NRC-01-074

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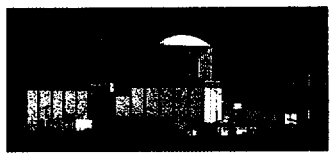
Kewaunee Nuclear Power Plant
N490, State Highway 42
Kewaunee, WI 54216-9511
920-388-2560

Operated by
Nuclear Management Company, LLC



June 20, 2001

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,

for

Thomas J. Webb
Site Licensing Director

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, w/attach.

A045

KEWAUNEE NUCLEAR POWER PLANT

June 19, 2001

EMERGENCY PLAN IMPLEMENTING PROCEDURES TRANSMITTAL FORM

RETURN TO DIANE FENCL - KNPP

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 w/NRC Letter (15)*
Bob Hayden - Wisconsin Electric Power Co. (10)*
Craig Weiss - Wisconsin Power & Light (11)*
Jim Holthaus - Nuclear Management Company (12)*

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K. Hoops (28)

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L. Duggan - Fuel Services (65)
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C. Sternitzky - ATF-2 (44)
D. Braun - ATF-3 (45)
P. Ehlen - I&C Office (42)
M. Daron - Security Building (46)
P&FS Adm - GB D2-3 (EOF) (81)
H. Kocourek - OSF (52)
C. Hutter - ATF-1 (64)
LOREB - STF (62, 66, 67, 68, 70, 72, 73, 74)
STF Library (43)
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WORKING COPIES (101-199) These copies of procedures are kept in the areas designated for use in response to an emergency. These are not complete sets, but contain only those procedures that are used to implement activities in the location where they are kept. Please dispose of any sections distributed that are not tabbed in the indicated copy.

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)
N. Deda - SBF/SEC (114)
M. Anderson - CR/Communicator (116)(Partial Distribution)
Simulator/Communicator (117)
J. Fletcher - Security (121)
N. Deda - Security Building (120)
S. VanderBloomen (125)
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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
June 19, 2001

Please follow the directions listed below. If you have any questions regarding changes made to the EPIPs, please contact Dave Seebart at ext. 8719. If you are a controlled copy holder (see cover page), return this page to Diane Fencl by July 19, 2001, SIGNED AND DATED to serve as a record of revision.

EPIP Index, dated 06-19-2001.

REMOVE		INSERT	
PROCEDURE	REV.	PROCEDURE	REV.
EPIP-AD-02	Z	EPIP-AD-02	AA

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

Diane Fencl

Enclosure

EMERGENCY PLAN IMPLEMENTING PROCEDURES

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EPIP-AD-03	KNPP Response to an Unusual Event	AB	03-20-2001
EPIP-AD-04	KNPP Response to Alert or Higher	AC	03-20-2001
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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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TSC 8A.4	Steam Release Data/Calculation Sheet (STMRLS Program)	C	04-16-96
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TSC 9A.2	Core Damage Based on Radiation Monitors	C	02-14-95
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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-02	Rev. AA
	Title Emergency Class Determination	
	Date JUN 1 9 2001	Page 1 of 20
Reviewed By	Approved By	

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 determining proper emergency classification listed in order to activate the appropriate level of response from the Kewaunee Nuclear Power Plant emergency response organization and off-site response organization.

2.0 General Notes

2.1 None

3.0 Precautions and Limitations

3.1 Plant monitors used to determine whether emergency classification levels are being exceeded should be checked for accuracy prior to declaring an emergency class (e.g., compare against redundant channels, determine if consistent with system status, or verification by sample analysis when required by Chart A(1).

4.0 Initial Conditions

4.1 This procedure applies during any plant evolution that may result in an emergency declaration.

5.0 Procedure

5.1 Determine if a plant emergency exists during abnormal plant conditions by referring to Chart 1, Emergency Action Level Charts.

5.2 IF a plant emergency exists, THEN perform the required actions of the appropriate emergency procedure listed below:

5.2.1 EPIP-AD-03, KNPP Response to an Unusual Event

5.2.2 EPIP-AD-04, KNPP Response to Alert or Higher

5.3 As plant conditions change, continue referring to the Emergency Action Level Charts.

5.4 Determine if the emergency should be reclassified.

5.5 IF the event is reclassified, THEN return to step 5.2.

5.6 IF Final Conditions (Section 6.0) are not met, THEN return to step 5.3.

5.7 IF Final Conditions (Section 6.0) are met, THEN use of this procedure may be suspended.

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 Kewaunee Nuclear Power Plant Emergency Plan

7.2 EPIP-AD-01, Personnel Response to the Plant Emergency Siren

7.3 EPIP-AD-03, KNPP Response to an Unusual Event

7.4 EPIP-AD-04, KNPP Response to Alert or Higher

7.5 COMTRAK 89-001, NRC Inspection Report 88-11, Improve Guidance for Fires Chart G

7.6 OEA 87-246, Report OE 2265, Improve Description of Unusual Aircraft Activity Chart P

7.7 NRC Letter 07-11-94, Branch Position on Acceptable Deviations to NUREG-0654

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 ACTION LEVEL CHARTS

The following charts are separated into different abnormal operating conditions which may, depending upon their severity, be classified as an Unusual Event, Alert, Site Emergency, or General Emergency.

