



GULF STATES UTILITIES COMPANY

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Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Denton:

River Bend Station Units 1 & 2
Docket Nos. 50-458/50-459

Enclosed for your review is Gulf States Utilities Company's (GSU) revised FSAR Table 13.3-1, "Emergency Action Levels (EAL), Initiating Conditions, and Emergency Response". Attachment 1 is a cross reference for the respective initiating conditions in Table 13.3-1 which respond to FSAR Questions 210.84 through 210.111. Items labeled 'LATER' in Table 13.3-1 are currently being developed as part of the River Bend Station (RBS) Technical Specifications which are scheduled for submittal during June 1984. At that time, any additional information for Table 13.3-1 will be provided to your office.

This information will be reflected in a future FSAR amendment.

Sincerely,

William J. Booker
for J.E. Booker
Manager-Engineering
Nuclear Fuels & Licensing
River Bend Nuclear Group

JEB/ERG/RJK/kt

Attachment - 40 copies

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ATTACHMENT 1

Initiating Conditions

	<u>Unusual</u>	<u>Alert</u>	<u>Site</u>	<u>General</u>
Q810.84	7 & 8		3	
Q810.85	4, 13 & 16	3, 9 & 13	7	4 & 5
Q810.86	1			
Q810.87	11 & 12			
Q810.88	14b			
Q810.89	14c			
Q810.90	15b			
Q810.91	15c			
Q810.92		2		
Q810.93		6		
Q810.94		10		
Q810.95		11		
Q810.96		14b		
Q810.97		14c		
Q810.98		15b		
Q810.99		15c		
Q810.100			2	
Q810.101			6	
Q810.102			9	
Q810.103			10	
Q810.104			12	
Q810.105			13	
Q810.106			14	
Q810.107			15	
Q810.108				1
Q810.109				2
Q810.110				3
Q810.111				4 & 5

ATTACHMENT 2

TABLE 13.3-1

EMERGENCY ACTION LEVELS,
INITIATING CONDITIONS,
AND EMERGENCY RESPONSE⁽¹⁾

RBS FSAR

TABLE 13.3-1

EMERGENCY ACTION LEVELS, INITIATING CONDITIONS, AND EMERGENCY RESPONSE⁽¹⁾

NOTIFICATION OF UNUSUAL EVENT			Offsite Response	
Initiating Condition	Emergency Action Level	Licensee Action	Agency	Action
1. ECCS initiated and injected into reactor vessel	Low reactor water level indication - level 2	1. Promptly notify plant personnel of event particulars and an assessment of safety significance of the event. 2. Notify appropriate state and local governments. 3. If no indications exist that event is escalating, report the incident to plant and company management; Notify NRC via LER program prompt notification provision, and provide for press releases. (Nominally occurs 15 min. into event.) Declassify, closeout and complete item 5. 4. If assessment reveals that event is <u>not</u> being terminated safely (or has <u>not</u> been), escalate to Alert level and notify local parish and state agencies. 5. If action above is implemented, submit a written closeout to NRC within 7 days.	<u>State</u>	
	<u>OR</u> High drywell pressure greater than 2 psig <u>OR</u> Manual initiation and injection into vessel		LNED, LOEP, MEMA, and MSHP	Standby until verbal closeout <u>OR</u> Escalate to a more severe class
2. Radiological effluent instantaneous Tech. Spec. limit exceeded (Tech. Spec. 3.11.1 & 3.11.2)	For Gaseous effluent release: 1. High alarm on one or more radiation monitors: a. Radwaste bldg. ventilation exhaust b. Fuel bldg. ventilation exhaust c. Main plant exhaust duct	Same as for Notification of Unusual Event condition 1	<u>Local</u>	
			Sheriff and Civil Defense	Standby until verbal closeout <u>OR</u> Escalate to a more severe class
			Same as for Notification of Unusual Event condition 1	

⁽¹⁾ Setpoints are subject to change pending final approval of technical specifications.

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TABLE 13.3-1 (Cont)

EMERGENCY ACTION LEVELS, INITIATING CONDITIONS, AND EMERGENCY RESPONSE

NOTIFICATION OF UNUSUAL EVENT

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
	<p style="text-align: center;"><u>AND</u></p> <p>Summation of monitors exceeds Tech. Spec. limit</p> <p style="text-align: center;"><u>OR</u></p> <p>2. Summation of grab sample results exceeding Tech. Spec. limits</p> <p>For liquid effluent release:</p> <p>1. Liquid Radwaste effluent monitor High alarm</p> <p style="text-align: center;"><u>AND</u></p> <p>Isolation valve fails to close</p> <p style="text-align: center;"><u>OR</u></p> <p>2. Cooling tower blowdown effluent monitor High alarm</p>			
3. Fuel damage indication	<p>Off gas post-treatment monitor Hi-Hi alarm</p> <p>a. Increase of (later) uCi/sec in 30 minutes</p> <p style="text-align: center;"><u>OR</u></p> <p>b. Greater than (later) uCi/sec</p> <p style="text-align: center;"><u>OR</u></p> <p>Laboratory analysis of coolant sample indicates greater than or equal to 4 uCi/ml dose equivalent I-131.</p>	Same as for Notification of Unusual Event condition 1	Same as for Notification of Unusual Event condition 1	

