Form 34731 (10-81) (Formerly SPD-1002-1)

# DUKE POWER COMPANY PROCEDURE PREPARATION PROCESS RECORD

(1) ID No: <u>EP/O/A/500</u>0/05 Change(s) 0 to \_\_\_\_\_\_ Incorporated

STATION: McGuire Nuclear Station	
PROCEDURE TITLE: Notification of Unusual	Event
mch.	
PREPARED BY: M. S. Glover	DATE: 9/10/82
REVIEWED BY: MD Willest	DATE: 9-10-82
Cross-Disciplinary Review By:	N/R:
TEMPORARY APPROVAL (IF NECESSARY):	
By:(SRO)	Date:
Ву:	Date:
APPROVED BY: Swley	Date: 9-/3-82
MISCELLANEOUS:	
Reviewed/Approved By:	Date:
Reviewed/Approved By:	Date:

# DUKE POWER COMPANY McGUIRE NUCLEAR STATION NOTIFICATION OF UNUSUAL EVENT

T.O OAMDFOMO	1.0	Symp	toms
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1.1 This condition exists whenever unusual events are in process or have occurred which indicate a potential degradation of the level of safety of the plant.

# 2.0 Immediate Actions

2.1 Automatic

None

2.2 Manual

2.2.1 The Shift Supervisor shall be informed of all events initiating this procedure.

# 3.0 Subsequent Action

# Initial/N/A

- 3.1 The Shift Supervisor shall assure that the appropriate emergency condition (Notification of Unusual Event, Alert, Site Area Emergency, or General Emergency) is declared by evaluating the actual plant condition with Enclosure 4.1, Emergency Classification Flowchart and Enclosure 4.2, List of Initiating Conditions, Emergency Action Levels, and Associated Emergency Procedure/Document.
- 3.2 The Shift Supervisor shall assure that all actions required by the initiating Emergency Procedure will be performed and that all actions necessary for the protection of persons and property are being taken.

### NOTE

If at any time in the course of events in this procedure, site evacuation or personnel assembly/accountability appears necessary, refer to Station Directive 3.8.1.

3.3 The Shift Supervisor shall assume the function of the Emergency Coordinator until the arrival of the Station Manager or his designee at which time the Station Manager or his designee assumes the responsibility of the Emergency Coordinator.

3.4 The Emergency Coordinator shall assure prompt (within about 15 minutes of declaring the emergency) notification of those personnel/Warning Points indicated on Enclosure 4.3 for the appropriate Initiating Condition/Emergency Procedure listed in Enclosure 4.2.

# NOTE 1.

See Enclosure 4.4, Telephone Listing, for notification, telephone numbers/radio codes/pager codes.

# NOTE 2.

See Enclosure 4.5, Notification of Emergency Conditions, for information to be provided to State/County Warning Points.

# NOTE 3.

See Enclosure 4.6, Notification of Emergency Conditions for information to be provided to Nuclear Production Duty Engineer/Corporate Communications Department.

- 3.5 In the event a release or potential release of radioactive materials is a threat to plant personnel or members of the general public the Emergency Coordinator shall request Health Physics personnel to evaluate the consequences utilizing the appropriate Health Physics procedure, HP/0/B/1009/05, HP/0/B/1009/06, HP/0/B/1009/08, HP/0/B/1009/09 or HP/0/B/1009/10.
- 3.6 The Emergency Coordinator shall provide protective action recommendations as necessary to the affected county warning point(s) and to the North Carolina warning point (Emergency Operations Centers if established) or the State Radiological Protection Section, Department of Human Resources (see Enclosure 4.4 Telephone Listing) as directed by the state in accordance with the North Carolina Radiological Emergency Response Plan. If actual release of radioactive materials will result in a projected dose (REM) to the population of: (EPA Protective Action Guidelines).
  - 3.6.1 Whole body <1, thyroid <5, NO protective action is required. Monitor environmental radiation levels to verify.

- 3.6.2 Whole body 1 to <5, thyroid 5 to <25, recommend seeking shelter and wait for further instructions. Consider evacuation particularly for children and pregnant women. Monitor environmental radiation levels. Control access to affected areas.
- 3.6.3 Whole body 5 and above, thyroid 25 and above, recommend mandatory evacuation of populations in the affected areas. Monitor environmental radiation levels and adjust area for mandatory evacuation based on these levels. Control access to affected areas.

# NOTE

See Enclosure 4.4, Telephone Listing for notification.

	3.7 The Emergency Coordinator shall augment on shift resources to
	assess and respond to the emergency situation as needed to ensure
	the protection of persons and property.
	3.8 The Emergency Coordinator will assess the Emergency Condition and
	determine the need to remain in a Notification of Unusual Event,
	escalate to a more severe class or close out the emergency.
/	3.9 The Projects and Licensing Engineer or his designee will close out
	the Emergency with verbal summary to county and State authorities,
	notified in Step 3.4, followed by written summary within 24 hours.

### 4.0 Enclosures

- 4.1 Emergency Classification Guide Flowchart
- 4.2 List of Initiating Conditions, Emergency Action Levels, and Associated Emergency Procedure/Document.
- 4.3 Notification Chart
- 4.4 Telephone Listing
- 4.5 Notification of Emergency Conditions.
- 4.6 Notification of Emergency Conditions (Nuclear Production Duty Engineer/Corporate Communication Department).

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# EMERGENCY CLASSIFICATION GUIDE FLOWCHART

GENERAL EMERGENCY	SMALL OR LANGE BREAK LUCA OCCUSS AND CORT AINMENT PERFORMANCE IS UNSUCCESS! US PERFORMANCE IS UNSUCCESS! US APPECTING LONGER TEMA SICCESS OF THE FCCS COLI DI LAD FO CORE DEGRADA TION UN ME I IN SEVERAL HOUSE WITHOUT CONTAINMENT	AARNES WITH COULS OF THE STREET LOSS OF THE THE THANKS BARRIER OF SOME OF THE THANKS BARRIER OF A SWITH	TAKUNG OF SIGN OF REAL TO BE ADDED TO COME MALL TO SEGURATE TO SEGURATE TO SEGURATE TO SEGURATE TO SEGURATE SEG	CORRESCONDING TON DUTE CE C. E. C. C. CORRESCONDING TO D. RELIGIEN W. B. COR. BE RELIGIEN TO THE CO. C.	That states if it is, a coss or or estitation of the states of the state	MOT FUNCTION  SHUTTOWN OCCUSS BUT REQUISITE  OLCAY HEAT PRIMOVAL SYSTEM (6. C. MANNOVAL SYSTEM (6. C. MANNOVAL SYSTEM (6. C. MANNOVAL SYSTEM PRIMOVAL SYSTEM PRIMOVAL SYSTEM PRIMOVAL SYSTEM SYSTEM PRIMOVAL S	UNAVALABLE CORE DEGRADERON UNAVALABLE CORE DEGRADERON HOUNS WITH EURE GUILL CONTAINMENT FAILURE	ANY MAJOR INTERNAL OR EXTERNAL OF EXTERNAL SECTIONALS SECTIONALS SECTION OF SECTION SECTION OF SEC			FACILITY	ANY MALADON INTERPRACE OF RESPONDED  EVENTS SO, PRINCE, SARINGULARS  SUGSTANTISELLY BY COND. DESIGN  BASIS WHICH COULD CAUSE MASSIVE  COMMISS WHICH COULD CAUSE MASSIVE	OTHER PLANT COMBINIONS INSTITUTE THE STORE WHAT THE BOUNCE THAT BANK IN RECOUNTED THAT BANK IN RECOUNT OF THE RECOUNT OF THE SHOWN THE STREET FEMILIES OF ANY COME WELLT STRUM THOUSE THE STRUM THE ST
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EVENI CATEGORY	ABNORMAL PRIMARY LEAK RATE	ABNORMAL CORE CONDITIONS	OTHER LCOS	REFLUENT OR RACIATION LEVELS	LOSS OF SHIFT DOWN FINCTIONS. DECAY HEAT OR REACTIVITY	ELECTRICAL ON POWER PAIL URES	CONTROL ROOM EVACUATION		FUEL HANGLING ACCIDENT	HAZARDS TO PLANT OF CRATIONS	SECURITY THREATS		OTHERS.

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# LIST OF INITIATING CONDITIONS, EMERGENCY ACTION LEVELS, AND ASSOCIATED EMERGENCY PROCEDURE/DOCUMENT

Initiatio	ng Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.2.1	Emergency Core Cooling Initiated (SI) and discharge to vessel has occurred.	Safety Injection signal verification by redundant indication and indication of discharge to vessel.	EP/1/A/5000/01, EP/1/A/5000/02, EP/1/A/5000/03, EP/1/A/5000/04, AP/1/A/5500/35
4.2.2	Radiological effluent Technical Specification limits exceeded.	EMF49, 50, 35, 36, 37 Alarm indicating Technical Specification Limits exceeded.	Tech Specs 3/4.11, Environmental Tech Specs, HP/0/B/1009/09, HP/0/B/1009/10, HP/0/B/1009/05
4.2.3	Fuel Damage Indication:		
а.	High coolant activity sample exceeding Tech. Specs.	a. >1 μCi/gram Dose Equivalent I-131 or >100 μCi/gram gross activity.	AP/1/A/5500/18
		NOTE: These calculations avail- able from counting faci- lity on request.	
b.	Failed fuel monitor indicates increase greater than 0.1% equivalent fuel failures within 30 minutes.	b. Increase in I-131 concentration by 7μCi/ml over a 30 minute period, or, I-131 concentration is in the range of 70μCi/ml to 350 μCi/ml verified by increased EMF-48 readings and labora- tory analysis.	
4.2.4	Abnormal coolant tempera- ture and/or pressure or abnormal fuel temperature outside of Technical Speci- fication Limits.	Figure 2.1-1 Tech Specs exceeded and Core Subcooling Monitor less than acceptable. (Below Curve) Verified as necessary by redundant Instrumentation. (e.g., narrow and wide range pressure/temperature subcooling monitors)	AP/1/A/5500/05

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Initiat	ing Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.2.5	Exceeding either primary/ secondary leak rate requiring shutdown by Tech. Specs. or primary leak rate requiring shutdown by Tech. Specs.	>1GPM total P/S leakage >500 GPD from any S/G >10GPM Identified Primary Leakage Verified by EMF readings, level control, make-up rate, and or chemical/radiological analysis.	EP/1/A/5000/02, EP/1/A/5000/04, AP/1/A/5500/10
4.2.6	Failure of a safety or relief valve in a safety related system to close, following reduction of applicable pressure. (Primary System (NC) or Main Steam (SM).	Valid accoustical monitor indica- tion of valve failure.	EP/1/A/5000/02, AP/1/A/5500/11, EP/1/A/5000/03
4.2.7	Loss of offsite power or loss of onsite AC power capability.	Undervoltage alarms on 7KV buses or blackout load sequencers actuated.	AP/1/A/5500/07
4.2.8	Loss of containment integrity requiring shutdown by Tech Specs (3/4.6.1).	Any automatic containment isolation valve found to be open and inoperable and unisolable or both air lock doors on a lock inoperable, or penetration(s) fail leak test per Tech Specs when containment integrity required.	AP/1/A/5500/24
4.2.9	Loss of engineered safety feature or fire protection system function requiring shutdown by Tech Specs (e.g., malfunction, personnel error; or procedural inadequal		AP/1/A/5500/19, AP/1/A/5500/21, AP/1/A/5500/20, Tech Specs 3/4.5, 3/4.7.10, 3/4.7.11