	CHART	PAGE
Abnormal Radiological Effluent	A (1)	4
Gaseous Effluent Action Levels	A (2)	5 – 7
Fuel Damage Indication	B	8
Primary Leak to LOCA	C	9
Primary to Secondary Leak	D	10
Loss of Power	E	11
Engineered Safety Feature Anomaly	F	12
Loss of Indication	G	13
DELETED	H	13
Secondary Side Anomaly	I	14
Miscellaneous Abnormal Plant Conditions	J	15
Fire and Fire Protection	K	16
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High Winds or Tornado	N	17
Flood, Low Water, or Seiche	O	18
External Events and Chemical Spills	P	19
Security Contingency	Q	20

CHART A(1)
ABNORMAL RADIOLOGICAL EFFLUENT

KNPP INDICATION	EMERGENCY CLASSIFICATION CRITERIA	CLASSIFICATION
SEE CHART A(2)	Effluent monitors detect levels corresponding to greater than 1 rem/hr whole body or 5 rem/hr thyroid at the site boundary under "actual meteorological" conditions.	GENERAL EMERGENCY
Projected or measured dose rates to be provided by the Radiological Protection Director or Environmental Monitoring Teams.	Projected or measured in the environs dose rates greater than 1 rem/hr whole body or 5 rem/hr thyroid at the site boundary.	GENERAL EMERGENCY
SEE CHART A(2)	Effluent monitors detect levels corresponding to greater than 50 mr/hr for ½ hour OR greater than 500 mr/hr for two minutes (or five times these levels to the thyroid) OR for "adverse meteorology."	SITE EMERGENCY
Projected or measured dose rates to be provided by the Radiological Protection Director or Environmental Monitoring Teams.	At the site boundary, projected or measured dose rates greater than 50 mr/hr for ½ hours OR greater than 500 mr/hr for two minutes (or five times these levels to the thyroid) or EPA PAGs are projected to be exceeded outside the site boundary.	SITE EMERGENCY
SEE CHART A(2)	Radiological effluents greater than 10 times ODCM instantaneous limits.	ALERT
a. Containment R-2 OR R-7 ≥ 1.0E+4 mr/hr, OR b. Charging Area R-4 ≥ 1.0E+4 mr/hr, OR c. SFP Area R-5 ≥ 1.0E+4 mr/hr, OR d. Plant area air sample indicates airborne contamination > 1000 times the occupational DAC values.	Radiation levels or airborne contamination which indicate a severe degradation in the control of radioactive materials (e.g., radiation levels suddenly increase by a factor of 1000).	ALERT
(1) Gaseous Releases: See Chart A(2) (2) Liquid Releases: Notification by the Rad-Chem Group of violating ODCM 3.3.1 limits.	Off site Dose Calculation Manual limits exceeded.	UNUSUAL EVENT

CHART A(2)
GASEOUS EFFLUENT ACTION LEVELS

1. AUX BUILDING VENT RELEASES - *WITH SIGNIFICANT CORE DAMAGE*

Instrument readings assuming a post accident gas release AND Containment High Range Radiation Monitors 42599 (R-40) and 42600 (R-41) reads 1000 R/hr within one-half hour of the accident.

NOTE: Use adverse meteorology conditions (ADV MET) only when, 10m and 60m wind speed < 5mph AND Delta-T > 2.4 degrees F. All other cases are average meteorology (AVG MET).

NOTE: R-13 and R-14 are expected to be off scale high during all events on this page.

