHR in split-train operation.

b. Confirmation of system availability, including all pumps, valves, and adequate inventory in the RCS to preclude steam from entering the RHR pump suction, must take place before RHR operation can begin.

c. Auxiliary building radiation levels should be evaluated. Placing RHR in service in the normal lineup will cause potentially highly radioactive fluid to be transported through lines that did not have radioactive fluid in them prior to the event. Care should be taken to minimize the spread of radioactive fluid through the CVCS system, if possible. Additionally, during a design basis LOCA, some valves and equipment (such as RHR-10A and RHR-10B) are projected to be in radiation fields of 1,000 R/hr or more due to "shine" from the containment building.

5.7 IPEOP ES-1.2: POST-LOCA COOLDOWN AND DEPRESSURIZATION

5.7.1 Consult with Emergency Director for Additional Recovery Actions:

a. This step instructs the operator to notify the Emergency Director when the hydrogen concentration inside containment is greater than 6% in dry air. The possible actions to be taken with high hydrogen concentrations in containment are dependent on the containment conditions, the event progression, and off-site conditions.

b. Evaluate actions to be taken for high containment hydrogen concentration using SAG-7.

5.8 IPEOP ES-1.2: POST-LOCA COOLDOWN AND DEPRESSURIZATION

5.8.1 Evaluate Long-Term Plant Status:

a. After reaching and maintaining cold shutdown conditions, the plant is effectively stable for the long term. IF the SI pumps were stopped, THEN RCS subcooling would have been restored and RCS circulation flow should have been adequate to prevent boron precipitation. Thus, the transfer of hot leg recirculation would probably not be needed for the smaller breaks where SI flow was reduced.

5.9 IPEOP ES-3.1: POST-SGTR COOLDOWN USING BACKFILL

5.9.1 Evaluate Long-Term Plant Status:

a. The equipment needed to function following an event has been designed so that operation for extremely long periods of time is possible. This allows the Plant Engineering staff time to evaluate the event and develop recovery procedures so that the plant can be repaired and brought back to service. Priority should be given, however, to ensure that equipment needed for accident mitigation remains operable.

5.10 IPEOP ES-3.2: POST-SGTR COOLDOWN USING BLOWDOWN

5.10.1 Evaluate Long-Term Plant Status:

a. The equipment needed to function following an event has been designed so that operation for extremely long periods of time is possible. This allows the Plant Engineering staff time to evaluate the event and develop recovery procedures so that the plant can be repaired and brought back to service. Priority should be given, however, to ensure that equipment needed for accident mitigation remains operable.

5.11 IPEOP ES-3.3: POST-SGTR COOLDOWN USING STEAM DUMP

5.11.1 Evaluate Long-Term Plant Status:

a. The equipment needed to function following an event has been designed so that operation for extremely long periods of time is possible. This allows the Plant Engineering staff time to evaluate the event and develop recovery procedures so that the plant can be repaired and brought back to service. Priority should be given, however, to ensure that equipment needed for accident mitigation remains operable.

5.12 IPEOP ECA-0.0: LOSS OF ALL AC POWER

5.12.1 IF core exit temperatures are greater than 1200°F and increasing, THEN go to SACRG-1, Severe Accident Control Room Guideline Initial Response.

a. The Severe Accident Management Guidelines (SAMGs) are entered from the ERGs by Control Room Operators when core damage occurs. The ERG to SAMG transition uses, as part of the transition criteria, a core exit thermocouple temperature indication of greater than 1200°F to indicate the need to transition from the ERGs to the SAMGs. The 1200°F criteria for transition from the ERGs to the SAMGs is identical to the 1200°F criteria on the Core Cooling Critical Safety Function Status Tree.

b. IF the Operator enters this step and core exit TC temperatures are greater than 1200°F and increasing, THEN the Operator should transition to the SAMGs. This condition indicates that all attempts to restore core cooling have failed, core damage cannot be prevented, and the Operator should go to the SAMGs.

5.13 IPEOP ECA-1.1: LOSS OF EMERGENCY COOLANT RECIRCULATION

5.13.1 Consult with Emergency Director to determine if RHR System should be placed in service.

a. The RHR System is designed to operate below specific RCS pressure and temperature conditions. IF previous actions to establish conditions were not complete, THEN this step directs the Operator to continue with the procedure for completion of the actions. At this time, the plant staff should determine RHR System availability. RHR System availability includes confirmation of equipment needed for RHR System operation (RHR suction valves, RHR pumps, etc.) and confirmation of adequate liquid inventory in the RCS to preclude steam from entering the RHR pump suction.