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Initiati	ing Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.2.10	Fire within one plant lasting more than 10 minutes.	Observation or fire detection alarm with confirming observation of a fire lasting more than 10 minutes.	Station Directive 2.11
4.2.11	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 or communication capability (e.g., all meteorological instrumentation, or radio networks).	Loss of process or effluent radiation monitoring system or Loss of all meteorological instrumentation onsite or Loss of all radio/telephone communications capability offsite.	OP/O/A/6700/03, Tech Specs 3/4.3
4.2.12	Security threat or attempted entry or attempted sabotage.	As notified by Security Force.	Station Security Plan
4.2.13	Natural phenomenon being experienced or projected beyond usual levels.		
	a. Any earthquake felt in plant or detected on station seismic in- strumentation.	(<.08gH, <.053gV), Annunciator Alarm, (AD-13)	
	b. 50-year flood or low water, hurricane surge, seiche (lake tidal wave)	As observed	
	c. Any tornado on site d. Any hurricane	As observed Winds >73 mph/from National Weather Service information,	AP/0/A/5500/29, AP/0/A/5500/30

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Initiati	ng Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.2.14	Other hazards being experienced or projected.		
	<ul> <li>Aircraft crash onsite or unusual aircraft activity over facility.</li> </ul>	As observed	
	b. Train derailment on site.	As observed	
	c. Near site or onsite explosion.	As observed	
	d. Near site or onsite toxic or flammable gas release.	As observed	AP/0/A/5500/31
	e. Turbine rotating com- ponent failure causing rapid plant shutdown (Loss of Condenser Heat Sink).	Turbine trip and observation of a turbine malfunction or failure.	AP/0/A/5500/23, AP/0/A/5500/32, AP/0/A/5500/02
4.2.15	Other plant conditions exist that in the judge- ment of the Shift Supervisor, the Operations Duty Engineer, the Superintendent of Opera- tions, or the Station Manager warrant increased awareness on the part of State and/or local offsite authorities or require plant shutdown under Tech Specs requirements or involve other than normal con trolled shutdown (e.g., cool- down rate exceeding Tech Spec limits, pipe cracking found during operation).		As directed by plant conditions

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Initiati	ng Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.2.16	Transportation of contami- nated injured individual from site to offsite hospital.	As observed.	AP/0/A/5500/27
4.2.17	Rapid depressurization of secondary side.	As observed and actuation of 4.2.1 and 4.2.6 above.	AP/1/A/5500/06

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# NOTIFICATION CHART NOTIFICATION OF UNUSUAL EVENT

INITIATING CONDITIONS (from ENCLOSURE 4.2)

Shift Supervisor	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
OPS. Duty Engineer	×	×	×	×	*	×	×	×	×	×	×	×	×	×	×	×	*
Station Manager	×	×	×	×	×	×	×	×	×	X	×	×	×	×	×	×	*
Supt. of Operations	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	*
Supt. of Tech. Services	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	*
Project/Licen, Engineer	×	×	×	×	×	×	×	×	×	×	×	×	×	×	*		
Nuclear Prod. Duty Eng.	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	*
Corporate Communications	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	*
N.C. State Warning Point	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	*	
Mecklenburg Warning Pt.	×	×	×	×	×	×	×	×	×	×	×	×	×	×			4 >
Catawba Co. Warning Pt.	×	×	×	×	×	×	×	×	×	×	×	×	×	*	*		
Lincoln Co. Warning Pt.	×	×	×	×	×	×	×	×	×	×	×	×	×	*	×		,
Gaston Co. Warning Pt.	×	×	×	×	×	×	×	×	×	×	×	×	×	×	*		
Iredell Co. Warning Pt.	×	×	×	×	×	×	×	×	×	×	×	×		×			4 >
Cabarrus Co. Warning Pt.	×	×	×	×	×	×	×	×	×	×	×	×	×	*			
NRC VIA ENS	×	×	×	×	×	×	×	×	×	×	×	×	*	×			4 >
NRC (Station Rep.)	×	×	×	×	×	×	×	×	×	×	×	×	*	×	>		
Construction Proj. Magr.	×	×	×	×	×	×	×	×	×	×	×	×	×				4 >
Station Health Physicist	NO	×	×	NO	×	**	ON	×	ON	*×	×	NO.	**	*×	*×	*	NON
Station Safety Supervisor	NO	NO	ON	0N	NO	NO	NO	NO	×	×	NO	NO	×	×	NO	×	ON
Supt. of Maintenance	ON.	NO	NO	ON	NO	×	×	NO	×	×	×	NO	×	×	×	ON	ON
Supt. of Administration	ON	ON	ON	ON	ON	ON	ON	N/A						-	-		-

<sup>\* -</sup> Whenever radiological hazards may be involved X - To be notified

# TELEPHONE LISTING

4.4.1	Operations Duty Engineer (PA Syste P&T Pager -	m)		
4.4.2	Station Manager			
~.~.	Home - Syst	em Speed		
		Speed -		
4.4.3	Superintendent of Operations			
	Home - Syst	em Speed		
4.4.4	Superintendent of Technical Service	96 -		
		m Speed		
	27500	m opeca		
4.4.5	Projects & Licensing Engineer -			
	Home Syst	em Speed -		
4.4.6	Nuclear Production Duty Engineer -		Sustan S.	
4.4.0	Macreal Froduction Duty Engineer -	P&T Pager	- System S	peed -
4.4.7	Duke Power Corporate Communication			System Sneed -
	(24 hour Answering Servi			
	Ira Kaplan or Mary Boyd)			,
4.4.8	NC State Warning Point, Raleigh -		- Syst	tem Speed -
4.4.9	Mecklenburg County Warning Point -	Primary:	Ring Down	Phone
		Back-up:		- System Speed
		Back-up:	Emergency	Radio, Code:
4.4.10	Lincoln County Warning Point -	Primary:	Rine Down	Phone
		Back-up:		· System Speed
			Emergency	Radio, Code:
	C			
4.4.11	Catawba County Warning Point -	Primary:		
		Back-up:	F	- System Speed
		back-up:	Emergency	Radio, Code:
4.4.12	Iredell County Warning Point -	Primary:	Ring Down	Phone
	The state of the s	Back-up:	mang bown	- System Speed
		Back-up:	Emergency	Radio, Code:
4.4.13	Gaston County Warning Point -	Primary:	Ring Down	Phone
		Back-up:		- System Speed
		Back-up:	Emergency	Radio, Code: _
4.4.14	Cabarrus County Warning Point -	Primary:	Ring Down	Phone
		Back-up:		- System Speed
		Back-up:	Emergency	Radio, Code: _ ?
				-

# NOTE

Radio Code will activate all county radio units.

N.R.C. Operation Center, Emergency Notification System (ENS phone)
N.R.C. Senior Station Representative Office - Home - System Speed - Wife work - System Speed - P&T Pager
101 loge:
Construction Project Manager: Construction
Home - System Speed
System Speed
Station Health Physicist
Home - System Speed - P&T Pager
Station Safety Supervisor
Home - System Speed -
C
Superintendent of Maintenance - Home System Speed -
dome System Speed -
Superintendent of Administration -
Home System Speed -
Radiation Protection Section Department of Human Resources
- System Speed -

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# MCGUIRE NUCLEAR STATION NOTIFICATION OF EMERGENCY CONDITIONS

4.5.1	Incl	ude as a minimum, the following information to the	North Carolina				
	State Warning Point, the six County Warning Points, (Mecklenburg, Catawba,						
		Iredell, Lincoln, Gaston, and Cabarrus) and the South Carolina Warning					
		1: See Enclosure 4.4, Telephone Listing					
		2: A. Complete Part I of this format as a min	imal firer				
	HOIL	notification of a reportable incident.	Imal IIIsc				
		B. Complete Part I and II of this format t	a provide				
			o provide				
	DADT	minimal followup information.	✓ ACKNOWLEDGEMENT				
	PART	I: Initial Emergency Message Information	ACKNOWLEDGEMENT				
		TELEPHONE RESPONSE:	Mecklenburg				
			Gaston				
		"This is McGuire Nuclear Station.	Iredel1				
		Please acknowledge when you are	Lincoln				
		ready to copy Emergency Information."	Cabarrus				
			Catawba				
	1.	This is McGuire Nuclear Station.					
	2.	My name is					
	3.	This message (Number)					
		a. Reports a real emergency.					
		b. Is an exercise message.					
	4.	My telephone number is					
	5.	Message Authentication:					
	6.	The class of emergency is:					
		a. Notification of an Unusual Event					
		b. Alert					
		c. Site Area Emergency					
		d. General Emergency					
	7.	The Classification of Emergency was declared at:	on				
			(A.M./P.M.)				
		(Date)					

		gency Condition (Select one of the below options):	
_	a.	Does not involve the release of radioactive mater	ials
		from the plant.	
-	b.	Involves the POTENTIAL for a release, but NO releoccurring.	ase is
_	c.	Involves a release of radioactive material.	
W	e recomm	mend the following protective action: (select one o	f the
ь	elow opt	tions)	
_	a.	No protective action is recommended at this time.	
_	b.	People living in zones	remain
		indoors with doors and windows closed.	
_	c.	People in zones	EVACUATE
		their homes and businesses.	
_	d.	Pregnant women and children in zones	
		remain indoors with the doors and windows closed.	
_	e.	Pregnant women and children in zones	
		evacuate to the nearest shelter/reception center.	
_	f.	Other recommendations:	
T		ll be:	
-		A followup message	
-		No further communications	
		, this message:	
_		Reports an actual emergency.	
-		Is an exercise message. is information to the persons indicated in your ale	
	a last was	is information to the earsons indicated in your ale	rr pro-

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Enclos	ure	4.5	
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PART	II: Followup Emergency Me	ssage Information
1.	The type of actual or proj	
	b. Waterborne	
	c. Surface spill	
	d. Other	
2.	The source and description	of the release is:
3.		ll begin ata.m./p.m.; time since
		hours.
		ration of the release is hours.
6.	Dose projection base data:	
	Radiological release:	curies, orcuries/sec.
	Wind speed:	mph
	Wind direction: F	rom°
	Stability class:	(A,B,C,D,E,F, or G)
	Release height:	Ft.
	Dose conversion factor:	R/hr/Ci/M³ (whole body)
		R/hr/Ci/M3 (Child Thyroid)
	Precipitation	
	Temperature at the site:	°F
5.	Dose projections:	
		Commitment*
	Distance Whole	Body (Child Thyroid)
	Rem/h	our Rem/hour of inhalation

Distance	Whole Body Rem/hour	(Child Thyroid) Rem/hour of inhalation
Site boundary		
2 miles		
5 miles		
10 miles		

Child Thyroid

# \*Projected Integrated Dose In Rem\*

Whole Body

Distance

Site Boundary	
2 miles	
5 miles	
10 miles	
Field measurement of dose r	rate or contamination (if available):
Emergency actions underway	at the facility include:
Onsite support needed from	offsite organizations:
Plant status:	
a. Reactor is: not tripp	ped/tripped
b. Plant is at: % powe	er/hot shutdown/cold shutdown/cooling dow
c. Prognosis is: stable/	/improving/degrading/unknown.
I repeat, this message:	
a. Reports an actual	1 emergency.
b. Is an exercise me	essage.
Do you have any questions?	

\*\*\*END OF FOLLOW-UP MESSAGE\*\*\*

NOTE: Record the name, title, date, time, and warning point notified.