SV & SFP FANS	AUX BLDG SPING MONITORS				AUX BLDG STACK MONITORS				EMERG. CLASS.
	MID RANGE CPM (01-07) PPCS PT G9086G		HIGH RANGE CPM (01-09) PPCS PT G9088G		R-35 MR/HR		R-36 R/HR		
TOTAL NUMBER RUNNING	AVG MET	ADV MET	AVG MET	ADV MET	AVG MET	ADV MET	AVG MET	ADV MET	
1	**	1.1E+4	6.5E+1	*	**	7.9E+2	1.27E+2	7.9E-1	GENERAL EMERG.
2	8.8E+5	5.5E+3	3.25E+1	*	**	3.9E+2	6.35E+1	4.0E-1	
3	5.9E+5	3.7E+3	2.16E+1	*	**	2.6E+2	4.2E+1	2.6E-1	
4	4.4E+5	2.7E+3	1.62E+1	*	**	2.0E+2	3.175E+1	2.0E-1	
1	8.8E+4	5.5E+2	3.0E+0	*	6.3E+3	3.9E+1	6.3E+0	*	SITE EMERG.
2	4.4E+4	2.7E+2	1.5E+0	*	3.1E+3	1.9E+1	3.1E+0	*	
3	2.9E+4	1.8E+2	1.0E+0	*	2.1E+3	1.3E+1	2.1E+0	*	
4	2.2E+4	1.3E+2	*	*	1.5E+3	9.5E+0	1.5E+0	*	
1	1.0E+3	6.2E+0	*	*	7.0E+1	*	*	*	ALERT
2	5.0E+2	3.1E+0	*	*	3.5E+1	*	*	*	
3	3.3E+2	2.0E+0	*	*	2.3E+1	*	*	*	
4	2.5E+2	1.5E+0	*	*	1.75E+1	*	*	*	
1	1.0E+2	6.2E-1	*	*	7.0E+0	*	*	*	UNUSUAL EVENT
2	5.0E+1	3.1E-1	*	*	3.5E+0	*	*	*	
3	3.3E+1	2.0E-1	*	*	2.3E+0	*	*	*	
4	2.5E+1	1.5E-1	*	*	1.7E+0	*	*	*	

* Offscale Low
** Offscale High (Confirmation Only)

CHART A(2)
GASEOUS EFFLUENT ACTION LEVELS continued

2. AUX BUILDING VENT RELEASES *WITHOUT CORE DAMAGE*

NOTE: Use adverse meteorology conditions (ADV MET) only when, 10m and 60m wind speed < 5mph AND Delta-T > 2.4 degrees F. All other cases are average meteorology (AVG MET).

NOTE: R-13 and R-14 are expected to be off scale high during all events on this page.

SV & SFP FANS	AUX BLDG SPING MONITORS				EMERG. CLASS.
TOTAL NUMBER RUNNING	MID RANGE CPM (01-07) PPCS PT G9086G		HIGH RANGE CPM (01-09) PPCS PT G9088G		
	AVG MET	ADV MET	AVG MET	ADV MET	
1	**	9.4E+4	1.6E+4	1.0E+2	GENERAL EMERG.
2	**	4.7E+4	8.0E+3	5.0E+1	
3	**	3.1E+4	5.3E+3	3.3E+1	
4	**	2.3E+4	4.0E+3	2.5+1	
1	7.5E+5	4.6E+3	8.0E+2	5.0E+0	SITE EMERG.
2	3.7E+5	2.3E+3	4.0E+2	2.5E+0	
3	2.5E+5	1.5+3	2.6E+2	1.6E+0	
4	1.8E+5	1.1E+3	2.0E+2	1.2E+0	

SV & SFP FANS TOTAL NUMBER RUNNING	AUX BLDG SPING MONITORS		EMERG. CLASS.
	LOW RANGE Ci/cc (01-05) PPCS PT G9084G	MID RANGE CPM (01-07) PPCS PT 9086G	
1	**	8.6E+3	ALERT
2	**	4.3E+3	
3	**	2.8E+3	
4	**	2.1E+3	
1	6.3E-2	8.6E+2	UNUSUAL EVENT
2	3.1E-2	4.3E+2	
3	2.1E-2	2.8E+2	
4	1.5E-2	2.1E+2	

** Offscale High (Confirmation Only)

CHART A(2)
GASEOUS EFFLUENT ACTION LEVELS continued

3. **STEAM LINE RELEASE *WITH SIGNIFICANT CORE DAMAGE***

Instrument readings assuming radioactive steam is releasing at a total of 1.4E+5 pounds per hour to the atmosphere AND Containment High Range Radiation Monitor 42599 (R-40) or 42600 (R-41) reads 1000 R/hr within one-half hour of the accident.