5.13.2 Consult with Emergency Director for Additional Recovery Actions:

a. This step instructs the operator to notify the Emergency Director when the hydrogen concentration inside containment is greater than 6% in dry air. The possible actions to be taken with high hydrogen concentrations in containment are dependent on the containment conditions, the event progression, and off-site conditions.

b. Evaluate actions to be taken for high containment hydrogen concentration using SAG-7.

5.13.3 Consult with Emergency Director:

a. This procedure provides generic instructions for cooldown and depressurization of the plant to atmospheric conditions following a loss of emergency coolant recirculation. After the steps have been completed and cold shutdown conditions have been maintained, the Plant Engineering staff has time to evaluate the event and develop recovery procedures so that the Plant can be repaired and brought back to service.

5.14 IPEOP ECA-2.1: UNCONTROLLED DEPRESSURIZATION OF BOTH SGs

5.14.1 Evaluate Long-Term Plant Status:

a. The equipment needed to function following an event has been designed so that operation for extremely long periods of time is possible. This allows the Plant Engineering staff time to evaluate the event and develop recovery procedures so that the plant can be repaired and brought back to service. Priority should be given, however, to ensure that equipment needed for accident mitigation remains operable.

5.15 IPEOP ECA-3.1: SGTR WITH LOSS OF REACTOR COOLANT - SUBCOOLED RECOVERY DESIRED

5.15.1 Consult with Emergency Director:

a. This step instructs the Operator to consult with the Emergency Director when ruptured SG narrow range level exceeds 92%. An inability to prevent SG overfill may result from a rupture large enough to require the use of ECA-3.2, "SGTR with Loss of Reactor Coolant - Saturated Recovery Desired."

5.16 IPEOP ECA-3.1: SGTR WITH LOSS OF REACTOR COOLANT - SUBCOOLED RECOVERY DESIRED

5.16.1 Check if RHR System Should Be Placed in Service:

a. The RHR System is designed to operate below specific RCS pressure and temperature conditions (RCS hot leg temperature less than 400°F and RCS pressure less than 425 psig). When such conditions are established, the RHR System should be placed in service to complete the cooldown to cold shutdown and provide long-term cooling.

5.16.2 Consider These Three Important Factors:

a. The RWST (or alternate) source of injection (makeup) water must be available for operating high-head SI, charging pumps, and RHR in split-train operation.

b. Confirmation of system availability including all pumps, valves, and adequate inventory in the RCS to preclude steam from entering the RHR pump suction must take place before RHR operation can begin.

c. Auxiliary building radiation levels should be evaluated. Placing RHR in service in the normal lineup will cause potentially highly radioactive fluid to be transported through lines that did not have radioactive fluid in them prior to the event. Care should be taken to minimize the spread of radioactive fluid through the CVCS System if possible. Additionally, during some design basis accidents, some valves and equipment (such as RHR-10A and RHR-10B) are projected to be in radiation fields of 1,000 R/hr or more due to "shine" from the containment building.

5.17 IPEOP ECA-3.1: SGTR WITH LOSS OF REACTOR COOLANT - SUBCOOLED RECOVERY DESIRED

5.17.1 Consult with Emergency Director for Additional Recovery Actions:

a. This step instructs the operator to notify the Emergency Director when the hydrogen concentration inside containment is greater than 6% in dry air. The possible actions to be taken with high hydrogen concentrations in containment are dependent on the containment conditions, the event progression, and off-site conditions.

b. Evaluate actions to be taken for high containment hydrogen concentration using SAG-7.

5.18 IPEOP ECA-3.1: SGTR WITH LOSS OF REACTOR COOLANT - SUBCOOLED RECOVERY DESIRED

5.18.1 Evaluate Long-Term Plant Status:

a. After reaching and maintaining cold shutdown conditions, the plant is effectively stable for the long term. This allows the Plant Engineering staff time to evaluate the event and develop recovery procedures so that the plant can be repaired and brought back to service. Priority should be given, however, to ensure that equipment needed for accident mitigation remains operable.

5.19 IPEOP ECA-3.2: SGTR WITH LOSS OF REACTOR COOLANT - SATURATED RECOVERY DESIRED

5.19.1 Check if RHR System Should Be Placed in Service:

a. The RHR System is designed to operate below specific RCS pressure and temperature conditions (RCS hot leg temperature less than 400°F and RCS pressure less than 425 psig). When such conditions are established, the RHR System should be placed in service to complete the cooldown to cold shutdown and provide long-term cooling.