.)			Communicator
	(Name)		(Title)
			Mecklenburg
	(Date)	(Time)	(Warning Point)
2)	de la companya de la		Communicator
	(Name)		(Title)
			Gaston
ı	(Date)	(Time)	(Warning Point)
) _			Communicator
	(Name)		(Title)
			Iredell
	(Date)	(Time)	(Warning Point)
) _			Communicator
47	(Name)		(Title)
			Catawba
	(Date)	(Time)	(Warning Point)
) _			Communicator
	(Name)		(Title)
			Lincoln
	(Date)	(Time)	(Warning Point)
) _			Communicator
νŒ	(Name)		(Title)
			Cabarrus
	(Date)	(Time)	(Warning Point)
)			Communicator
	(Name)		(Title)
			North Carolina
	(Date)	(Time)	(Warning Point)

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Enclosu	re	4.6		
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# NOTIFICATION OF EMERGENCY CONDITIONS

(Nuclear Production Duty Engineer/Corporate Communications Department)

	isat
	(Name) (Title)
McGui	re Nuclear Station. This is/is not a drill. Open your Crisis
Manage	ement Plan to Figure E-4 for the following message. Do you have
that	figure?
fy na	me is I am the
	(title) at McGuire Nuclear Station and am notifying you
of a	Notification of Unusual Event condition associated with Unit no
The i	ncident occurred at(hours) on/_/_ (date).
The i	nitiating condition for this Notification of Unusual Event is as
follo	ws:
There	have/have not been any injuries to plant personnel.
	have/have not been any injuries to plant personnel.  information on the incident is as follows:
Other	information on the incident is as follows:
Other I can	information on the incident is as follows:
Other I can infor	be reached at(telephone number) for follow-u
Other I can infor	be reached at(telephone number) for follow-u
I can inform Do you	be reached at(telephone number) for follow-uponation.  u have any questions?
Other I can inform Do you	be reached at

Form 34731 (10-81) (Formerly SPD-1002-1)

# PROCEDURE PREPARATION PROCESS RECORD

(1) ID No: <u>EP/O/A/500</u>0/06 Change(s) <u>0</u> to <u>0</u> Incorporated

(2)	STATION: McGuire Nuclear Station	
(3)	PROCEDURE TITLE: Alert	
	PREPARED BY: M. S. Glover	
(4)	PREPARED BY: M. S. Glover	DATE: 9/10/82
(5)	REVIEWED BY: O'D Hilland	DATE: 9-10-82
	Cross-Disciplinary Review By:	N/R: 4174
(6)	TEMPORARY APPROVAL (IF NECESSARY):	
	By:(SRO)	Date:
	Ву:	
7)	APPROVED BY: GWCage	Date: 9-15-82
8)	MISCELLANEOUS:	
	Reviewed/Approved By:	Date:
	Reviewed/Approved By:	Date:

EP/0/A/	5000	0/06	
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# DUKE POWER COMPANY McGUIRE NUCLEAR STATION ALERT

1.0	Symptoms

1.1 Events are in process or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant.

# 2.0 Immediate Action

2.1 Automatic

None

- 2.2 Manual
  - 2.2.1 The Shift Supervisor shall be informed of all events initiating this procedure.

# 3.0 Subsequent Actions

Initial / N/A		
	3.1	The Shift Supervisor shall assure that the appropriate emergency condition (Notification of Unusual Event, Alert, Site Area
		Emergency, or General Emergency) is declared by evaluating the acutal plant condition with Enclosure 4.1, Emergency Classifi-
		cation Flowchart and Enclosure 4.2, List of Initiating Conditions
		Emergency Action Levels, and Associated Emergency Procedure/
		Document

7 3.2 The Shift Supervisor shall ensure that all actions required by the initiating Emergency Procedure will be performed and that all actions necessary for the protection of persons and property are being taken.

# NOTE

If at any time in the course of events in this procedure, site evacuation or personnel assembly/accountability appears necessary, refer to Station Directive 3.8.1.

7 3.3 The Shift Supervisor shall assume the function of the Emergency Coordinator until the arrival of the Station Manager or his designee, at which time the Station Manager or his designee assumes the responsibility of the Emergency Coordinator. 3.4 The Emergency Coordinator shall assure prompt (within 15 minutes of declaring the emergency for State and Local authorities) notification of those personnel, and Warning Points and shall activate those Emergency Centers indicated on Enclosure 4.3 for the appropriate Initiating Condition/Emergency Procedure listed in Enclosure 4.2.

# NOTE 1

Activation of the Technical Support Center (TSC), and Operations Support Center (OSC) shall be in accordance with Station Directive 3.8.2. Activation of the Crisis Management Center (CMC) shall be in accordance with Enclosure 4.6.

# NOTE 2

See Enclosure 4.4, Telephone Listing, for notification, telephone numbers/radio codes/pager codes.

# NOTE 3

See Enclosure 4.5, Notification of Emergency Conditions, for information to be provided to State/County Warning Points.

- 3.5 The Emergency Coordinator in direct contact with the Technical Support Center and the Crisis Management Center will assess and respond to the emergency by:
  - 3.5.1 Dispatching onsite monitoring teams with associated communications equipment.
  - 3.5.2 Providing periodic plant status updates to offsite authorities (at least every 15 minutes).
  - 3.5.3 Providing periodic meteorological assessments to offsite authorities and, if any releases are occurring, dose estimates for actual releases.

## NOTE

In the event a release or potential release of radioactive materials is a threat to plant personnel or members of the general public, the Emergency Coordinator shall request Health Physics personnel to evaluate the consequences utilizing the appropriate Health Physics procedure, HP/O/B/1009/05, HP/O/B/1009/06, HP/O/B/1009/08, HP/O/B/1009/09, or HP/O/B/1009/10.

- The Emergency Coordinator shall provide protective action recommendations as necessary to the affected county warning point(s) and to the North Carolina warning point (Emergency Operations Centers if established) or to the state Radiological Protection Section, Department of Human Resources (See Enclosure 4.4, Telephone Listing) as directed by the state in accordance with the North Carolina Radiological Emergency response plan. If evaluation indicates that a potential for or an actual release of radioactive materials will result in a projected dose (REM) to the population of: (EPA Protective Action Guidelines).
  - 3.6.1 Whole body <1, thyroid <5, NO protective action is required. Monitor environmental radiation levels to verify.
  - 3.6.2 Whole body 1 to <5, thyroid 5 to <25, recommend seeking shelter and wait for further instructions. Consider evacuation particularly for children and pregnant women. Monitor environmental radiation levels. Control access to affected areas.
    - 3.6.3 Whole body 5 and above, thyroid 25 and above, recommend mandatory evacuation of populations in the affected areas.

      Monitor environmental radiation levels and adjust area for mandatory evacuation based on these levels. Control access to affected areas.

### NOTE

See Enclosure 4.4 for Telephone Listing for notification.

 3.7	The Emergency Coordinator in coordination with the Recovery Manager
	at the Crisis Management Center, will assess the emergency condition
	and determine the need to remain in an Alert Status, escalate to
	a more severe class, reduce the emergency class or close out the
	emergency.
 3.8	The Station Manager or his designee will close out the Emergency
	with a verbal summary to County and State authorities notified in

Step 3.4, followed by a written summary within 8 hours.

# 4.0 Enclosures

- 4.1 Emergency Classification Guide Flowchart
- 4.2 List of Initiating Conditions, Emergency Action Levels, and Associated Emergency Procedure/Document.
- 4.3 Notification Chart.
- 4.4 Telephone Listing.
- 4.5 Notification of Emergency Conditions.
- 4.6 Crisis Management Center Activation Format.

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# EMERGENCY CLASSIFICATION GUIDE FLOWCHART

ABHORMAL PRIMARY LEAK RATE	EXCEEDING STREET FRIMARY SECONDARY LEAK RATE TECHNICAL	PRIMARY COOLANT LEAK MATE	SITE AREA EMERGENCY	SMALL OR LANGE BREAK LOCA
ABNORMAL CORE CONDITIONS	SPECIFICATION ON PRIMARY SYSTEM LEAK MATE FECHNICAL SPECIFICATION	THE TOTAL PROPERTY.	GOACITY CAPER SHAN MAKE UP	OCCURS AND COM FAINMENT PERPORANCE IS UNSUCCISSE OF APPECTING CONDER 18 MA SUCCESS OF THE ECOS. COUND DIE AD O. COME DEGRADATION OR MELL IN SEVERAL MOUND AND CONTRAINMENT
NO FINEL DAMAGE	PAGSSURE OR ABNORMAL FUEL TEMPS WHICH EXCEED TECH SPEC, LIMITS	FUEL FAILURE SEIZURE LEADING TO	OF COOLABLE GEOMETRY	
OTHER LCOS	VALVE IN A SAFETY RELATION SYSTEM TO CLOSE FOUNDAMEN A REDUCTION OF AFFLICABLE PRESSURE LOSS OF CONTAINABLE IN INSCRIPT RESULTING IN IMMEDIATE SHUTDOWN INSCRIPTION OF ENGINEER OF STREET LOSS OF ENGINEER DESTREET FUNCTION REQUIRING SHUTDOWN BY THE STATEME OF PROFICTION BY THE STREET THE STATEMEN STREET THE STREET STREET STREET STREET STREET THE STREET STREET STREET STREET STREET THE STREET STREET STREET STREET THE STREET STREET STREET STREET STREET STREET THE STREET STREET STREET STREET STREET THE STREET STR	MALFUNCTION CAUSING LEAKAGE	STEAM LINE BREAK OUTSIDE CONTAINMENT WITHOUT 180LATION	A ALLUNG TALENDA LONG SWITH LEADING TO COME WELL DEGRADATION OF MELT IN MINUTES TO FIGURES LOSS OF CONTAINMENT INTEGRITY MAY BE IMMINENT
RPFLUENT OR AADIATION LEVELS	PRESPICATION LIMITS EXCEEDED	AGOATORE LEVEL OR AIRBORNE CONTAMINATION WHICH INDOCATES SEVERE DEGRADATION WHICH INDOCATES THAN TO THE FILL SEVEL SEVEL SEVELS THAN TO TIMES FECH SPEC. INSTANTANEOUS LIMITS	CONGESTORION OF DESCRIPTION BO MANAGE FOR K HOUN OF GREATER THAN 80 MANAGE FOR K HOUN OF GREATER THAN 80 MINUTES AT THE SITE BOUNDARY FOR ADVERSE METER BOOK OF THE SITE BOUNDARY FOR ADVERSE METER AND FOR EXAMETERS OR ARE ME ASURED IN THE ENVIRONS. CON AND FOR THE SITE OF THE	CORRESPONDED DE RECT LEVELS CORRESPONDED OF THE SITE BOUNDARY UNDER ACTUANE SITE BOUNDARY UNDER ACTUANE MET EGROLDGICAL CONDITIONS I THESE DOSE ARE SARE PRUSCISED BASED ON GIVER FLAMT PARAMETERS OR ARE MEASURED IN THE ENVIRONS
LOSS OF SHUTDOWN FUNCTIONS:		SYSTEM TO INITIATE AND COMPLETE SYSTEM TO INITIATE AND COMPLETE SUBCHITCAL COMPLETE LOSS OF ANY FUNCTION HELDE D FOR PLANT COLD SHUTDOWN	OUTSIDE THE SITE BOUNDARY TAAASSENT REQUINING OFFEATION OF SHUTOOWN SYSTEMS WITH FAILURE TO SCAM ICCONTINUED FOWER GENERATION WITH HO COME DAMAGE IMMEDIATELY EVIDER NOTHERED FOR	FOWER PLUS ALLOSS OF OPPSITE FOWER PLUS ALLUNE OF REQUISITE CORE SHUTTOWN S'YSTEMS IS SCRAM! COULD US AND TO COME MELT! SEVERAL HOUNG WITH CONTAINMENT!
ELECTRICAL ON FOWER FAILURES	LOSS OF OFFSITE FOWER OR LUBS OF	ALL CHESTS AC FOWER AND LOSS OF	PLANT HOT SHUTDOWN 1.058 OF OF STATE FOWER AND LOSS OF ALL OMSITE AC FOWER FOR MORE THAN 18 MILL OF THE OMSITE OC FOWER 1.055 OF ALL VITAL OMSITE OC FOWER	COMPACTOR LINES TO ANNO THE DOLE NOT ANNO THE DOLE NOT FUNCTION FOUND THE DOLE OF THE DOLE
CONTROL ROOM EVACUATION	MORE THAN 10 MINUTES	==	FOR MORE THAN 18 MIN. FOR COMPANIEND THE FUNCTIONS OF SAFETY BYSTEMS	UNAVAL MEANS ANE RENDERED UNAVAILABLE CORE DEGRADATION
LOSS OF MONTONS, ALARMS, ETC.	ON 6 F FLUENT PARAMETERS NOT FUCESS FUNCTIONED IN CONTROL MODIFIED TO AN EXPENT FOR MODIFIED FANT SHUTDOWN OTHER SIGNAL CONTROL MODIFIED TO AN ENUTROWN	EVACUATION OF CONTROL ROOM ANTICIPATED OR REGULINE DWITH CONTROL OF SHUTDOWN SYSTAMS ESTABLISHED FROM LOCAL STATIONS MOST OR ALL AL ARMS (ANNUNICATORS) LOST	CONTROL OF SHUTDOWN SYSTEMS NOT ESTABLISHED FROM LOCAL STATIONS NOT ESTABLISHED FROM LOCAL STATIONS NOT SHUTDOWN SYSTEMS NOT SHUTDOWN SYSTEMS NOT SHUTDOWN SYSTEMS I CANNUNCIATIONS I COST AND PLANT TRANSIENT INITIATED OR IN PROGRESS	HOURS WITH SUBSCIDENT CONTAINMENT FALLURE.  ANY MAJOR INTERNAL OR EXTERNALS EVERTREE OF THESE STREETH HOUSES
FUEL HANDLING ACCIDENT	ASSESSMENT OR COMMUNICATION	FUEL DAMAGE ACCIDENT WITH RELEASE OF ANDIOGRATIVETS TO COMPANIONE TO COMPANION TO C	MAJOR DAMAGE TO SPENT FUEL IN CONTAINMENT OR FUEL NANDLING	BARISI WHICH COULD CAUSE MASSIVE COMMON DAMAGE TO PLANT SYSTEMS
HAZARUS TO FLANT OFERATIONS	PROJECTED THAT AFFECT PLANT OFENATIONS	SUIL DING SEVEL DING SEVERE HAZARDS BEING EXPERIENCED—— OR PROJECTED POTENTIAL L'A AFFECTING SAFETY SYSTEMS	SEVENE HAZARDS BEING EXPENSENCED-	
SECURITY FIRENTS	DA ATTENTED SAGON AGE ON ATTENTED SAGON ON ATTENTED SAGON EXPENSED ON PROJECTED BEYOND	SEVERE NATURAL PHENOMERA BEING REFERENCE OF PROJECTED	NE ACTOR NOT IN COLD SHUTDOWN  IMMIERT LOSS OF PHYSICAL CONTROL  OF PLANT  SYSTEM STATUTAL PHENOMERA SING	FACILITY ANY MACOR INTERNAL OR EXTERNAL
01146118	USUAL LEVELS	OTHER PLANT CONDITIONS SKET	COMPROMISE THE PUNCTIONS OF SAFETY BYSTEMS REACTOR NOT IN COLD BEILTSOME	EVENTS (E. G. FIRES, EARTHQUARES EVEST ANTIALLY BY YOUR DESIGN BASIS) WHICH COULD CAUSE MASSIVE COMMON DAMAGE TO PLANT SYSTEMS
	WARRANT IN CREASED AWARENESS ON THE PART OF FLANT OPERATING STAFF ON IT ATE ANALOGUE LOCAL OF FILT AUTHONITIES OR REQUINE PLANT SHIPDOWN LUGGE IT ECHNICAL SPECIFICATION REQUINEMENTS OR INVOCAVE THEM THAN NORMAL CONTROLLED SHIPDOWN LAND OF THE AUTHORISE OF THANSPORT AT THOM DO CONTAMINATED	WARRANTION OF THE TSC	MARRAYING ACTIVATION CMC. RMRAGINEVE CENTERS AND RMCHITORING TEAMS ON ISSUANCE OF A PRECAUTIONARY NOTIFICATION TO THE FUBLIC NEAR THE SITE	OTHER FLANT COMMISSING EXEM PROBLEM FLANT MARKET FOR STATE AND