	"A" Steam Line Monitors		"B" Steam Line Monitors		Emergency Classification
R-15 (cpm)	R-31 (mR/hr)	R-32 (R/hr)	R-33 (mR/hr)	R-34 (R/hr)	
**	1.3E+3	E+0	1.3E+03	E+0	General Emergency
**	6.0E+1	--	6.0E+1	--	Site Emergency
**	1.5E-1	--	1.5E-1	--	Alert
2.0E+05	--	--	--	--	Unusual Event

** Offscale High (Confirmation Only)

4. **SHIELD BUILDING STACK RELEASE**

Instrument readings assuming SBV System is operating in the recirculation mode.

Reactor Bldg. Discharge Vent SPING		Emergency Classification
PPCS PT G9077G (02-07) Mid Range (cpm)	PPCS PT G9079G (02-09) High Range (cpm)	
1.3E+05	1.5E+2	General Emergency
6.7E+03	7.0E+0	Site Emergency
1.5E+1	--	Alert
--	--	Unusual Event

CHART B
FUEL DAMAGE INDICATION

KNPP INDICATION	EMERGENCY CLASSIFICATION CRITERIA	CLASSIFICATION
SACRG-1, Severe Accident Control Room Guideline Initial Response has been implemented.	Plant conditions exist that make the release of large amounts of radioactivity in a short time period possible.	GENERAL EMERGENCY
(Applies when more than one spent fuel element is damaged.) (1) Fuel Handling accident in Containment Report of a large object dropped in Rx core OR dropped spent fuel assembly, AND Alarm on R-11 OR R-12 (2) Fuel Handling Accident in Auxiliary Bldg. Report of: a. A large object dropped in spent fuel pool, OR b. A dropped spent fuel assembly, OR c. A loss of water level below spent fuel, AND Alarm on R-13 or R-14.	Major damage to spent fuel in containment or auxiliary building.	SITE EMERGENCY
R-9 indication is offscale high, AND Laboratory analysis confirms RCS activity levels comparable to USAR Appendix D, Table D.4-1.	Severe loss of fuel cladding a. Very high coolant activity sample b. Failed fuel monitor indicates greater than 1% fuel failures within 30 minutes or 5% total fuel failures.	ALERT
(1) Fuel Handling Accident in Containment A confirming report, AND Alarm on R-11 OR R-12 (2) Fuel Handling Accident in Auxiliary Bldg. A confirming report, AND Alarm on R-13 OR R-14.	Fuel damage accident with release of radioactivity to containment or auxiliary building.	ALERT
With RCS Temperature > 500°F, a. > 0.2 µCi/gram DOSE Equivalent I-131 for 48 hours, OR b. Exceeding T.S. figure 3.1-3 for Dose Equivalent I-131, OR c. > $91/\bar{E}$ µCi/cc As determined by SP-37-065 (from T.S. 3.1.c)	High reactor coolant activity sample.	UNUSUAL EVENT
R-9 is greater than 5.0 R/hr, AND Verified by RCS chemistry sample analysis.	Failed fuel monitor indicates greater than 0.1% equivalent fuel failures within 30 minutes.	UNUSUAL EVENT

CHART C
PRIMARY LEAK TO LOCA

NOTE: This chart does not apply when leakage from the Reactor Coolant System is caused by a Steam Generator tube rupture.

KNPP INDICATION	EMERGENCY CLASSIFICATION CRITERIA	CLASSIFICATION
(1) LOCA is verified per IPEOP E-1, "Loss of Reactor or Secondary Coolant," AND (2) ECCS failure is indicated by: a. SI and RHR pumps not running, OR b. Verification of no flow to the reactor vessel, OR c. Core exit thermocouples indicate greater than 1200°F, AND (3) Failure or potential failure of containment is indicated by: a. Physical evidence of containment structure damage, OR b. Loss of all containment fan coil units and both trains of ICS, OR c. Containment hydrogen monitor indicates ≥ 10% hydrogen concentration, OR d. Containment pressure exceeds 46 psig.	(1) Loss of coolant accident, AND (2) Initial or subsequent failure of ECCS, AND (3) Containment failure or potential failure exists (loss of 2 of 3 fission product barriers with a potential loss of 3rd barrier).	GENERAL EMERGENCY
SI System is activated and RCS leakage exceeds charging system capacity as verified by Control Room indications or IPEOPs.	Reactor Coolant System leakage greater than make-up pump capacity.	SITE EMERGENCY
Charging flow verses letdown flow indicates an unisolable RCS leak > 50 gpm.	Reactor Coolant System leak rate greater than 50 GPM.	ALERT
Initiation of reactor shutdown required by Technical Specification, Section T.S. 3.1.d. Indicated leakage may be determined using Reactor Coolant System mass balance calculations performed by SP-36-082.	Exceeding Reactor Coolant System leak rate, Technical Specifications, requiring reactor shutdown.	UNUSUAL EVENT