TABLE 13.3-1 (Cont)

EMERGENCY ACTION LEVELS, INITIATING CONDITIONS, AND EMERGENCY RESPONSE

NOTIFICATION OF UNUSUAL EVENT

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
4. Abnormal reactor coolant pressure	Reactor vessel pressure greater than 1045 psig, or less than (later) psig concurrent with (later) % rated power.	Same as for Notification of Unusual Event condition 1	Same as for Notification of Unusual Event condition 1	
5. Exceeding primary coolant system leak rate Tech. Spec. (Std. Tech. Spec. 3/4.4.3.2)	Any verified pressure boundary leakage <u>OR</u> 5 gpm unidentified leakage <u>OR</u> 25 gpm total leakage averaged over 24 hours <u>OR</u> 2 gpm increase in unidentified leakage within any 4 hour period	Same as for Notification of Unusual Event condition 1	Same as for Notification of Unusual Event condition 1	
6. Failure of a safety or relief valve to close in Operational Conditions 1-3	Relief valve open as indicated by SRV position indicating light from pressure switch <u>AND</u> Continued increase in suppression pool temperature	Same as for Notification of Unusual Event condition 1	Same as for Notification of Unusual Event condition 1	
7. Total loss of offsite power or loss of on-site AC power capability	1. Undervoltage on 1ENS*SWG1A and 1ENS*SWG1B busses <u>AND</u> 1RTX-XSR1C and 1RTX-XSR1D preferred station transformers lost <u>OR</u> 2. All diesel generators out of service	Same as for Notification of Unusual Event condition 1	Same as for Notification of Unusual Event condition 1	
8. Loss of primary/secondary	Exceeding one of the following Limiting Conditions for Operation (LCO):	Same as for Notification of Unusual Event condition 1	Same as for Notification of Unusual Event condition 1	

TABLE 13.3-1 (Cont)

EMERGENCY ACTION LEVELS, INITIATING CONDITIONS, AND EMERGENCY RESPONSE

NOTIFICATION OF UNUSUAL EVENT

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
containment integrity requiring Technical Specification Shutdown. ⁽²⁾ (Tech. Spec. 3.5.3, 3.6.1, 3.6.2, 3.6.4 and 3.6.6)	a. Primary Containment Integrity b. Containment Leakage Rates c. Drywell Bypass Leakage d. Containment Air Locks e. Drywell Air Locks f. Suppression Pool Operability g. Containment and Drywell Isolation Valve h. Secondary Containment Integrity i. Secondary Containment Automatic Isolation Dampers/Valves j. Standby Gas Treatment Subsystem			
9. Loss of Engineered Safety Feature requiring Tech. Spec. Shutdown (Tech. Spec. 3.5.1)	Exceeding <u>one</u> of the following Limiting Conditions For Operation (LCO): a. HPCS (High Pressure Core Spray) b. ADS (Automatic Depressurization System) c. LPCS (Low Pressure Core Spray System) d. LPCI (Low Pressure Coolant Injection System)	Same as for Notification of Unusual Event condition 1	Same as for Notification of Unusual Event condition 1	
10. Fire lasting more than 10 minutes.	1. As reported by plant personnel or Fire Brigade leader to the main control room	Same as for Notification of Unusual Event condition 1	Same as for Notification of Unusual Event condition 1	

(2) Leak rates and the primary structural integrity test are not considered here, since they are performed during shutdown and will not allow the reactor to be started and pressurized if out of specification.

TABLE 13.3-1 (Cont)

EMERGENCY ACTION LEVELS, INITIATING CONDITIONS, AND EMERGENCY RESPONSE

NOTIFICATION OF UNUSUAL EVENT

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
	<p style="text-align: center;"><u>OR</u></p> <p>Fire detection device alarm</p> <p style="text-align: center;"><u>AND</u></p> <p>2. Condition exists for more than 10 min.</p>			
11. Significant loss of vital accident assessment capability or loss of effluent monitoring capability requiring shutdown (Tech. Spec. 3.3.7.5, 3.3.7.1, 3.3.7.11 & 3.3.7.12)	<p>Loss of all main control room meteorological instrumentation</p> <p style="text-align: center;"><u>OR</u></p> <p>Loss of off-gas post-treatment radiation effluent monitors and loss of main plant exhaust duct radiation monitors.</p>	Same as for Notification of Unusual Event condition 1	Same as for Notification of Unusual Event condition 1	
12. Significant loss of main control room communications capability	Degradation of offsite communication capability to only one method as determined by Shift Supervisor	Same as for Notification of Unusual Event condition 1	Same as for Notification of Unusual Event condition 1	
13. Security threat or attempted entry or sabotage	Observation of event reported by Security.	Same as for Notification of Unusual Event condition 1	Same as for Notification of Unusual Event condition 1	
14. Natural events near site		Same as for Notification of Unusual Event condition 1	Same as for Notification of Unusual Event condition 1	