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# LIST OF INITIATING CONDITIONS, EMERGENCY ACTION LEVELS, AND ASSOCIATED EMERGENCY PROCEDURE/DOCUMENT

Initiat	ing Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document	
4.2.1	Severe loss of fuel cladding:	a. Very high coolant activity sample (e.g., 300 µCi/cc equivalent of 1-131)		
		b. Failed fuel monitor (EMF-48) or lab analysis indicates increase greater than 1% fuel failures within 30 minutes or 5% total fuel failure.	Tech Specs 3/4.6.7	
4.2.2	Rapid gross failure of one Steam Generator tube with loss of off- site power.	Pressurizer low pressure alarm and reactor trip and, pressurizer low level alarm and, pressurizer low pressure safety injection signal and, undervoltage alarm on 7KV buses. EMF 32, 33, and 34 Alarm(s).	EP/1/A/5000/04, AP/1/A/5500/07	
4.2.3	Rapid failure of Steam Generator tubes.	Several hundred gpm primary to secondary leak rate indicated by:  a. as above in 4.2.2 for pressurizer and EMF indicators.  b. Steam generator level increasing in one or more generator(s) and falling in	EP/1/A/5000/04	

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Initiating	Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
	Steam line break with significant primary to secondary leak rate.	Greater than 10gpm, rapidly decreasing reactor coolant Tavg, pressurizer pressure and level and,	EP/1/A/5000/04, EP/1/A/5000/03
		<ol> <li>Steam line differential pressure safety injection signal and increased con- tainment building pressure/ if break is in containment.</li> </ol>	
		<ol> <li>High steam flow and Lo Lo Tavg or Low steam pressure safety injection signal for rupture downstream of MSIV's.</li> </ol>	
	Primary coolant leak cate greater than 50 gpm.	Leak >50gpm as indicated by calcu- lation or other indication. (i.e., sump levels)	EP/1/A/5000/02, AP/1/A/5500/10
	high radiation levels or high airborne con- tamination which in- dicates a severe de- gradation in the control of radioactive materials.	Increase by a factor of 1,000 in radiation monitor reading within the station.	HP/0/B/1009/05
	loss of offsite power and loss of all onsite AC lower for up to 15 minutes. (See Site Area Emergency EP/0/A/5000/07, for extended loss).	Undervoltage alarm on 7KV buses, and blackout load sequencers actuated.	AP/1/A/5500/07
	coss of all onsite DC power.	DC bus undervoltage alarms on all buses.	Tech Specs 3/4.8.2.3, Tech Specs 3/4.8.2.4
	Coolant pump seizure leading to fuel failure.	Reactor coolant pump auto trip alarm, and reactor trip on low coolant flow, and failed fuel monitor alarm EMF48.	AP/1/A/5500/04, AP/1/A/5500/08 OP/0/A/6150/14, AP/1/A/5500/05

EP/0/A/5000/06 Enclosure 4.2 Page 3 of 5

Initiati	ng Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document	
4.2.10	Complete loss of func- tions needed for plant cold shutdown.	RHR not functional and inability to sustain natural or forced cir- culation.	AP/1/A/5500/17, OP/1/A/6100/04	
4.2.11	Failure of the reactor protection system to initiate and complete a scram which brings the reactor subcritical.	Reactor remains critical after all attempts to trip reactor have been completed.	AP/0/A/5500/34	
4.2.12	Fuel damage accident with release of radio-activity to containment or fuel handling building.	Observation of damage to spent fuel assembly, and  1. EMF-16 and 17 alarm.  2. EMF-38, 39, 40, or 42 alarm.	AP/1/A/5500/25	
4.2.13	Fire potentially affecting safety systems.	Observation of a fire that could affect safety systems.	Station Directive 2.11 Series, Tech Specs 3/4.5	
4.2.14	Most or all alarms (annun- ciators) lost.	As observed.	OP/O/A/6350/01A	
4.2.15	Radiological effluents greater than 10 times Tech Specs instantaneous	For EMF35 - Low Range offscale High Range 1 x 10 cpm		
	limits (an instantaneous rate which, if continued over 2 hours, would result in about 1mr at the site boundary under average meteorological conditions or whenever effluent monitors or radiological monitoring detect these levels).	For EMF36 - Low Range 2 x 10 <sup>6</sup> cpm High Range 5 x 10 <sup>7</sup> cpm	HP/0/B/1009/05	
4.2.16	Ongoing security compromise.	As reported by Security force.	Station Security Plan	

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Initiati	ng Co	nditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.2.17	bei	ere natural phenomena ng experienced or jected:		AP/0/A/5500/30, AP/0/A/5500/29
	а.	Earthquake greater than Operational Basis Earthquake Levels	>0.08gH, >.053gV, Annunciator Alarm, (AD-13).	
	b.	Flood, low water, hur- ricane surge, seiche near design levels. (Lake tidal wave)	As observed.	
	c.	Any tornado striking facility.	As observed.	
	d.	Hurricane winds near design basis level.	As observed (93 mph)/from National Weather Service information.	
4.2.18		er hazards being ex- ienced or projected.		AP/0/A/5500/32, AP/0/A/5500/31 AP/1/A/5500/23
	а.	Aircraft crash on facility.	As observed.	
	ь.	Missile impacts from whatever source on facility.	As observed.	
	с.	Know explosion damage to facility affecting plant operation.	As observed.	
	d.	Entry into facility environs of toxic or flammable gases.	As observed.	
	e.	Turbine failure causing casing pene- tration.	Turbine trip and observation of turbine malfunction or failure.	

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Initiati	ing Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.2.19	Other plant conditions exist that in the judge- ment of the Shift Super- visor, the Operations Duty Engineer, the Superintendent of Opera- tions, or the Plant Manager warrant pre- cautionary activation of the Technical Support Center and near site Crisis Management Center.	As determined by Shift Supervisor/ Emergency Coordinator.	As dictated by Plant Conditions.
4.2.20	Evacuation of control room anticipated or required with control of shutdown systems established from local station.	As determined by Shift Supervisor/ Emergency Coordinator.	AP/1/A/5500/17, OP/1/A/6100/04

# NOTIFICATION/ACTIVATION ALERT

Notify/Activate the following personnel/or Emergency Centers for all Initiating Conditions listed in Enclosure 4.2. (See Enclosure 4.4 for Telephone Listing)

NOTIFY/ACTIVATE	NOTIFICATION	COMPLETE-INITIAL
Shift Supervisor		
Operations Duty Engineer		
Station Manager		
Superintendent of Operations		
Superintendent of Technical Services		
Projects and Licensing Engineer		
Station Health Physicist		
North Carolina State Warning Point		
Mecklenburg County Warning Point		
Lincoln County Warning Point		
Catawba County Warning Point		
Iredell County Warning Point		
Gaston County Warning Point		
Cabarrus County Warning Point		
N.R.C. via ENS (Red Phone)		
N.R.C. Station Representative		
Construction Project Manager		
Superintendent of Maintenance		
Superintendent of Administration		
Activate T.S.C. (Station Directive 3.8.2)		
Activate O.S.C. (Station Directive 3.8.2)		
Activate C.M.C. (Enclosure 4.4, Enclosure 4.6)		

# TELEPHONE LISTING

4.4.1	Operations Duty Engineer (PA Syste P&T Pager -	em)	
4.4.2	Station Manager		
		Speed -	
		Speed -	
4.4.3	Superintendent of Operations		
4,4,5		Speed	
4.4.4	Superintendent of Technical Service	es -	
	Home - System		
4.4.5	Projects and Licensing Engineer -		
		Speed -	
4.4.6	Station Health Physicist		
	Home - System S	peed -	
	P&T Pager		
4.4.7	NC State Warning Point, Raleigh -		- System Speed -
4.4.8	Mecklenburg County Warning Point -		
		Back-up:	
		Back-up:	Emergency Radio, Code:
4.4.9	Lincoln County Warning Point -	Primary:	
		Back-up:	
		Back-up:	Emergency Radio, Code: _
4.4.10	Catawba County Warning Point -	Primary:	Ring Down Phone
		Back-up:	The state of the s
		Back-up:	Emergency Radio, Code:
4.4.11	Iredell County Warning Point -	Primary:	
		Back-up:	- System Speed
		Back-up:	Emergency Radio, Code: _
4.4.12	Gaston County Warning Point -	Primary:	Ring Down Phone
		Back-up:	- System Speed
		Back-up:	Emergency Radio, Code: _
4.4.13	Cabarrus County Warning Point -	Primary:	Ring Down Phone
		Back-up:	- System Speed
,		Back-up:	Emergency Radio, Code: _

# NOTE

Radio Code will activate all county radio units.