CHART D
PRIMARY TO SECONDARY LEAK

KNPP INDICATION	EMERGENCY CLASSIFICATION CRITERIA	CLASSIFICATION
(1) Entry into IPEOP E-3, "Steam Generator Tube Rupture," is expected or has occurred, AND (2) Primary-to-secondary flow > 800 GPM OR RCS pressure decreasing uncontrollably, AND (3) All three transformers Main Aux., Reserve Aux., and Tertiary Aux., are de-energized.	Rapid failure of steam generator tubes with loss of off-site power.	SITE EMERGENCY
(1) Entry into IPEOP E-3, "Steam Generator Tube Rupture," is expected or has occurred, AND (2) Primary-to-secondary leak rate > 400 GPM, AND (3) All three transformers: Main Aux., Reserve Aux., and Tertiary Aux., are de-energized.	Rapid gross failure of one steam generator tube with loss of off-site power.	ALERT
(1) Entry into IPEOP E-3, "Steam Generator Tube Rupture," is expected or has occurred, AND (2) Primary-to-secondary leak rate greater than 800 GPM indicated by SI flow **OR** RWST level change.	Rapid failure of multiple steam generator tubes.	ALERT
Primary-to-secondary leakage > 150 gallons per day for more than 4 hours (TS 3.1.d.2). **Do not delay declaration** if leakage suddenly increases above 150 gallons per day **AND** plant shutdown actions are initiated.	Exceeding Primary-to-Secondary leak rate Technical Specification.	UNUSUAL EVENT

CHART E
LOSS OF POWER

KNPP INDICATION	EMERGENCY CLASSIFICATION CRITERIA	CLASSIFICATION
(1) RCS is ≥ 350°F, AND (2) Buses 1 through 6 are de-energized including the D/G supplies to buses 5 and 6, AND (3) Loss of the turbine driven AFW pump, AND (4) Conditions exist for greater than 2 hours.	Failure of off-site and on-site AC power, AND Total loss of auxiliary feedwater makeup capability for greater than 2 hours. (Loss of power plus loss of all AFW would lead to clad failure and potential containment failure.)	GENERAL EMERGENCY
Buses 1 through 6 are de-energized including the D/G supplies to buses 5 and 6 for longer than 15 minutes. (Does not apply when core is unloaded or cavity is flooded with internals removed.)	Loss of off-site power, AND Loss of on-site AC power (for more than 15 minutes).	SITE EMERGENCY
Low voltage lockout OR de-energized condition on all safeguards DC distribution cabinets for greater than 15 minutes. a. BRA 102 and BRB 102, OR b. BRA 104 and BRB 104, OR c. BRA 102 and BRB 104, OR d. BRB 102 and BRA 104 (Does not apply when core is unloaded or cavity is flooded with internals removed.)	Loss of all vital on-site DC power (for more than 15 minutes).	SITE EMERGENCY
Low voltage lockout OR de-energized condition on all safeguards DC distribution cabinets for less than 15 minutes. a. BRA 102 and BRB 102, OR b. BRA 104 and BRB 104, OR c. BRA 102 and BRB 104, OR d. BRB 102 and BRA 104 (Does not apply when core is unloaded or cavity is flooded with internals removed.)	Loss of all vital on-site DC power (for less than 15 minutes).	ALERT
Buses 1 through 6 are de-energized, AND the D/G supplies to buses 5 and 6 do not respond as designed. AC power is restored to bus 5 or 6 within 15 minutes. (Does not apply when core is unloaded or cavity is flooded with internals removed.)	Loss of off-site power, AND Loss of on-site AC power (for less than 15 minutes.)	ALERT
With the Reactor Coolant System above cold shutdown condition: a. All three transformers: Main Aux., Reserve Aux., and Tertiary are de-energized, OR b. Both D/Gs unavailable (unable to supply bus 5 or 6 by any means).	Loss of off-site power, OR Loss of on-site power capability.	UNUSUAL EVENT
Core is unloaded or reactor cavity is flooded with internals removed, AND Buses 1 through 6 are de-energized including the D/G supplies to buses 5 and 6 for longer than 15 minutes.	Loss of off-site power, AND Loss of on-site AC power (for more than 15 minutes).	UNUSUAL EVENT