TABLE 13.3-1 (Cont)

EMERGENCY ACTION LEVELS, INITIATING CONDITIONS, AND EMERGENCY RESPONSE

NOTIFICATION OF UNUSUAL EVENT

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
a. Earthquake	Any earthquake detected by seismic instrumentation systems			
	<u>OR</u>			
b. Tornado	A tornado is observed to cross the site boundary			
	<u>OR</u>			
c. Hurricane	Whole gale force winds measured at 55 mph.			
15. Other hazards being experienced or projected which have the <u>potential</u> for endangering the plant		Same as for Notification of Unusual Event condition 1	Same as for Notification of Unusual Event condition 1	
a. Onsite aircraft crash or unusual aircraft activity over station	1. When visually observed or notification is received			
b. Onsite train derailment	2. When observed			
c. Near or on-site explosion	3. When observed or notification is received			
d. Onsite flammable or near-site toxic gas release that threat-	4. Observation or notification of event			

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TABLE 13.3-1 (Cont)

EMERGENCY ACTION LEVELS, INITIATING CONDITIONS, AND EMERGENCY RESPONSE

NOTIFICATION OF UNUSUAL EVENT

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
ens personnel e. Turbine rotating component failure causing rapid plant shutdown	5. Observation of event			
16. Other plant conditions exist that warrant increased awareness on the part of a plant operating staff or State and/or local off-site authorities or require plant shutdown under technical specification requirements or involve other than normal controlled shutdown (e.g., cooldown rate exceeding technical specification limits, pipe cracking found during operation)	Observation of event	Same as for Notification of Unusual Event condition 1	Same as for Notification of Unusual Event condition 1	
17. Transportation of overexposed	As deemed necessary by the Shift Supervisor	Same as for Notification of Unusual Event condition 1	Same as for Notification of Unusual Event condition 1	

TABLE 13.3-1 (Cont)

EMERGENCY ACTION LEVELS, INITIATING CONDITIONS, AND EMERGENCY RESPONSE

NOTIFICATION OF UNUSUAL EVENT

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
and/or contami- nated injured individual from site to hospital				

TABLE 13.3-1 (Cont)

ALERT

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
1. Severe loss of fuel clad	Off gas post-treatment monitor reading greater than (later) Ci/sec.	1. Promptly notify ofisite authorities of Alert status and reason for Alert.	<u>State</u> LNED and MSBH	1. Augment resources by activating Emergency Operations Center and any other primary response centers.
	<u>OR</u> Very high coolant activity as determined by sample analysis of 300 uCi/ml equivalent of I-131; <u>OR</u> Main steam line radiation monitor exceeds HI-HI alarm trip set point due to failed fuel radioactivity	2. Augment resources by activating the Technical and Operations Support Centers. 3. Assess and respond. 4. Assemble orsite monitoring teams and bring associated communications to standby status. 5. Provide hourly plant status updates to offsite authorities. 6. Provide periodic meteorological assessments to offsite authorities and, if any significant offsite releases are occurring, dose estimates for actual releases. 7. For significant offsite release situations, dispatch monitoring teams. Notify offsite authorities to activate centers and monitoring teams. 8. Close out by verbal summary to offsite authorities followed by press release within 24 hr (in some cases deescalation to the Notification of Unusual Event class may be appropriate if the initiating condition cannot be closed out, but it has lost its Alert class significance). <u>OR</u> 9. Escalate to a more severe class.		2. Alert to standby status key emergency personnel including monitoring teams and associated communications. 3. Provide confirmatory off-site radiation monitoring and ingestion pathway dose projections if actual releases substantially exceed technical specification limits. 4. Maintain Alert status until verbal closeout <u>OR</u> 5. Escalate to a more severe class
			LOEP and MEMA	1. Augment resources by activating Emergency Response Facilities and any other primary response centers. 2. Alert to standby status key emergency personnel 3. Maintain alert status

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TABLE 13.3-1 (Cont)

ALERT

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
				until verbal closeout <u>OR</u> 4. Escalate to a more severe class
		LSP		1. Provide security as- sistance if requested 2. Alert to standby status key emergency personnel 3. Maintain Alert status until verbal closeout <u>OR</u> 4. Escalate to a more severe class
			<u>Local</u>	
		Civil Defense		1. Augment resources by activating Emergency Response Facilities and any other primary response centers 2. Alert to standby status key emergency personnel 3. Maintain Alert status until verbal closeout <u>OR</u> 4. Escalate to a more severe class
		Sheriff		1. Provide security as- sistance if requested

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TABLE 13.3-1 (Cont)