# TELEPHONE LIST

		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
.4.14	N.R.C. Operation Ce	nter, Emergency	Notification System (ENS Phon
.4.15	N.R.C. Station Repr	esentative	
		Office -	
		Home -	- System Speed -
		Wife work -	- System Speed -
		P&T Pager	
.4.16	Construction Projec	t Manager Cons	struction '
		Home :	System Speed -
			- System Speed -
			.,
.4.17	Superintendent of M	aintenance -	
	Superincensent of it	Home -	System Speed -
		tionic	7,222
.4.18	Superintendent of A	dministration .	
.4.10	Superincendent of A	Home -	System Speed -
		nome	Jyseem opeca
.4.19	CRISIS MANAGEMENT C	ENTER ACTIVATIO	N.
.4.17	CRISIS PARAGERENT C	THILL WOLLTHIE	
	Hal B. Tucker	Office:	
	or	Home:	- System Speed -
	OI.	nome.	System speed
	J. Ed Smith	Office:	Extension
		Home:	- System Speed
	or	nome:	System Speed
	Y 11 11	Office:	- Extension
	J. W. Hampton		- System Speed
	or	Home:	- System Speed
		0661	7
	R. W. Bostian	Office:	0 0d
	or	Home:	System Speed -
			Comment Count
	Nuclear Production		- System Speed
		P&T Pager	
.4.20	Radiation Protection	n Section, Depa	artment of Human Resources-
		V	- System Speed -

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# MCGUIRE NUCLEAR STATION NOTIFICATION OF EMERGENCY CONDITIONS

		and the second second				
4.5.1	Include as a minimum, the following information to the North Carolina					
	State Warning Point, the six County Warning Points, (Mecklenburg, Catawba,					
	Iredell, Lincoln, Gaston, and Cabarrus) and the South Carolina Warning Point. NOTE 1: See Enclosure 4.4, Telephone Listing					
	NOTE 2: A. Complete Pa	art I of this format as a minim	nal first			
	notification	on of a reportable incident.				
	B. Complete Pa	art I and II of this format to	provide			
	minimal fol	llowup information.				
		cy Message Information	ACKNOWLEDGEMENT			
	TELEPHONE RESPON	NSE:	Mecklenburg			
			Gaston			
	"This is Mo	Guire Nuclear Station.	Iredell			
	Please ac	knowledge when you are	Lincoln			
		copy Emergency Information."	Cabarrus			
			Catawba			
	1. This is McGuire Nucl	ear Station.				
	2. My name is					
	3. This message (Number					
	a. Reports a					
	b. Is an exer					
		is				
		on:				
	6. The class of emergen					
		on of an Unusual Event				
	b. Alert					
	c. Site Area					
	d. General Em					
	7. The Classification of	of Emergency was declared at:				
			(A.M./P.M.)			
	(Date)					

a. Does not involve the release of radioactive materials from the plant.  b. Involves the POTENTIAL for a release, but NO release is occurring.  c. Involves a release of radioactive material.  We recommend the following protective action: (select one of the below options)  a. No protective action is recommended at this time.  b. People living in zones remaind indoors with doors and windows closed.  c. People in zones EVACUATE their homes and businesses.  d. Pregnant women and children in zones remain indoors with the doors and windows closed.  e. Pregnant women and children in zones evacuate to the nearest shelter/reception center.  f. Other recommendations:  There will be:  a. A followup message  b. No further communications  I repeat, this message:  a. Reports an actual emergency.  b. Is an exercise message.  Relay this information to the persons indicated in your alert procedures for an incident at McGuire Nuclear Station.	Th	e Emergency Condition (Select one of the below options):
b. Involves the POTENTIAL for a release, but NO release is occurring.  c. Involves a release of radioactive material.  We recommend the following protective action: (select one of the below options)  a. No protective action is recommended at this time.  b. People living in zones remaind indoors with doors and windows closed.  c. People in zones EVACUATE their homes and businesses.  d. Pregnant women and children in zones remain indoors with the doors and windows closed.  e. Pregnant women and children in zones evacuate to the nearest shelter/reception center.  f. Other recommendations:  There will be:  a. A followup message  b. No further communications  I repeat, this message:  a. Reports an actual emergency.  b. Is an exercise message.  Relay this information to the persons indicated in your alert pro-		a. Does not involve the release of radioactive materials
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a. Reports an actual emergency.  b. Is an exercise message.  Relay this information to the persons indicated in your alert pro-	_	
b. Is an exercise message.  Relay this information to the persons indicated in your alert pro-	I	repeat, this message:
Relay this information to the persons indicated in your alert pro-	_	a. Reports an actual emergency.
		b. Is an exercise message.
cedures for an incident at McGuire Nuclear Station.	Re	lay this information to the persons indicated in your alert pro-
	ce	dures for an incident at McGuire Nuclear Station.
		Part II.

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The type of actual or project	ted release is:
a. Airborne	
b. Waterborne	
c. Surface spill	
d. Other	
The source and description of	f the release is:
a. Release began/will	begin ata.m./p.m.; time since
reactor trip is	
b. The estimated dura	tion of the release is hours.
Dose projection base data:	
Radiological release:	curies, orcuries/sec.
Wind speed:	mph
Wind direction: From	m
Stability class:	(A,B,C,D,E,F, or G)
Release height:	Ft.
Dose conversion factor:	R/hr/Ci/M³ (whole body)
	R/hr/Ci/M3 (Child Thyroid)
Precipitation	
Temperature at the site:	°F
Dose projections:	
A STATE OF THE PROPERTY OF THE PARTY OF THE	

Distance	Whole Body Rem/hour	(Child Thyroid) Rem/hour of inhalation
Site boundary		
2 miles		
5 miles		
10 miles		

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Child Thyroid

### \*Projected Integrated Dose In Rem\*

Whole Body

Distance

Site Boundar	у				
2 miles					
5 miles					-
10 miles					PASE .
Field measur	ement of do	ose rate o	r contamin	ation (if a	vailable):
Emergency ac	tions under	rway at th	e facility	include:	
Onsite suppo	rt needed	from offsi	te organiz	ations:	
Onsite suppo		from offsi	te organiz	ations:	
Plant status				ations:	
Plant status	: is: not	tripped/tr	ipped		wn/cooling down
Plant status a. Reactor b. Plant i	: is: not ! s at:%	tripped/tr power/hot	ipped shutdown/		
Plant status a. Reactor b. Plant i c. Prognos	: is: not : s at:% is is: sta	tripped/tr power/hot able/impro	ipped shutdown/	cold shutdow	
Plant status a. Reactor b. Plant i c. Prognos I repeat, th	: is: not : s at:% is is: sta	tripped/tr power/hot able/impro	ipped shutdown/ wing/degra	cold shutdow	
Plant status a. Reactor b. Plant i c. Prognos I repeat, th	is: not is at:	tripped/tr power/hot able/impro : ctual emer	ipped shutdown/ wing/degra	cold shutdow	

\*\*\*END OF FOLLOW-UP MESSAGE\*\*\*

NOTE: Record the name, title, date, time, and warning point notified.

		Communicator
(Name	2)	(Title)
		Mecklenburg
(Date	(Time)	(Warning Point)
		Communicator
(Name	2)	(Title)
		Gaston
(Date	e) (Time)	(Warning Point)
		Communicator
(Name	2)	(Title)
		Iredell
(Date	e) (Time)	(Warning Point)
		Communicator
(Name		(Title)
		Catawba
(Date	e) (Time)	(Warning Point)
		Communicator
(Name		(Title)
		Lincoln
(Date	e) (Time)	(Warning Point)
		Communicator
(Name	2)	(Title)
		Cabarrus
(Date	e) (Time)	(Warning Point)
		Communicator
(Name		(Title)
	<b>建设工工工工工工工工工工工工工工工工工工工工工工工工工工工工工工工工工工工工</b>	North Carolina
(Date	(Time)	(Warning Point)

### CRISIS MANAGEMENT CENTER ACTIVATION FORMAT

This is at McGuire Nuclear Station. This
is/is not a drill. Open your Crisis Management Plan to Figure E-2 for the
following message. Do you have that Figure?
My name is (title)
at McGuire Nuclear Station and am notifying you of an incident at McGuire
Nuclear Station, Unit No
The incident occurred at(Hours) on/_/(Date).
The class of emergency is:
The initiating condition causing the emergency is as follows:
Release of radioactivity:is taking placeis not taking place.
Wind direction (blowing from)degrees.
Corrective measures being taken at present are as follows:
It is recommended that you activate the Crisis Management Center in
accordance with the Crisis Management Plan.
Do you have any questions?
I repeat, this is/is not a drill.
Record name of person notified, title, and time notified.
(Name) (Title) (Time)

Form 34731 (10-81) (Formerly SPD-1002-1)

# DUKE POWER COMPANY PROCEDURE PREPARATION PROCESS RECORD

(1) ID No: EP/O/A/5000/07 Change(s) 0 to 0 Incorporated

(2)	STATION: McGuire Nuclear Station		
(3)	PROCEDURE TITLE: Site Area Emergency		
,,,	M.S. 66		0/10/00
	3 11 11 11	1000	9/10/82
(5)	REVIEWED BY: A STALLET	DATE:_	9-10-82
	Cross-Disciplinary Review By:		N/R: 0704
(6)	TEMPORARY APPROVAL (IF NECESSARY):		
	By:(SRO)	Date:_	
	Ву:	Date:_	
7)	APPROVED BY: Swy	Date:_	9-13-82
8)	MISCELLANEOUS:		
	Reviewed/Approved By:	Date:_	
	Reviewed/Approved By:	Date:	

# DUKE POWER COMPANY MCGUIRE NUCLEAR STATION SITE AREA EMERGENCY

### 1.0 Symptoms

1.1 Events are in process or have occurred which involve actual or likely major failures of plant functions needed for protection of the public.

### 2.0 Immediate Action

2.1 Automatic

None

- 2.2 Manual
  - 2.2.1 The Shift Supervisor shall be informed of all events initiating this procedure.

### 3.0 Subsequent Actions

Initial/N/A		
	3.1	The Shift Supervisor shall assure that the appropriate emergency condition (Notification of Unusual Event, Alert, Site Area Emergency, or General Emergency) is declared by evaluating the actual plant condition with Enclosure 4.1, Emergency Classification Flowchart and Enclosure 4.2, List of Initiating Conditions, Emergency Action Levels, and Associated Emergency Procedure/Document.

3.2 The Shift Supervisor shall ensure that all actions required by the initiating Emergency Procedure will be performed and that all actions necessary for the protection of persons and property are being taken.

### NOTE

If at any time in the course of events in this procedure, site evacuation or personnel assembly/accountability appears necessary, refer to Station Directive 3.8.1.

3.3 The Shift Supervisor shall assume the function of the Emergency Coordinator until the arrival of the Station Manager or his designee at which time the Station Manager or his designee assumes the responsibility of the Emergency Coordinator. 3.4 The Emergency Coordinator shall assure prompt (within 15 minutes of declaring the emergency for State and Local authorities) notification of those personnel and Warning Points and shall activate those Emergency Centers indicated on Enclosure 4.3 for the appropriate Initiating Condition/Emergency Procedure listed in Enclosure 4.2.