CHART F
ENGINEERED SAFETY FEATURE ANOMALY

KNPP INDICATION	EMERGENCY CLASSIFICATION CRITERIA	CLASSIFICATION
RCS > 200°F with a loss of cooling capability or inventory control: a. Loss of negative reactivity control, OR b. Steam dump, S/G safeties, and power operating reliefs not operable (> 350°F), OR c. Inability to feed S/Gs (No AFW or Main Feedwater/Condensate Flow), OR d. Loss of RCS inventory control. e. (1) Loss of both trains of RHR, AND (2) The inability to sustain either natural **OR** forced circulation with the steam generators (≤ 350°F). A Site Emergency should be declared upon the initiation of bleed and feed per FR H.1, "Response to Loss of Secondary Heat Sink"	Complete loss of any function needed when RCS > 200°F.	SITE EMERGENCY
(Apply this criteria when the RCS is ≤ 200°F.) (1) Loss of both trains of RHR (Does not apply when core is unloaded **OR** cavity is flooded with internals removed.)	Complete loss of any function needed when RCS ≤ 200°F.	ALERT
Failure of both Rx trip breakers to open upon receipt of a valid signal. Applies even if IPEOP FR S.1 is not entered.	Failure of the Reactor Protection System to initiate and complete a reactor trip which brings the reactor subcritical.	ALERT
(1) Loss of ESF function, required support function or required Tech Spec instruments **OR** Exceeding Tech Spec Safety Limits, AND (2) upon discovery, inability or failure to take required shutdown or mode change actions within the required time. NOTE: Total loss of AFW system when required (FR-H.1 implemented) should be declared a UE regardless of Tech Spec action compliance.	Inability to reach required shutdown within Tech Spec limits	UNUSUAL EVENT

CHART G
LOSS OF INDICATION

KNPP INDICATION	EMERGENCY CLASSIFICATION CRITERIA	CLASSIFICATION
(1) Total loss of Annunciator System computer alarms, and sequence of events recorder for greater than 15 minutes, AND (2) Uncontrolled plant transient in progress or initiated during the loss.	Most or all alarms (annunciators) lost and a plant transient initiated or in progress.	SITE EMERGENCY
Total loss of Annunciator System, computer alarms, and sequence of events recorder. (Not applicable when plant is at or below cold shutdown.)	Most or all alarms (annunciators) lost.	ALERT
Significant loss of ESF or Rx Protection instrumentation. An Unusual Event should NOT be declared for a non-emergency Tech Spec backdown, when the affected parameter remains monitorable. (Not applicable when plant is at or below cold shutdown.)	Indications or alarms on process or effluent parameters not functional in control room to an extent requiring plant shutdown or other significant loss of assessment capability.	UNUSUAL EVENT

CHART H

(DELETED)

CHART I
SECONDARY SIDE ANOMALY

KNPP INDICATION	EMERGENCY CLASSIFICATION CRITERIA	CLASSIFICATION
(1) Main steam line break that results in a SI actuation, AND (2) a. R-15 or R-19 reads offscale high with confirmation by chemistry analysis, OR b. Primary-to-secondary leakage > 50 gpm, AND (3) a. R-9 or CNTMT high range rad monitors (42599, 42600) indicate > 10 R/hr, OR b. CNTMT hydrogen monitor indicates > 1% hydrogen concentration.	Steam line break, AND Primary-to-secondary leak > 50 GPM, AND Indication of Fuel Damage.	SITE EMERGENCY
Main steam line break that results in a SI actuation, AND a. R-15 OR R-19 reads a factor of 1000 above normal, OR b. Primary-to-secondary leakage > 10 gpm.	Steam line break with significant (greater than 10 GPM) primary-to-secondary leakage. (Applies even if events occur in opposite steam generators.)	ALERT
Turbine trip and observation of penetration of casing.	Turbine rotating component failure causing rapid plant shutdown.	UNUSUAL EVENT
The uncontrolled depressurization of the secondary system that results in an SI actuation.	Rapid depressurization of the secondary side.	UNUSUAL EVENT