ALERT

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
				2. Alert to standby status key emergency personnel
				3. Maintain Alert status until verbal closeout
				<u>OR</u>
				4. Escalate to a more severe class
2. Primary coolant leak rate greater than 50 gpm with reactor at operating temperature and pressure.	Unidentified plus identified leakage greater than 50 gpm.	Same as for Alert condition 1	Same as for Alert condition 1	
3. MSIV high leakage	Abnormal main steam line pressure after MSIV closure	Same as for Alert condition 1	Same as for Alert condition 1	
4. Unexpected high radiation levels or high airborne contamination which indicates a severe degradation in the control of radioactive materials	Alarm of area radiation monitors and confirmation of readings greater than 1000 times normal levels <u>OR</u> Alarm of DRMS (Digital Radiation Monitoring System) airborne ventilation monitors and confirmation of readings greater than 1000 times normal levels.	Same as for Alert condition 1	Same as for Alert condition 1	
5. Loss of offsite power and loss of <u>all</u> onsite ac power for	Undervoltage on 1ENS*SWG1A and 1ENS*SWG1B busser <u>AND</u> 1RTX-XSR1C and 1RTX-XSR1D preferred	Same as for Alert condition 1	Same as for Alert condition 1	

TABLE 13.3-1 (Cont)

ALERT

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
less than 15 minutes	station transformers lost <u>AND</u> All diesel generators out of service			
6. Loss of all onsite DC power for less than 15 minutes	Less than (later) volts on 1ENB*SWG01A and 1ENB*SWG01B distribution busses	Same as for Alert condition 1		Same as for Alert condition 1
7. Loss of functions needed for plant cold shutdown (?)	Loss of both standby service water loops <u>OR</u> Loss of <u>any</u> two of the following: a. Main condenser b. Safety relief valve capability c. RCIC System d. Steam condensing mode of RHR loops A and B	Same as for Alert condition 1		Same as for Alert condition 1
8. Failure of the reactor protection systems to initiate and complete a scram which brings the reactor sub-critical	Neutron Monitoring System does not indicate reactor subcritical following valid scram initiation signal with control rod insertions	Same as for Alert condition 1		Same as for Alert condition 1
9. Fuel handling	1. Observation of event	Same as for Alert condition 1		Same as for Alert condition 1

(3) LOCA condition is not considered.

TABLE 13.3-1 (Cont)

ALERT

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
accident with release of radioactivity to secondary containment or Fuel Building	<p><u>AND</u></p> <p>2. High alarm on one or more fuel handling area radiation monitors</p> <p><u>AND</u></p> <p>3. High alarm on fuel bldg. ventilation exhaust radiation monitors for an accident in the fuel bldg.</p> <p><u>OK</u></p> <p>High alarm on the main plant exhaust duct radiation monitors for an accident in the containment.</p>			
10. Fire potentially affecting safety systems	As reported by the Fire Brigade leader to the Main Control Room	Same as for Alert condition 1		Same as for Alert condition 1
11. Loss of all annunciators in Main Control Room for less than 15 min ⁽⁴⁾	As determined by control room operator from direct observation and plant is not in cold shutdown or transient has not occurred.	Same as for Alert condition 1		Same as for Alert condition 1
12. Radiological effluents greater than 10 times technical specification instantaneous limits	<p>For gaseous effluent release:</p> <p>High alarm on <u>one or more</u> radiation monitors:</p> <p>a. Radwaste bldg ventilation exhaust</p> <p>b. Fuel bldg ventilation exhaust</p> <p>c. Main plant exhaust duct</p>	<p>1. Promptly notify offsite authorities of Alert status and reason for Alert (once reason is discovered).</p> <p>2. Augment resources by activating the Technical and Operations Support Centers.</p> <p>3. Assess and respond.</p> <p>4. Provide recommended protective actions</p>		Same as for Alert condition 1

(4) Annunciators are powered by .25-V DC batteries A, B, and C. See Alert condition 6, loss of all DC power.

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TABLE 13.3-1 (Cont)

ALERT

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
(Tech. Spec. 3/4.11.1 & 3/4.11.2)	<p><u>AND</u> Summation of monitors exceeds 10X Tech. Spec. limit</p> <p>For liquid effluents release:</p> <p>1. Liquid radwaste effluent monitor High alarm verified to be greater than 10X the Tech. Spec. limit.</p> <p><u>AND</u> Isolation valve fails to close</p> <p><u>OR</u> 2. Cooling tower blowdown monitor High alarm verified to be greater than 10X the Tech. Spec. limit.</p>	<p>as necessary and dispatch monitoring teams. Notify offsite authorities to activate centers and monitoring teams.</p> <p>5. Provide periodic meteorological assessments to offsite authorities and, if any significant offsite releases are occurring, dose estimates for actual releases.</p> <p>6. Provide hourly plant status updates to offsite authorities.</p> <p>7. Close out by verbal summary to offsite authorities followed by press release within 24 hr (in some cases deescalation to the Notification of Unusual Event class may be appropriate if the initiating condition cannot be closed out, but it has lost its Alert class significance).</p> <p><u>OR</u> 8. Escalate to a more severe class.</p>		
13. Ongoing security compromise	Safeguards Contingency Event that results in adversaries commanding an area of the plant, but not control over shutdown capability or vital islands as outlined in the Security Plan	Same as for Alert condition 1		Same as for Alert condition 1
14. Severe natural phenomenon experienced beyond Notification of Unusual Event levels		Same as for Alert condition 1		Same as for Alert condition 1
a. Earthquake	An earthquake beyond OBE levels as detected on plant seismic in-			