### NOTE 1

Activation of the Technical Support Center (TSC), Operations Support Center (OSC), shall be in accordance with Station Directive 3.8.2. Activation of the Crisis Management Center (CMC) shall be in accordance with Enclosure 4.6.

### NOTE 2

See Enclosure 4.4, Telephone Listing, for notification, telephone numbers/radio codes/pager codes.

### NOTE 3

See Enclosure 4.5, Notification of Emergency Conditions to be provided to State/County Warning Points.

- 3.5 The Emergency Coordinator in direct contact with the Technical Support Center and the Crisis Management Center will assess and respond to the emergency by:
  - 3.5.1 Dispatching the Onsite and Offsite Monitoring teams with associated communications.
  - 3.5.2 Providing meteorological and dose estimates to offsite authorities for actual releases via a dedicated individual or automated data transmission.
  - 3.5.3 Providing release and dose projections based on available plant condition information and foreseeable contingencies to offsite authorities.

### NOTE

In the event a release or potential release of radioactive materials is a threat to plant personnel or members of the general public, the Emergency Coordinator shall request Health Physics personnel to evaluate the consequences utilizing the appropriate Health Physics procedure, HP/O/B/1009/05, HP/O/B/1009/06, HP/O/B/1009/08, HP/O/B/1009/09, HP/O/B/1009/10.

- 3.6 The Emergency Coordinator shall provide protective action recommendations as necessary to the affected county warning point(s) and to the North Carolina Warning Point (Emergency Operations Centers if established) or the Radiological Protection Section, Department of Human Resources (see Enclosure 4.4, Telephone Listing) as directed by the state in accordance with the North Carolina Radiological Emergency response plan. If evaluation indicates that a potential for or an actual release of radioactive materials will result in a projected dose (REM) to the population of: (EPA Protective Action Guidelines).
  - 3.6.1 Whole body <1, thyroid <5, NO protective action is required. Monitor environmental radiation levels to verify.
  - 3.6.2 Whole body 1 to <5, thyroid 5 to <25, recommend seeking shelter and wait for further instructions, consider evacuation particularly for children and pregnant women.

    Monitor environmental radiation levels and adjust area for mandatory evacuation based on these levels. Control access to affected areas.
  - 3.6.3 Whole body 5 and above, thyroid 25 and above, recommend mandatory evacuation of populations in the affected areas. Monitor environmental radiation levels and adjust area for mandatory evacuation based on these levels. Control access to affected areas.

### NOTE

See Enclosure 4.4, Telephone Listing for notification.

- 3.7 The Emergency Coordinator in coordination with the Recovery Manager, at the Crisis Management Center, will provide or make available:
  - 3.7.1 A dedicated individual for plant status updates to offsite authorities and periodic press briefings.
  - 3.7.2 Senior technical and management staff onsite available for consulation with the NRC and State on a periodic basis.

	3.8	The Emergency Coordinator in coordination with Recovery Manager at
		the Crisis Management Center, will assess the emergency condition
		and determine the need to remain in a Site Area Emergency,
		escalate to a more severe class, reduce the emergency class, or
		close out the emergency.
1	3.9	The Recovery Manager at the Crisis Management Center will close

3.9 The Recovery Manager at the Crisis Management Center will close out or recommend reduction of the emergency class, by briefing of offsite authorities at the Crisis Management Center or by phone if necessary, followed by written summary within 8 hours.

### 4.0 Enclosures

- 4.1 Emergency Classification Guide Flowchart
- 4.2 List of Initiating Conditions, Emergency Action Levels, and Associated Emergency Procedure/Document.
- 4.3 Notification Chart.
- 4.4 Telephone Listing.
- 4.5 Notification of Emergency Conditions.
- 4.6 Crisis Management Center Activation Format.

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### **EMERGENCY CLASSIFICATION GUIDE FLOWCHART**

	EVENTCATEGORY	UNUSUAL EVENT	ALER!	SITE AREA EMERGENCY	GENERAL EMERGENCY
	ABNOHMAL PRIMARY LEAR RATE	EXCEEDING EITHER PRIMARY/ SECONDARY LEAR RATE TECHNICAL SPECIFICATION OR PRIMARY SYSTEM LEAR RATE TECHNICAL SPECIFICATION	PRIMARY COOLANT LEAR RATE	KNOWN LOSS OF COOLANT ACCIDENT LOCA) GREATER THAN MAKE-UP CAPACITY	SMALL OR LARGE BREAK 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
21	ABNORMAL CORE CONDITIONS	FUEL DAMAGE INDICATION  ABNORMAL COOLANT TEMP AND/OR  PRESSURE OR ABNORMAL FUEL TEMPS.  WHICH EXCEED TECH. SPEC. LIMITS	COOLANT PIMP SEIZURE LEADING TO	DEGRADED CORE WITH POSSIBLE LOSS	BOUNDARY LOSS OF 7 OF 3 FISSION PRODUCT BARRIERS WITH POTENTIAL LOSS OF THE THISD BARRIER
31	STEAM LINE SHEAK OR MS RV/SV	FAILURE OF A SAFETY ON RELIEF VALVE IN A SAFETY RELATED SYSTEM TO CLOSE FOLLOWING A REDUCTION	MALFUNCTION CAUSING LEAKAGE	CONTAINMENT WITHOUT ISOLATION	SMALL OR LANGE LOCAS WITH FAILURE OF ECCS TO PERFORM LEADING TO CORE MELT
	OTHER LCOR	OF APPLICABLE PRESSURE LOSS OF CONTAINMENT INTEGRITY RESULTING IN IMMEDIATE SHUTDOWN BY YECH, SPEC. LOSS OF ENGINEERED SAFETY FEATURE OR FIRE PROTECTION FUNCTION REQUIRING SHUTDOWN BY TECH, SPEC. EMERGENCY CORE COOLING SYSTEM (ECCS) INTIATED AND DISCHARGED TO VESSEL			DEGRADATION OR MELT IN MINUTES TO HOURS LOSS OF CONTAINMENT INTEGRITY MAY BE IMMINENT
*	ABNORMAL MADIOLOGICAL EFFLUENT OR MADIATION LEVELS	AADIOLOGICAL EFFLUENT TECHNICAL	RADIATION LEVELS OR AIRSORNE CONTAMINATION WHICH INDICATES SEVERE DE GRADATION IN CONTROL OF RADIOACTIVE MATERIAL RADIOLOGICAL EFFLUENTS OREATER THAN 18 TIMES TECH SPEC. INSTANTANEOUS LIMITS	COPRESPONDING TO GREATER THAN SO MEMORY FOR S. HOUR OR GREATER THAN SO MEMOR OR GREATER THAN SO MEMORY FOR TWO MINUTES AT THE SITE SOUNDARY FOR ADVERSE METEOROLOGY  - HIESE DOSE RAYES ARE FROMECTED  BASED ON OTHER PLANT PARAMETERS OF ARE MEASURED IN THE ENVIRONS  EFA PROTECTIVE ACTION GUIDELINES  ARE PROJECTED TO SE EXCEEDED	EFFLUENT MONITORS DETECT LEVELS CORRESPONDING TO I REMITE WE OR S REMARY THY ROID AT THE SITE BOUNDARY UNDER ACTUAL MITEOROLOGICAL CONDITIONS THESE DOSE RATES ARE PROJECTED BASED ON OTHER PLANT PARAMETERS OR ARE MEASURED IN THE ENVIRONS
**	LOSS OF SHUTDOWN FUNCTIONS: DECAY HEAT OR REACTIVITY		FAILURE OF REACTOR PROTECTION SYSTEM TO INITIATE AND COMPLETE A SCRAM WHICH BRINGS THE REACTOR SUBCRITICAL COMPLETE LOSS OF ANY FUNCTION— NEEDED FOR FLANT COLD SHUTDOWN	OUTSIDE THE SITE BOUNDARY  TRANSIENT REQUIRING OPERATION OF SHUTDOWN SYSTEMS WITH FAILURE TO SCHAM (CONTINUED FOWER GENERATION WITH NO CORE DAMAGE IMMEDIATELY EVIDENT)  LOSS OF ANY FUNCTION NEEDED FOR—	TRANSIENT IE.G. LOSS OF OFFSITE FOWER! PLUS FAILURE OF REQUISITE CORE SHUTDOWN SYSTEMS IE.G. SCRAM! COULD LEAD TO CORE MELT IN SEVERAL HOURS WITH CONTAINMENT FAILURE LIKELY, MORE SEVERE
n	ELECTRICAL OR FOWER FAILURES	LOSS OF OFFSITE FOWER OR LOSS OF	LOSS OF ALL ONSITE DO POWER	PLANT HOT SHUTDOWN  LOSS OF OFFSITE FOWER AND LOSS OF  ALL ONSITE AC FOWER FOR MORE THAN IS MIN.  LOSS OF ALL VITAL ONSITE DC FOWER	CONSEQUENCES IF PUMP TRIP DOES NOT FUNCTION. SHUTDOWN OCCURS BUT REQUISITE DECAY HEAT REMOVAL SYSTEM IS GRAND OR NOWASFETY SYSTEM HEAT
81	FIRE	FIRE WITHIN THE PLANT LASTING	FIRE POTENTIALLY APPECTING	FOR MORE THAN IS MIN. —FIRE COMPROMISING THE FUNCTIONS ——	REMOVAL MEANS ARE RENDERED
91	LOSS OF MONITORS ALARMS ETC	MORE THAN 10 MINUTES	SAFETY SYSTEMS EVACUATION OF CONTROL ROOM ANTICIPATES OR REQUIRED WITH CONTROL OF SHUTDOWN SYSTEMS ESTABLISHED FROM LOCAL STATIONS	OF SAFETY SYSTEMS  SYACUATION OF CONTROL ROOM AND CONTROL OF SHUTDOWN SYSTEMS NOT ESTABLISHED FROM LOCAL STATIONS IN 16 MIN.	UNAVAILABLE CORE DEGRADATION OR MELT COULD OCCUR IN ABOUT TEN HOURS WITH SUBSEQUENT CONTAINMENT FAILURE.
101		INDICATIONS OR ALARMS ON PROCESS OR EFFLUENT PARAMETERS NOT FUNCTIONING IN CONTROL ROOM TO AN EXTENT REQUIRING PLANT SHUTDOWN OTHER SIGNIFICANT LOSS OF ASSESSMENT OR COMMUNICATION CAPABILITY	MOST OR ALL ALARMS	LANSIENT INITIATED OR IN PROGRESS	ANY MAJOR INTERNAL OR EXTERNAL EVENTS (E.G. FIRES, EARTHQUAKES SUBSTANTIALLY BE VOND DESIGN BASISE WHICH COULD CAUSE MASSIVE COMMON DEMAGE TO PLANT SYSTEMS
111	FUEL HANDLING ACCIDENT		FUEL DAMAGE ACCIDENT WITH RELEASE OF RADIOACTIVITY TO CONTAINMENT OR FUEL HANDLING	MAJOR DAMAGE TO SPENT FUEL IN CONTAINMENT OR FUEL HANDLING BUILDING	
121	HAZAROS TO PLANT OPERATIONS	PROJECTED THAT AFFECT PLANT OPERATIONS	BUILDING  SEVERE HAZAZOS BEING EXPERIENCED  OR PROJECTED POTENTIALLY  AFFECTING SAFETY SYSTEMS	OR PROJECTED THAT COMPROMISE THE	
131	SECURITY THREATS	SECURITY THREAT, ATTEMPTED ENTRY	ONGOING SECURITY COMPROMISE	PUNCTIONS OF SAFETY SYSTEMS. REACTOR NOT IN COLO SHUTDOWN	
141	NATURAL EVENTS	OR ATTEMPTED SABOTAGE  NATURAL PREMOMENA BEING  EXPERIENCED OR PROJECTED SEYOND  USUAL LEVELS	SEVERS NATURAL PHENOMENA BEING	OF PLANT  - SEVERE NATURAL PHENOMENA BEING  EXPERIENCED ON PROJECTED THAT  COMPROMISE THE FUNCTIONS OF  SAFETY SYSTEMS REACTOR NOT IN	LOSS OF PHYSICAL CONTROL OF THE FACILITY  ANY MAJOR INTERNAL ON EXTERNAL EVENTS (E.G. FIRES, EARTHQUERES SUBSTANTIALLY SEYOND DESIGN BASIS) WHICH COULD CAUSE MASSIVE
159	OTHERS	OTHER PLANT CONDITIONS EXIST THAT WARRANT INCREASED AWARENESS ON THE PART OF PLANT OFF RATING STAFF OR STATE AND/OR LOCAL OF SITE AUTHOUSTIES OR REGULERE PLANT SHUTDOWN UNDER TECHNICAL SPECIFICATION REQUIREMENTS OR INVOLVE OTHER THAN NORMAL CONTINULED SHUTDOWN TRANSPORTATION OF CONTAMINATED INCLUSED HOLVIDUAL FROM SITE TO OFFSITE HOSPITAL	OTHER PLANT CONDITIONS EXIST WARRANTING PRECAUTIONARY ACTIVATION OF THE TSC	COLD SHUTDOWN  OTHER PLANT CONDITIONS EXIST— WARRANTING ACTIVATION OF CMC, EMERGENCY CENTERS AND MONITORING TEAMS OR ISSUANCE OF A PRECAUTIONARY NOTIFICATION TO THE PUBLIC NEAR THE SITE	COMMON DAMAGE TO PLANT SYSTEMS OTHER PLANT CONDITIONS EXIST FROM WHATEVER SOURCE THAT MAKE RELEASE OF LARGE AMOUNTS OF RADIOACTIVITY IN A SHORT TIME PERIOD POSSIBLE. IE Q ANY CORE MELT SITUATIONS