CHART J
MISCELLANEOUS ABNORMAL PLANT CONDITIONS

KNPP INDICATION	EMERGENCY CLASSIFICATION CRITERIA	CLASSIFICATION
(1) Containment boundary failure or potential failure: a. Containment pressure > 46 psig, OR b. Loss of all containment fan coil units and both trains of ICS, OR c. Containment hydrogen monitor ≥ 10% hydrogen concentration, AND (2) Loss of core cooling capability: a. Loss of SI and RHR flow, AND (3) Failure of shutdown system when required: a. Entry into IPEOP FR-S.1, "Response to Nuclear Power Generation/ATWS," OR b. Loss of AFW for greater than 30 minutes with loss of main FW and condensate.	Other plant conditions that make a release of large amounts of radioactivity in a short time period possible; e.g., any core melt situation. Examples: - Failure of main FW and AFW systems for greater than 30 minutes without Safety Injection and Residual Heat Removal flow. Plus a containment failure is imminent. - Transient requiring the operation of shutdown systems with a failure of these shutdown systems. In addition, failure of SI and RHR and containment failure is imminent.	GENERAL EMERGENCY
Evacuation of Control Room (E-O-06 event).	Evacuation of control room and control of shutdown systems required from local stations.	SITE EMERGENCY
Conditions that warrant increased awareness on part of the plant staff will be evaluated by the Plant Manager or his designate. This is to determine if conditions are applicable for activating the E.P. Example: Loss of AFW system when required, validated upon implementation of FR H.1 "Response to Loss of Secondary Heat Sink."	Other plant conditions that warrant increased awareness on the part of plant staff or state and/or local authorities.	UNUSUAL EVENT

CHART K
FIRE AND FIRE PROTECTION

KNPP INDICATION	EMERGENCY CLASSIFICATION CRITERIA	CLASSIFICATION
A fire within the Auxiliary Building, Technical Support Center, safeguards alley, D/G rooms, Battery Rooms, or screenhouse that defeats redundant safety trains of ESF equipment causing the required ESF system to be inoperable.	A fire compromising the functions of safety systems.	SITE EMERGENCY
A fire within the Auxiliary Building, Technical Support Center, safeguards alley, D/G rooms, Battery Rooms, or screenhouse that causes a single train of required ESF equipment to be inoperable.	A fire potentially affecting safety systems.	ALERT
A fire within the Administration Building, Technical Support Center, Turbine Building, Warehouse Annex, Auxiliary Building, or Containment Building lasting more than 10 minutes.	A fire within the plant lasting more than 10 minutes.	UNUSUAL EVENT

CHART L

(DELETED)

CHART M
EARTHQUAKE

KNPP INDICATION	EMERGENCY CLASSIFICATION CRITERIA	CLASSIFICATION
(1) Activation of seismic recorder with TRIGGER, OBE, and DBE lights lit in relay room on RR159, AND (2) Verification of a seismic event by physical experience or from U. of W. - Milwaukee Seismic Center.	An earthquake greater than Design Basis Earthquake (DBE).	SITE EMERGENCY
(1) Activation of seismic recorder with TRIGGER, and OBE lights lit in relay room on RR159, AND (2) Verification of a seismic event by physical experience or from U. of W. - Milwaukee Seismic Center.	An earthquake greater than Operational Basis Earthquake (OBE).	ALERT
(1) Activation of seismic recorder with TRIGGER light lit in relay room on RR159, OR (2) An earthquake felt in the Plant*. (*Should be confirmed by evidence of physical damage or verification from University of Wisconsin Seismic Center.)	An earthquake felt in plant or detected on station seismic instrumentation.	UNUSUAL EVENT

NOTE: Telephone numbers for U of W - Milwaukee Seismic Center are in EPIP-APPX-A-03.

CHART N
HIGH WINDS OR TORNADO

KNPP INDICATION	EMERGENCY CLASSIFICATION CRITERIA	CLASSIFICATION
(1) Winds in excess of 100 mph for greater than 1 hour, AND (2) Plant above cold shutdown condition.	Sustained winds in excess of design levels with plant not in cold shutdown.	SITE EMERGENCY
(1) A tornado which strikes the facility, AND (2) Causes damage to render a single train of required ESF equipment to be inoperable.	Any tornado striking facility.	ALERT
A tornado observed on-site causing significant damage to the facility.	Any tornado on-site.	UNUSUAL EVENT

CHART O
FLOOD, LOW WATER, OR SEICHE

<table>
<tr><th colspan="4">KNPP INDICATION</th><th>EMERGENCY CLASSIFICATION CRITERIA</th><th>CLASSIFICATION</th></tr>
<tr><td colspan="4">FOREBAY LEVEL</td><td rowspan="4">Flood, low water, or seiche near design levels.</td><td rowspan="4">ALERT</td></tr>
<tr><td>0 PUMPS</td><td>1 PUMP</td><td>2 PUMPS</td><td>CORRESPOND TO LAKE LEVEL</td></tr>
<tr><td>NOTE 3</td><td>NOTE 1</td><td>≥ 94% *</td><td>≥ 588 ft.</td></tr>
<tr><td>≤ 64% *</td><td>≤ 42% *</td><td>≤ 42% *</td><td>≤ 573 ft.</td></tr>
<tr><td colspan="4">OR Deep water Wave ≥ 22.5 ft.</td><td></td><td></td></tr>
<tr><td colspan="4">FOREBAY LEVEL</td><td rowspan="4">50-year flood, low water, or seiche.</td><td rowspan="4">UNUSUAL EVENT</td></tr>
<tr><td>0 PUMPS</td><td>1 PUMP</td><td>2 PUMPS</td><td>CORRESPOND TO LAKE LEVEL</td></tr>
<tr><td>NOTE 2</td><td>≥ 98% *</td><td>≥ 88% *</td><td>≥ 586 ft.</td></tr>
<tr><td>≤ 71% *</td><td>≤ 63% * NOTE 4</td><td>≤ 54% * NOTE 4</td><td>≤ 575 ft. 4 in.</td></tr>
<tr><td colspan="4">OR Deep water wave ≥18 ft.</td><td></td><td></td></tr>
</table>