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TABLE 13.3-1 (Cont)

ALERT

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
	strumentation that does <u>not</u> result in another Alert-level initiating condition			
	<u>OR</u>			
b. Tornado	A tornado strikes the facility that does <u>not</u> result in another alert-level initiating condition.			
	<u>OR</u>			
c. Hurricane	Hurricane winds measured at 74 mph.			
15. Other hazards being experienced or projected which have a significant potential for affecting plant safety:		Same as for Alert condition 1	Same as for Alert condition 1	
a. Aircraft crash on facility	1. When visually observed into the Reactor Building, Diesel Generator Building, or Auxiliary Building			
b. Missile impacts on facility with resultant damage	2. Observation of event			
c. Known explosion at facility resulting in major damage to plant structure	3. As determined by on-duty Shift Supervisor			

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TABLE 13.3-1 (Cont)

ALERT

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
tures or equipment d. Entry of toxic or flammable gases into facility area e. Turbine fail- ure causing casing pene- trations	4. Observation or warning from offsite. 5. Observation of event			
16. Other plant conditions that warrant precautionary activation of Emergency Re- sponse Facili- ties	As determined by on-duty Shift Supervisor	Same as for Alert condition 1	Same as for Alert condition 1	
17. Evacuation of Main Control Room anticipa- ted or required with control of shutdown at re- mote shutdown panels	As determined by on-duty Shift Supervisor	Same as for Alert condition 1	Same as for Alert condition 1	

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TABLE 13.3-1 (Cont)

SITE AREA EMERGENCY

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
1. Known loss of coolant accident greater than makeup pump capacity	Low reactor water level indication-level 1	1. Promptly inform offsite authorities of Site Area Emergency status and reason for emergency as soon as discovered 2. Augment resources by activating all Emergency Response Facilities 3. Assess and respond 4. Dispatch onsite and offsite monitoring teams and associated communications for instances where radiation releases appear imminent or are occurring 5. Provide a dedicated individual for plant status updates to offsite authorities and periodic press briefing 6. Make senior technical and management staff onsite available for consultation with NRC and States on a periodic basis 7. Provide meteorological and dose estimates to offsite authorities for actual releases via a dedicated individual or automated data transmission 8. Provide release and dose projections based on available plant condition information and foreseeable contingencies. Provide recommended protective actions, as necessary. 9. Close out or recommend reduction in emergency class by briefing of offsite authorities at Emergency Response Facilities and by phone followed by written summary within 8 hours after closeout	<u>State</u>	
	AND High drywell pressure greater than 2 psig		LNER and MSBH	1. Provide any assistance requested 2. Activate immediate public notification or emergency status and provide public periodic updates 3. Augment resources by activating nearsite Emergency Operations Centers and any other primary response centers 4. Dispatch key emergency personnel including monitoring teams and associated communications 5. Alert to standby status other emergency personnel (e.g., those needed for evacuation) and dispatch personnel to nearsite duty stations 6. Provide offsite monitoring results to licensee and others and jointly assess them 7. Continuously assess information from licensee and offsite monitoring with regard
		OR 10. Escalate to General Emergency class		

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TABLE 13.3-1 (Cont)

SITE AREA EMERGENCY

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
				to changes to protective actions already initiated for public and mobilizing evacuation resources
				8. Recommend placing milk animals within 2 mi on stored feed and assess need to extend distance
				9. Provide press briefings, perhaps with licensee
				10. Maintain Site Area Emergency status until closeout or reduction of emergency class
				OR
				11. Escalate to General Emergency class
			LOEP and MEMA	1. Provide any assistance requested
				2. Maintain Emergency Response Facilities and any other primary response centers
				3. Dispatch key emergency personnel and associated communications
				4. Alert to standby status other emergency personnel (e.g., those needed for evacuation)
				5. Maintain Site Area Emergency status until

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TABLE 13.3-1 (Cont)

SITE AREA EMERGENCY

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
				closeout or reduction of emergency class
				<u>OR</u>
				6. Escalate to General Emergency class
			LSP	1. Provide assistance as requested
				2. Alert to standby status emergency personnel (e.g., those needed for evacuation)
				3. Maintain Site Area Emergency status until closeout or reduction of emergency class
				<u>OR</u>
				4. Escalate to General Emergency class
			<u>Local</u>	
			Civil Defense	1. Provide any assistance requested
				2. Maintain Emergency Response Facilities and any other primary response centers
				3. Dispatch key emergency personnel and associated communications
				4. Alert to standby status other emergency personnel (e.g., those