5.19.2 Consider These Three Important Factors:

a. The RWST (or alternate) source of injection (make-up) water must be available or operating high-head SI, charging pumps, and RHR in split-train operation.

b. Confirmation of system availability including all pumps, valves, and adequate inventory in the RCS to preclude steam from entering the RHR pump suction must take place before RHR operation can begin.

c. Auxiliary building radiation levels should be evaluated. Placing RHR in service in the normal lineup will cause potentially highly radioactive fluid to be transported through lines that did not have radioactive fluid in them prior to the event. Care should be taken to minimize the spread of radioactive fluid through the CVCS System if possible. Additionally, during some design basis accidents, some valves and equipment (such as RHR-10A and RHR-10B) are projected to be in radiation fields of 1,000 R/hour or more due to "shine" from the containment building.

5.20 IPEOP ECA-3.2: SGTR WITH LOSS OF REACTOR COOLANT - SATURATED RECOVERY DESIRED

5.20.1 Consult with Emergency Director for Additional Recovery Actions:

a. This step instructs the operator to notify the Emergency Director when the hydrogen concentration inside containment is greater than 6% in dry air. The possible actions to be taken with high hydrogen concentrations in containment are dependent on the containment conditions, the event progression, and off-site conditions.

b. Evaluate actions to be taken for high containment hydrogen concentration using SAG-7.

5.21 IPEOP ECA-3.2: SGTR WITH LOSS OF REACTOR COOLANT - SATURATED RECOVERY DESIRED

5.21.1 Evaluate Long-Term Plant Status:

a. After reaching and maintaining cold shutdown conditions, the plant is effectively stable for the long term. This allows the Plant Engineering staff time to evaluate the event and develop recovery procedures so that the plant can be repaired and brought back to service. Priority should be given, however, to ensure that equipment needed for accident mitigation remains operable.

5.22 IPEOP ECA-3.3: SGTR WITHOUT PRESSURIZER PRESSURE CONTROL

5.22.1 Evaluate Long-Term Plant Status:

a. After reaching and maintaining cold shutdown conditions, the plant is effectively stable for the long term. This allows the Plant Engineering staff time to evaluate the event and develop recovery procedures so that the plant can be repaired and brought back to service. Priority should be given, however, to ensure that equipment needed for accident mitigation remains operable.

5.23 IPEOP FR-S.1: RESPONSE TO NUCLEAR POWER GENERATION/ATWS

5.23.1 IF core exit temperatures are greater than 1200°F and increasing, THEN go to SACRG-1, Severe Accident Control Room Guideline Initial Response.

a. The Severe Accident Management Guidelines (SAMGs) are entered from the ERGs by Control Room Operators when core damage occurs. The ERG to SAMG transition uses, as part of the transition criteria, a core exit thermocouple temperature indication of greater than 1200°F to indicate the need to transition from the ERGs to the SAMGs. The 1200°F criteria for transition from the ERGs to the SAMGs is identical to the 1200°F criteria on the Core Cooling Critical Safety Function Status Tree.

b. IF the Operator enters this step and core exit TC temperatures are greater than 1200°F and increasing, THEN the Operator should transition to the SAMGs. This condition indicates that all attempts to restore core cooling have failed, core damage cannot be prevented, and the Operator should go to the SAMGs.

5.24 IPEOP FR-C.1: RESPONSE TO INADEQUATE CORE COOLING

5.24.1 IF core exit TC temperatures increasing AND RXCPs running in all available RCS cooling loops, THEN go to SACRG-1, Severe Accident Control Room Guideline Initial Response.

a. The Severe Accident Management Guidelines (SAMGs) are entered from the ERGs by Control Room Operators when core damage occurs. The ERG to SAMG transition uses, as part of the transition criteria, a core exit thermocouple temperature indication of greater than 1200°F to indicate the need to transition from the ERGs to the SAMGs. The 1200°F criteria for transition from the ERGs to the SAMGs is identical to the 1200°F criteria on the Core Cooling Critical Safety Function Status Tree.

b. IF the Operator enters this step and core exit TC temperatures are greater than 1200°F and increasing and all available RXCPs are running, THEN the Operator should transition to the SAMGs. This condition indicates that all attempts to restore core cooling have failed, core damage cannot be prevented, and the Operator should go to the SAMGs.