NOTE 1: Above the bottom of bar No. 1 painted on the south wall of the forebay.

NOTE 2: Above the bottom of bar No. 2 painted on the south wall of the forebay.

NOTE 3: Above the bottom of bar No. 3 painted on the south wall of the forebay.

NOTE 4: Applies to an uncontrollable decrease (cannot be restored by operator action; e.g., throttling water box valves, etc.).

* Computer point for forebay level is L9075A and should be used because of its greater accuracy.

Plant elevations and lake elevations are referenced to International Great Lakes Datum (IGLD), 1955.

(IGLD 1955 = IGLD 1985 - .7 FEET)

CHART P
EXTERNAL EVENTS AND CHEMICAL SPILLS

KNPP INDICATION	EMERGENCY CLASSIFICATION CRITERIA	CLASSIFICATION
An aircraft crash into plant buildings which causes a complete loss of an ESF function.	Aircraft crash affecting vital structures by impact OR fire.	SITE EMERGENCY
A missile strikes plant buildings **OR** explosion occurs within a plant building, which causes a complete loss of an ESF function.	Severe damage to safe shutdown equipment from missiles or explosion.	SITE EMERGENCY
Release of flammable or toxic gas from a ruptured container, which causes or is likely to cause evacuation of stations necessary to control shutdown systems. Portable monitors indicate toxic or explosive concentrations of the gas at life threatening levels in those vital areas.	Uncontrolled release of toxic or flammable gas is confirmed within vital area.	SITE EMERGENCY
An aircraft crashes into plant buildings **AND** causes a single train of required ESF equipment to be inoperable.	Aircraft crash on facility.	ALERT
A missile strikes the facility **AND** causes a single train of required ESF equipment to be inoperable.	Missile impact from whatever source on facility.	ALERT
Release of toxic or flammable gas at life threatening levels from a ruptured container enter the protected area **AND** impacts safe operation of the plant.	Uncontrolled release of toxic or flammable gas is confirmed within the protected area.	ALERT
Self-explanatory.	Known explosion damage to facility affecting plant operation.	ALERT
(1) An aircraft crash within the site boundary, OR (2) Unusual aircraft activity such as erratic flying, dropped unidentified object, or other hostile acts, which threaten the plant or plant personnel. (Any other persistent aircraft activity for which identification attempts through the FAA or other agencies have been unsuccessful.)	Aircraft crash on-site or unusual aircraft activity over facility.	UNUSUAL EVENT
Release of toxic or flammable gas from a ruptured tank/truck on site. Portable monitors indicate toxic or explosive concentrations at life threatening levels of the gas near the spill area.	Uncontrolled release of toxic or flammable gas is confirmed on site.	UNUSUAL EVENT

CHART Q
SECURITY CONTINGENCY

KNPP INDICATION	EMERGENCY CLASSIFICATION CRITERIA	CLASSIFICATION
Physical attack on the plant that has resulted in unauthorized personnel occupying the control room or any other vital areas as described in the Security Plan.	Loss of physical control of the plant.	GENERAL EMERGENCY
Physical attack on the plant involving imminent occupancy of the control room, auxiliary shutdown panels, or other vital areas as defined by the Security Plan.	Imminent loss of physical control of the plant.	SITE EMERGENCY
Security safeguards contingency event that results in adversaries commandeering an area of the plant, but not control over shutdown capability or of any vital areas as defined in the Security Plan.	Ongoing security compromise.	ALERT
Examples: - Bomb threat accompanied by interception of bomb materials. - Adversary intercepted in the protected area. - Undetonated bomb found within the protected area.	Security threat or attempted entry or attempted sabotage.	UNUSUAL EVENT

NOTE: Security staff will **not** act as notifier during **security events**. Utilize Control Room staff for notifications.