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# LIST OF INITIATING CONDITIONS, EMERGENCY ACTION LEVELS, AND ASSOCIATED EMERGENCY PROCEDURE/DOCUMENT

Initiat	ing Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document	
4.2.1	Known loss of coolant accident greater than makeup pump capacity.	Pressurizer low pressure reactor trip and pressurizer low pressure safety injection signal and high containment building pressure, (INSP5040, 5050, 5060, 5070) and high containment building sump level, (INIP5260, 5270) and high containment humidity, (INSP5400, 5410) and EMF 38, 39, and 40 alarm.	EP/1/A/5000/02	
4.2.2	Degraded core with possible loss of coolable geometry (indicators should include instrumentation to detect inadequate core cooling, coolant activity and/or containment radioactivity levels).	Valid readings on incore thermocouples above $700^{\circ} F$ and $\Delta T$ rapidly increasing or no $\Delta T$ across core.	AP/1/A/5500/05	
4.2.3	Rapid failure of steam generator tubes with loss of offsite power (e.g., several hundred gpm pri- mary to secondary leak rate).	Pressurizer low pressure alarm and reactor trip, and pressurizer low level alarm, and EMF 32, 33, and 34 alarm, and undervoltage alarms on 7KV buses, and steam generator water level rapidly increasing in one or more steam generators falling in the others, and pressurizer level rapidly decreasing, (INCP5151, 5160, 5172) and possible lifting of steam generator PRV's and/or safety valves.	EP/1/A/5000/04, AP/1/A/5500/07	

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Initiat	ing Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.2.4	Steam line break with greater than 50gpm primary to secondary leakage and indication of fuel damage.	Rapidly decreasing reactor coolant Tavg, pressurizer pressure and level. Steam line differential pressure safety injection signal, and High containment building pressure, if steamline break is in containment (INSP5040, 5050, 5060, 5070) and EMF 51A and/or B alarm, or high steam flow and Lo Lo Tavg or low steam pressure safety injection signal, and EMF 48 alarm.	EP/1/A/5000/03
4.2.5	loss of offsite power and loss of onsite AC power for more than 15 minutes.	Undervoltage alarms on 7KV buses.	AP/1/A/5500/07
4.2.6	Loss of all vital onsite DC power for more than 15 minutes.	Blackout load sequencers actuated, DC bus undervoltage all buses and indications as in 4.2.5 above.	Tech Specs 3/8.2.3, 3/8.2.4
4.2.7	Complete loss of any function needed for plant hot shutdown.	Inability to establish charging pump injection, and Inability to establish emergency feedwater flow, or Inability to establish service water flow, and Inability to establish component cooling water flow.	OP/1/A/6100/04, AP/1/A/5500/17
4.2.8	Transient requiring opera- tion of shutdown systems with failure to scram (continued power genera- tion but no core damage immediately evident).	Reactor remains critical after all attempts to trip reactor have been completed.	EP/1/A/5000/01, AP/0/A/5500/34
4.2.9	Major damage to spent fuel in containment or fuel handling building (e.g., large object damages fuel or water loss below fuel level).	Observation of major damage to one or more spent fuel assemblies, or spent fuel pool water below fuel level, or EMF16, 17, 38, 39, 40, or 42 alarm.	AP/1/A/5500/25

EP/0/A/5000/07 Enclosure 4.2 Page 3 of 6

Initiati	ng Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document	
4.2.10	Fire compromising the function of safety systems.	Observation of a major fire that defeats redundant safety system or function.	Tech Specs 3/4.5, Station Directive 2.11 Series	
4.2.11	Most or all alarms (annunciators) lost and plant transient initiated or in progress.	As determined by the Shift Supervisor/ Emergency Coordinator.	OP/O/A/6350/01A	
4.2.12	Effluent monitors detect levels corresponding to greater than 50 mr/hr	For EMF35 Low Range, offscale <sub>3</sub> High Range 8 x 10 <sup>3</sup> cpm. (See Note 1)		
	for 1/2 hour or greater than 500 mr/hr W.B. for two minutes (or five times these levels to the thy- roid) at the site boundary	For EMF36 Low Range 3 x 10 <sup>5</sup> cpm High Range 7 x 10 cpm (See Note 1)	HP/0/B/1009/05, HP/0/B/1009/09	
	for adverse meteorology (See Note 2).	For EMF37 Change of 143 cpm/minute for 30 minutes or a change of 1430 cpm/minute for 2 minutes (See Note 1).		
		NOTE 1: These values are worst case calculations and may not reflect more favorable weather conditions.		
		NOTE 2: These dose rates are projected based on other plant parameters (e.g., radiation level in containment with leak rate appropriate for existing containment pressure) or are measured in the environs. (EPA Protective Action Guidelines are projected to be exceeded outside the site boundary).		

Initiati	ng Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document	
4.2.13	Imminent loss of physical control of plant.	Physical attack on the plant involving imminent occupancy of control room and auxiliary shutdown panels.	Station Security Plan	
4.2.14	Severe natural pheno- mena being experienced or projected with plant not in cold shutdown.		AP/0/A/5500/29, AP/0/A/5500/30	
	4.2.14.1			
	Earthquake greater than SSE (Safe Shutdown Earth- quake) levels.	(>.15gH, >.1gV) as determined by monitoring seismic instrumentation and recording devices. (SMP-1)		
	4.2.14.2			
	Flood, low water, hurricane surge, seiche greater than design levels (lake tidal waves) or failure of protection of vital equipment at lower levels.	As determined by Shift Supervisor/ Emergency Coordinator.		
	4.2.14.3			
	Sustained winds or torna- does in excess of design levels.	(>95mph) as observed or documented by the National Weather Service Information.		
4.2.15	Other hazards being ex- perienced or projected with plant not in cold shutdown.		AP/0/A/5500/32, AP/0/A/5500/31	

Initiating Conditions

Emergency Action Level (EAL)

Emergency Procedure/Document

4.2.15.1

Aircraft crash affecting vital structures by impact or fire.

Aircraft crash causing damage or fire to: Containment Building, Control Room, Auxiliary Building, Fuel Building, or Intake Structure.

4.2.15.2

Severe damage to safe shutdown equipment from missiles or explosion.

Loss of functions needed for hot shutdown as in 4.2.7.

4.2.15.3

Entry of uncontrolled flammable gases into vital areas. Entry of uncontrolled toxic gases into vital areas where lack of access to the area constitutes a safety problem.

Entry of uncontrolled or toxic or flammable gases into: Control Room, Cable Spreading Room, Containment Building, Switchgear Room, Safe Shutdown Panels or Diesel Rooms.

4.2.16

Other plant conditions exist that in the judgement of the Shift Supervisor, the Operations Duty Engineer, the Superintendent of Operations, or the Plant Manager warrant activation of emergency centers and monitoring teams and a precautionary public notification to the public near the site.

As determined by Shift Supervisor/ Emergency Coordinator.

As dictated by Plant Conditions.

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Initiatio	ng Conditions	Emergency Action	Level	(EAL)	Emergency Procedure/Document
4.2.17	Evacuation of control room and control of shut-down systems not established from local stations in 15 minutes.	As determined by	Shift	Supervisor/	OP/O/A/6350/02, AP/1/A/5500/17

### NOTIFICATION/ACTIVATION GENERAL EMERGENCY

Notify/Activate the following personnel/or Emergency Centers for all Initiating Conditions listed in Enclosure 4.2. (See Enclosure 4.4 for Telephone Listing)

NOTIFY/ACTIVATE	NOTIFICATION COMPLETE-INITIAL
Shift Supervisor	
Operations Duty Engineer	
Station Manager	
Superintendent of Operations	
Superintendent of Technical Services	
Projects and Licensing Engineer	
Station Health Physicist	
North Carolina State Warning Point	
Mecklenburg County Warning Point	
Lincoln County Warning Point	
Catawba County Warning Point	
Iredell County Warning Point	
Gaston County Warning Point	
Cabarrus County Warning Point	
South Carolina State Warning Point	
N.R.C. via ENS (Red Phone)	
N.R.C. Station Representative	
Superintendent of Maintenance	
Superintendent of Administration	
Construction Project Manager	
Activate T.S.C. (Station Directive 3.8.2)	
Activate O.S.C. (Station Directive 3.8.2)	
Activate C.M.C. (Enclosure 4.4, Enclosure 4.6)	

### TELEPHONE LISTING

4.4.1	Operations Duty Engineer (PA System P&T Pager -	em)	
4.4.2	Station Manager		
		Speed -	
		Speed -	
4.4.3	Superintendent of Operations -		
	Home System	Speed	
4.4.4	Superintendent of Technical Service	es -	
	Home - System	Speed	
4.4.5	Projects and Licensing Engineer -		
	Home - System	Speed	
4.4.6	Station Health Physicist -		
	Home System S	Speed -	
	P&T Pager		
4.4.7	NC State Warning Point, Raleigh -		- System Speed -
	Washington Carray Warning Pains	Darlasans	Dian Danie Bhara
4.4.8	Mecklenburg County Warning Point -	Back-up:	Ring Down Phone - System Speed
		Back-up:	
4.4.9	Lincoln County Warning Point -	Primary:	Ring Down Phone
	and the same of th	Back-up:	- System Speed
		Back-up:	Emergency Radio, Code:
4.4.10	Catawba County Warning Point -	Primary:	Ring Down Phone
		Back-up:	- System Speed
		Back-up:	Emergency Radio, Code:
4.4.11	Iredell County Warning Point -	Primary:	
		Back-up:	- System Speed
		Back-up:	Emergency Radio, Code:
4.4.12	Gaston County Warning Point -	Primary:	Ring Down Phone
		Back-up:	- System Speed
		Back-up:	Emergency Radio, Code:
4.4.13	Cabarrus County Warning Point -	Primary:	Ring Down Phone
		Back-up:	- System Speed
		Back-up:	Emergency Radio, Code:

### NOTE

Radio Code will activate all county radio units.