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TABLE 13.3-1 (Cont)

SITE AREA EMERGENCY

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
				needed for evacuation)
				5. Maintain Site Area Emergency status until closeout or reduction of emergency class
				<u>OR</u>
				6. Escalate to General Emergency class
			Sheriff	1. Provide assistance as requested
				2. Alert to standby status emergency personnel (e.g., those needed for evacuation)
				3. Maintain Site Area Emergency status until closeout on reduction of emergency class
				<u>OR</u>
				4. Escalate to General Emergency class
2. Degraded core with possible loss of coolable geometry	Reactor water level at or below top of active fuel core height as indicated by reading on fuel zone level indicator <u>AND</u> Very high coolant activity as determined by sample analysis (greater than or equal to 300 uCi/ml equivalent of I-131)	Same as for Site Area Emergency condition 1	Same as for Site Area Emergency condition 1	

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TABLE 13.3-1 (Cont)

SITE AREA EMERGENCY

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
3. BWR steam line break outside containment without isolation	High mainsteam line flow (later) psig <u>OR</u> High steam tunnel temperature (later) F <u>OR</u> High steam tunnel differential temperature (later) F <u>OR</u> Any of the following RCIC temperature alarms a. RCIC steam tunnel A (later) F b. RCIC equipment room (later) F c. RCIC steam tunnel ventilation delta temperature (later) F <u>OR</u> RCIC high steam line flow	Same as for Site Area Emergency condition 1	Same as for Site Area Emergency condition 1	
4. Loss of off-site power and loss of <u>all</u> on-site AC power for more than 15 min	Undervoltage on 1ENS*SWG1A and 1ENS*SWG1B busses <u>AND</u> 1RTX-XSR1C and 1RTX-XSR1D preferred station transformers lost <u>AND</u> All diesel generators out of service <u>AND</u> Condition exists for more than 15 min	Same as for Site Area Emergency condition 1	Same as for Site Area Emergency condition 1	
5. Loss of all vital onsite 125 volt DC power for more than 15 min.	Less than (later) volts on 1ENB*SWG01A and 1ENB*SWG01B distribution busses <u>AND</u> Condition exists for more than 15 min	Same as for Site Area Emergency condition 1	Same as for Site Area Emergency condition 1	

TABLE 13.3-1 (Cont)

SITE AREA EMERGENCY

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
6. Loss of functions needed to bring the reactor subcritical with the mode switch in shutdown and temperature greater than 212°F (operational condition 3)	1. Inability to insert sufficient control rods to bring the reactor subcritical	Same as for Site Area Emergency condition 1		Same as for Site Area Emergency condition 1
	<u>AND</u> Failure of both Standby Liquid Control (SLC) loops to inject into reactor vessel			
	<u>OR</u> 2. Failure of the SLC system to bring reactor subcritical after poison injection			
7. Transient requiring operation of shutdown systems with failure to scram (continued power generation but no core damage immediately evident)	Observation of transient and initiation of shutdown systems	Same as for Site Area Emergency condition 1		Same as for Site Area Emergency condition 1
	<u>AND</u> Neutron monitoring system does not indicate reactor subcritical following rated scram initiation signal with control rod insertions			
8. Major damage to more than one spent fuel assembly in containment or Fuel Building (e.g., large object damages fuel or water loss below fuel level)	1. Observation of event causing structural damage to one or more fuel assembly			
	<u>OR</u> Low water level in spent fuel pool below normal level and unable to restore to normal level			
	<u>AND</u> 2. High alarm on fuel handling area radiation monitor			
	<u>AND</u>			

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TABLE 13.3-1 (Cont)

SITE AREA EMERGENCY

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
	3. High alarm on fuel building ventilation radiation monitor for accident in the fuel building <u>OR</u> High alarm on main plant exhaust duct radiation monitor for accident in containment			
9. Fire compromising the function of safety systems	Observation of a major fire that affects redundant safety system trains or functions			
10. All alarms lost (no annunciators) for more than 15 min and plant is not in cold shutdown or plant transient initiated while all alarms are lost	Observation by Shift Supervisor of loss of annunciators for more than 15 minutes while plant is not in cold shutdown <u>OR</u> Plant transient initiated after all annunciators have been lost for more than 15 min	Same as for Site Area Emergency condition 1	Same as for Site Area Emergency condition 1	
11. Effluent monitors detect levels corresponding to greater than 50 mr/hr for 1/2 hr or greater than 500 mr/hr W.B. for 2 min or 5X	Containment post-accident radiation monitors alert alarm <u>OR</u> Post accident effluent radiation monitor confirms noble gas release rates corresponding to: (later) Ci/sec noble gas (30 min) (later) Ci/sec noble gas (2 min) <u>OR</u> Iodine grab samples and laboratory	Same as for Site Area Emergency condition 1	Same as for Site Area Emergency condition 1	