5.24.2 Consult with Emergency Director for Additional Recovery Actions:

a. This step instructs the operator to notify the Emergency Director when the hydrogen concentration inside containment is greater than 6% in dry air. The possible actions to be taken with high hydrogen concentrations in containment are dependent on the containment conditions, the event progression, and off-site conditions.

b. Evaluate actions to be taken for high containment hydrogen concentration using SAG-7.

5.25 IPEOP FR-Z.2: RESPONSE TO CONTAINMENT FLOODING

5.25.1 Notify Emergency Director of Sump Level and Activity Level to Obtain Recommended Action:

a. The ED should request evaluation of the cause of the event and provide specific recommendations to the Operators for reducing containment water level.

5.25.2 Consider the Following Three Methods to Reduce Flooding:

a. Location of critical plant components in relation to containment sump water level.

b. Location, size, and shielding of available storage tanks outside containment.

c. Radiation concerns due to pump and line routing from the containment sump to the various storage tanks.

5.26 IPEOP FR-Z.3: RESPONSE TO HIGH CONTAINMENT RADIATION LEVEL

5.26.1 Notify Emergency Director of Containment Radiation Level to Obtain Recommended Action:

a. After containment vent isolation has been verified, check the pressurizer water level, charging flow, and operation of the containment sump pumps to determine if a reactor coolant leak is occurring. IF there is a lack of evidence of a reactor coolant leak, THEN verify the alarm condition by selecting the fast advance on the air particulate and sample fresh air for about 15 seconds to confirm that the detector function is normal. IF it is normal, THEN notify the RPD.

b. An additional area to be looked at is the possibility of fuel damage. By checking the thermocouple readings, hydrogen generation level, and RCS activity levels, it can be determined whether or not damage to the fuel has occurred.

5.27 IPEOP FR-I.3: RESPONSE TO VOIDS IN REACTOR VESSEL

5.27.1 Obtain Maximum Allowable Venting Time from Technical Support Center Director (Per EPIP-TSC-07):

a. Calculation of the maximum allowable venting time is based on maintaining containment hydrogen concentration below 3% in dry air. The lower the initial hydrogen concentration, the longer the venting can continue. Procedure EPIP-TSC-07 describes the method of determining RCS venting time.

6.0 Final Conditions

6.1 This procedure may be terminated when the emergency has been closed out or recovery operations have been entered, the plant is stable, and Operations has determined that technical support of IPEOPs is no longer required.

7.0 References

7.1 Kewaunee Nuclear Power Plant Integrated Plant Emergency Operating Procedures

7.2 Westinghouse Owners Group Emergency Response Guidelines

7.3 SAG-7

8.0 Records

8.1 The following QA records and non-QA records are identified in this directive/procedure and are listed on the KNPP Records Retention Schedule. These records shall be maintained according to the KNPP Records Management Program.

8.1.1 QA Records

None

8.1.2 Non-QA Records

None

EMERGENCY PHYSICAL CHANGE REQUEST

NO. _____

1.0 DESCRIPTION OF CHANGE _____

_____

_____

2.0 REFERENCE DRAWINGS _____

3.0 REASON FOR CHANGE _____

4.0 SPECIAL PRECAUTIONS _____

5.0 ESTIMATED DURATION OF EMERGENCY PHYSICAL CHANGE _____

Requested By (Originator) _____ Date _____

6.0 REVIEWED BY (TSCD) _____ Date _____

Approved by (Emergency Director) _____ Date _____

7.0 INITIAL DISTRIBUTION: Orig. (EOD), Copy 1 (SAD), Copy 2 (TSCD), Copy 3 (Plt File)

TAGOUT NO. _____

8.0 INSTALLATION

Install. allowed by (Shift Mgr.) _____ Date _____

Installed by _____ Date _____

Ind. Verification _____ Date _____

9.0 REMOVAL

Removal allowed by (Shift Mgr.) _____ Date _____

Removed by _____ Date _____

Ind. Verification _____ Date _____

10.0 NOTIFY EMERGENCY DIRECTOR OF REMOVAL _____

(Shift Mgr./Date)

11.0 REVIEW

Assistant Manager - Operations _____ Date _____

12.0 FINAL DISTRIBUTION:

Original (QA File)
Copy 1 (Manager - Operations)
Copy 2 (Training Manager - Operations)
Copy 3 (Training Manager - Technical)
Copy 4 (Manager - Nuclear Oversight)
Copy 5 (Assistant Manager - Operations)
Copy 6 (Manager - Engineering Systems)