TABLE 13.3-1 (Cont)

SITE AREA EMERGENCY

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
these levels to the thyroid at the site boundary for adverse meteorology	analysis confirm release levels of: (later) uCi/sec (30 min) (later) uCi/sec (2 min) Radiation monitoring teams report radiation and iodine concentration readings at the site boundary corresponding to: 50 mr/hr (30 minutes) 500 mr/hr (2 minutes) (later) uCi/cc iodine (30 minutes) (later) uCi/cc iodine (2 minutes)			
12. Security threat involving imminent loss of physical control of the plant	Physical attack on the plant involving imminent occupancy of Main Control Room and other Vital Islands	Same as for Site Area Emergency condition 1		Same as for Site Area Emergency condition 1
13. Severe natural event near site being experienced or projected with plant not in cold shutdown		Same as for Site Area Emergency condition 1		Same as for Site Area Emergency condition 1
a. Earthquake greater than SSE levels	Containment or Drywell Safe Shutdown Earthquake alarm			
b. Flood	Water level greater than 98" msl or less than -7" msl			
c. Winds in excess of design levels	Winds greater than 100 mph fastest mile winds onsite			

TABLE 13.3-1 (Cont)

SITE AREA EMERGENCY

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
14. Other hazards being experienced or projected with plant not in cold shutdown		Same as for Site Area Emergency condition 1	Same as for Site Area Emergency condition 1	
a. Aircraft crash into vital structures	1. Observed or reported aircraft crash causing damage or fire in containment, auxiliary, control, or turbine building			
b. Missile or explosion impact on facility rendering severe damage to shutdown equipment	2. Missile impact or explosion causes loss of functions needed for hot shutdown			
c. Entry of toxic or flammable gases into vital islands	3. Entry of toxic or flammable gases into: a. Main Control Room <u>AND</u> b. Remote shutdown panel rooms			
15. Other plant conditions exist that warrant activation of emergency operations centers, monitoring teams, and precaution-	As determined by the Emergency Director	Same as for Site Area Emergency condition 1	Same as for Site Area Emergency condition 1	

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TABLE 13.3-1 (Cont)

SITE AREA EMERGENCY

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
ary public noficiation				
16. Evacuation of Main Control Room and control of shutdown sys- tems not estab- lished at re- mote shutdown panels in 15 min	As determined by on-duty Shift Supervisor	Same as for Site Area Emergency condition 1	Same as for Site Area Emergency condition 1	

TABLE 13.3-1 (Cont)

GENERAL EMERGENCY

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
1. Effluent monitors detect levels corresponding to 1 rem/hr whole body or 5 rem/hr thyroid at the site boundary under actual meteorological conditions. ⁽⁵⁾	Post accident effluent radiation monitor confirms noble gas and iodine release rates corresponding to 1 rem/hr whole body or 5 rem/hr thyroid at the site boundary for actual meteorological conditions	<ol style="list-style-type: none"> Promptly inform offsite authorities of General Emergency status and reason for emergency as soon as discovered (parallel notification of NRC) Augment resources by activating Emergency Resource Facilities Assess and respond Dispatch onsite and offsite monitoring teams and associated communications Provide a dedicated individual for plant status update; to offsite authorities and periodic press briefings Make senior technical and management staff onsite available for consultation with NRC and states on a periodic basis Provide meteorological and dose estimates to offsite authorities for actual releases via a dedicated individual or automated data transmission Provide release and dose projections based on available plant condition, information, and foreseeable contingencies Close out or recommend reduction of emergency class by briefing of offsite 	<u>State</u>	
	<u>OR</u> Radiation monitoring teams report radiation and iodine concentration readings of 1 rem/hr whole body or (later) uCi/cc iodine.		LNED and MSBH	<ol style="list-style-type: none"> Provide any assistance requested Activate immediate public notification of emergency status and provide public periodic updates Recommend sheltering for 2 mi radius and 5 mi downwind and assess need to extend distances Augment resources by activating nearsite Emergency Response Facilities and any other primary response center Dispatch key emergency personnel including monitoring teams and associated communications Dispatch other emergency personnel to duty stations within 5 mi radius and alert all others to standby status Provide offsite moni-

⁽⁵⁾ Consider evacuation only within about 2 mi of the site boundary unless these levels are exceeded by a factor of 10 or projected to continue for 10 hr.

TABLE 13.3-1 (Cont)

GENERAL EMERGENCY

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
		authorities at Emergency Response Facilities and by phone followed by written summary 8 hours after closeout		toring results to li- censee and others and jointly assess these 8. Continuously assess information from li- censee and offsite monitoring teams with regard to changes to protective actions already initiated for the public 9. Recommend placing milk animals within 10 mi on stored feed and assess need to extend distance 10. Provide press briefings, perhaps with licensee 11. Consider relocation to alternate Emergency Re- sponse Facilities if actual dose accumula- tion in nearsite Emergency Response Facilities exceeds lower bound of EPA PAGs 12. Maintain General Emer- gency status until closeout or reduction of emergency class

TABLE 13.3-1 (Cont)

GENERAL EMERGENCY

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
			LOEP and MEMA	1. Provide any assistance as requested
				2. Maintain key emergency personnel and associated communication links
				3. Continuously assess information from licensee with regard to changes to protective actions already initiated for public and mobilizing evacuation resources
				4. Maintain General Emergency status until closeout on reduction of emergency class
			LSP	1. Provide any assistance as requested
				2. Maintain key emergency personnel and associated communication links
				3. Maintain General Emergency status until closeout or until reduction of emergency class

TABLE 13.3-1 (Cont.)

GENERAL EMERGENCY

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
			<u>Local</u>	
			Civil Defense	<ol style="list-style-type: none"> 1. Provide any assistance as requested 2. Maintain key emergency personnel and associated communication links 3. Continuously assess information from LNED, MSBH, and licensee with regard to changes to protective actions already initiated for public and mobilizing evacuation resources 4. Maintain General Emergency status until closeout on reduction of emergency class
			Sheriff	<ol style="list-style-type: none"> 1. Provide any assistance as requested 2. Maintain key emergency personnel and associated communication links 3. Maintain General Emergency status until closeout or until reduction of emergency class

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TABLE 13.3-1 (Cont)

GENERAL EMERGENCY

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
2. Loss of 2 of 3 fission product barriers with a potential loss of third barrier ⁽⁶⁾	1. Site Area Emergency Condition 11 exists (monitors indicate radiation levels corresponding to a site boundary dose of 50 mR/hr whole body for 30 min, 500 mR/hr whole body for 2 min, or 5 times these levels for thyroid). <u>AND</u> Containment pressure exceeds 15 psig for more than 15 minutes	Same as for General Emergency condition 1	Same as for General Emergency condition 1	
3. Loss of physical control of facility	1. Physical attack on the plant has resulted in unauthorized personnel occupying the Main Control Room or any other Vital Island as described in the Security Plan	Same as for General Emergency condition 1	Same as for General Emergency condition 1	

(6) Consider 2 mi precautionary evacuation. If more than GAP activity released, extend this to 5 mi downwind.

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TABLE 13.3-1 (Cont)

GENERAL EMERGENCY

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
4. Other plant conditions exist that make release of large amounts of radioactivity in a short time possible ⁽⁷⁾	1. Site Area Emergency conditions 1, 4, and 5 exist <u>AND</u> Suppression pool cooling has <u>not</u> been automatically <u>or</u> manually initiated following a 30 minute time lapse <u>OR</u>	Same as for General Emergency condition 1	Same as for General Emergency condition 1	
a. Transient (e.g., loss of offsite power) plus failure of requisite core shut-down systems (e.g., scram). Could lead to core melt in several hours with containment failure	2. Alert emergency condition 6 exists <u>AND</u> Conditions are expected to remain in excess of 10 hours			

- (7)
- For sequences where significant releases are not yet taking place and large amounts of fission products are not yet in the containment atmosphere, consider 2 mi precautionary evacuation. Consider 5 mi downwind evacuation (45 to 90 deg sector) if large amounts of fission products greater than gap activity are in the containment atmosphere. Recommend sheltering in other parts of the plume exposure EPZ in this circumstance.
 - For sequences where significant releases are not yet taking place and containment failure leading to a direct atmospheric release is likely in the sequence but not imminent and large amounts of fission products in addition to noble gases are in the containment atmosphere, consider precautionary 5 mi and 10 mi downwind evacuation (45 to 90 deg sector).
 - For sequences where large amounts of fission products other than noble gases are in the containment atmosphere and containment failure is judged imminent, recommend shelter for those areas where evacuation cannot be completed before transport of activity to that location.
 - As release information becomes available, adjust these actions in accordance with dose projections, time available to evacuate, and estimated evacuation time given current conditions.

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TABLE 13.3-1 (Cont)

GENERAL EMERGENCY

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
likely. More severe consequences if pumps trip does not function.				
b. Small or large LOCA's with failure of ECCS to perform leading to core melt degradation or melt in minutes to hours. Loss of containment integrity may be imminent.				
c. Small or large LOCA occurs and containment performance is unsuccessful affecting longer term success of the ECCS. Could lead to core degradation or melt in several hours without containment boundary.				

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TABLE 13.3-1 (Cont)

GENERAL EMERGENCY

<u>Initiating Condition</u>	<u>Emergency Action Level</u>	<u>Licensee Action</u>	<u>Offsite Response</u>	
			<u>Agency</u>	<u>Action</u>
d. Shutdown occurs but requisite decay heat removal systems (e.g., RHR) or non-safety systems heat removal means are rendered unavailable. Core degradation or melt could occur in about ten hours with subsequent containment failure.				
5. Any major internal or external events (e.g., fires, earthquakes, substantially beyond design basis) which could cause massive common damage to plant systems resulting in any of the above.	As determined by Emergency Director			