### TELEPHONE LIST

4.4.14	SC State Warning	Point	
4.4.15	N.R.C. Operation	Center, Emerge	ency Notification System (ENS Phone)
4.4.16	N.R.C. Station Re	presentative	
	minor beation no	Office -	
		The second secon	C
		Home -	system Speed -
		Wife work P&T Pager	- System Speed
4.4.17	Construction Proj	ect Manager (	Construction , Ext.
		Home :	System Speed
			- System Speed -
4:4.18	Superintendent of		
		Home -	- System Speed -
4.4.19	Superintendent of	Administratio	n
		Home -	System Speed -
4.4.20	CRISIS MANAGEMENT	CENTER ACTIVA	ATION
	Hal 3. Tucker	Office:	
	or	Home:	- System Speed -
	J. Ed Smith	Office:	Extension
	or	Home:	- System Speed
	J. W. Hampton	Office:	Extension
	or	Home:	- System Speed
	R. W. Bostian	Office:	
	or	Home:	System Speed -
	Nuclear Production	n Duty Enginee P&T Pager	- System Speed
4.4.21	Radiation Protect	ion Section, I	Department of Human Resources- System Speed -

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## MCGUIRE NUCLEAR STATION NOTIFICATION OF EMERGENCY CONDITIONS

4.5.1	Inclu	de as a minimum, the following information to the	North Carolina
		Warning Point, the six County Warning Points, (Mer	
		11, Lincoln, Gaston, and Cabarrus) and the South Co	
	Point		
	NOTE		
	NOTE	2: A. Complete Part I of this format as a minim	nal first
		notification of a reportable incident.	
		B. Complete Part I and II of this format to	provide
		minimal followup information.	
	PART	I: Initial Emergency Message Information	✓ ACKNOWLEDGEMENT
		TELEPHONE RECPONSE:	Mecklenburg
			Gaston
		"This is McGuire Nuclear Station.	Iredel1
		Please acknowledge when you are	Lincoln
		ready to copy Emergency Information."	Cabarrus
			Catawba
	1.	This is McGuire Nuclear Station.	
	2.	My name is	
	3.	This message (Number)	
		a. Reports a real emergency.	
		b. Is an exercise message.	
	4.	My telephone number is	
	5.	Message Authentication:	•
	6.	The class of emergency is:	
		a. Notification of an Unusual Event	
		b. Alert	
		c. Site Area Emergency	
		d. General Emergency	
	7.	The Classification of Emergency was declared at:	on
			(A.M./P.M.)
		*	
		(Date)	

The Emergency Condition (Select one of the below options):  a. Does not involve the release of radioactive materials from the plant.  b. Involves the POTENTIAL for a release, but NO release is occurring.  c. Involves a release of radioactive material.  We recommend the following protective action: (select one of the below options)  a. No protective action is recommended at this time.  b. People living in zones
from the plant.  b. Involves the POTENTIAL for a release, but NO release is occurring.  c. Involves a release of radioactive material.  We recommend the following protective action: (select one of the below options)  a. No protective action is recommended at this time.  b. People living in zones remaindoors with doors and windows closed.  c. People in zones EVACUATE their homes and businesses.  d. Pregnant women and children in zones
occurring.  c. Involves a release of radioactive material.  We recommend the following protective action: (select one of the below options)  a. No protective action is recommended at this time.  b. People living in zones remaindoors with doors and windows closed.  c. People in zones EVACUATE their homes and businesses.  d. Pregnant women and children in zones
We recommend the following protective action: (select one of the below options) a. No protective action is recommended at this time. b. People living in zones remaindoors with doors and windows closed. c. People in zones EVACUATE their homes and businesses. d. Pregnant women and children in zones
below options)  a. No protective action is recommended at this time.  b. People living in zones remaindoors with doors and windows closed.  c. People in zones EVACUT their homes and businesses.  d. Pregnant women and children in zones
below options)  a. No protective action is recommended at this time.  b. People living in zones remaindoors with doors and windows closed.  c. People in zones EVACUT their homes and businesses.  d. Pregnant women and children in zones
b. People living in zones remaindoors with doors and windows closed.  c. People in zones EVACU their homes and businesses.  d. Pregnant women and children in zones
indoors with doors and windows closed.  c. People in zones
indoors with doors and windows closed.  c. People in zones
d. Pregnant women and children in zones
d. Pregnant women and children in zones
e. Pregnant women and children in zones
evacuate to the nearest shelter/reception center.
f. Other recommendations:
There will be:
a. A followup message
b. No further communications
I repeat, this message:
a. Reports an actual emergency.
b. Is an exercise message.
Relay this information to the persons indicated in your alert pro-

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The type of actual or pro	ojected release is:
a. Airborne	
b. Waterborne	
c. Surface spill	
d. Other	
The source and description	on of the release is:
a. Release began/s	will begin ata.m./p.m.; time since
reactor trip is	s hours.
b. The estimated	duration of the release is hours.
Dose projection base data	a:
Radiological release:	curies, orcuries/sec.
Wind speed:	mph
Wind direction:	From°
Stability class:	(A,B,C,D,E,F, or G)
Release height:	Ft.
Dose conversion factor:	R/hr/Ci/M³ (whole body)
	R/hr/Ci/M³ (Child Thyroid)
Precipitation	
Temperature at the site:	°F
Dose projections:	
DOSE DIGIECTIONS.	

Distance	Whole Body Rem/hour	(Child Thyroid)  Rem/hour of inhalation
Site boundary		
2 miles		
5 miles		
10 miles		

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Child Thyroid

### \*Projected Integrated Dose In Rem\*

Whole Body

Distance

Site Boundary					
2 miles					
5 miles					
10 miles					
Field measureme	ent of dose rate	or conta	mination	(if ava	ilable):
	ns underway at the needed from offs				
Onsite support					
Onsite support		site orga			
Onsite support  Plant status:  a. Reactor is	needed from offs	site orga	nization	ns:	/cooling
Onsite support  Plant status:  a. Reactor is  b. Plant is a	needed from offs	site orga	nization	shutdown	
Onsite support  Plant status:  a. Reactor is  b. Plant is a  c. Prognosis	needed from offs s: not tripped/s at:% power/ho is: stable/imp	site orga	nization	shutdown	
Onsite support  Plant status:  a. Reactor is  b. Plant is a  c. Prognosis  I repeat, this	needed from offs s: not tripped/s at:% power/ho is: stable/imp	site orga tripped ot shutdo roving/de	nization	shutdown	

\*\*\*END OF FOLLOW-UP MESSAGE\*\*\*

NOTE: Record the name, title, date, time, and warning point notified.

		Communicator
(Na	me)	(Title)
		Mecklenburg
(D.	te) (Time)	(Warning Point)
		Communicator
(N	me)	(Title)
		Gaston
(D.	te) (Time)	(Warning Point)
		Communicator
(N	me)	(Title)
		Iredell
(D	ite) (Time)	(Warning Point)
		2
(N.	me)	Communicator (Title)
(D	ite) (Time)	Catawba (Warning Point)
,-	(	
	ime)	Communicator (Title)
("	ime /	(IICIE)
	(7)>	Lincoln
()	ite) (Time)	(Warning Point)
		Communicator
(N	ime)	(Title)
		Cabarrus
(D	te) (Time)	(Warning Point)
		Communicator
(N	ime)	(Title)
		North Carolina
(D	te) (Time)	(Warning Point)
		Communicator
(N	ame)	(Title)
		South Carolina
(D	ate) (Time)	(Warning Point)

### CRISIS MANAGEMENT CENTER ACTIVATION FORMAT

1.	This is	at McGui	re Nuclear Station. This
			t Plan to Figure E-2 for th
	following message. Do y	you have that Figure?	
2.	My name is	. I am the	(title
			u of an incident at McGuire
	Nuclear Station, Unit No	·	
3.	The incident occurred at	(Hours) on	/ / (Date).
4.	The class of emergency i		
5.			is as follows:
6.	Release of radioactivity	7:is taking place _	is not taking place.
7.	Wind direction (blowing	from)	degrees.
8.			as follows:
9.	It is recommended that y	you activate the Crisis	Management Center in
	accordance with the Cris	sis Management Plan.	
10.	Do you have any question	ns?	
11.	I repeat, this is/is not	a drill.	
12.	Record name of person no	otified, title, and tim	e notified.
	(Name)	(Title)	(Time)

Form 34731 (10-81) (Formerly SPD-1002-1)

### DUKE POWER COMPANY PROCEDURE PREPARATION PROCESS RECORD

(1) ID No: <u>FP/O/A/500</u>0/08 Change(s) 0 to \_\_\_\_\_\_ Incorporated

(2)	STATION: McGuire Nuclear Station		
(3)	PROCEDURE TITLE: General Emergency		
	PREPARED BY: M. S. Glover		
			9/10/82
5)	REVIEWED BY: AD Yellut	DATE:_	9-10-82
	Cross-Disciplinary Review By:		N/R: 474
5)	TEMPORARY APPROVAL (IF NECESSARY):		
	By:(SRO)	Date:_	
	Ву:	Date:_	
7)	APPROVED BY: Govern		
8)	MISCELLANEOUS:		
	Reviewed/Approved By:	Date:_	
	Reviewed/Approved By:	Date:	

# DUKE POWER COMPANY McGUIRE NUCLEAR STATION GENERAL EMERGENCY

### 1.0 Symptoms

1.1 Events are in process or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity.

### 2.0 Immediate Action

2.1 Automatic

None

- 2.2 Manual
  - 2.2.1 The Shift Supervisor shall be informed of all events initiating this procedure.

### 3.0 Subsequent Actions

Initial/N/A		
/	3.1	The Shift Supervisor shall assure that the appropriate emergency
		condition (Notification of Unusual Event, Alert, Site Area
		Emergency, or General Emergency) is declared by evaluating the
		actual plant condition with Enclosure 4.1, Emergency
		Classification Flowchart and Enclosure 4.2, List of Initiating
		Conditions, Emergency Action Levels, and Associated Emergency
		Procedure/Document.
	3.2	The Shift Supervisor shall ensure that all actions required
		by the initiating Emergency Procedure will be performed
		and that all actions necessary for the protection of persons

and property are being taken.

#### NOTE

If at any time in the course of events in this procedure, site evacuation or personnel assembly/ accountability appears necessary, refer to Station Directive 3.8.1.

3.3 The Shift Supervisor shall assume the function of the Emergency Coordinator until the arrival of the Station Manager or his designee, at which time the Station Manager or his designee assumes the responsibility of the Emergency Coordinator.

/ 3.4 The Emergency Coordinator shall assure prompt (within 15 minutes of declaring the emergency for State and Local authorities) notification of those personnel and Warning Points and shall activate those Emergency Centers indicated on Enclosure 4.3 for the appropriate Initiating Condition/Emergency Procedure listed in Enclosure 4.2.

### NOTE 1

Activation of the Technical Support Center (TSC) and Operations Support Center (OSC) shall be in accordance with Station Directive 3.8.2. Activation of the Crisis Management Center (CMC) shall be in accordance with Enclosure 4.6.

### NOTE 2

See Enclosure 4.4, Telephone Listing, for notification, telephone numbers/radio codes/pager codes.

### NOTE 3

See Enclosure 4.5, Notification of Emergency Conditions to be provided to State/County Warning Points.

- 3.5 The Emergency Coordinator in direct contact with the Technical Support Center and the Crisis Management Center will assess and respond to the emergency by:
  - 3.5.1 Dispatching the onsite and offsite monitoring teams with associated communications.
  - 3.5.2 Provide meteorological and dose estimates to offsite authorities for actual releases via a dedicated individual or automated data transmission.
  - 3.5.3 Provide release and dose projections based on available plant condition information and foreseeable contingencies to offsite authorities.

#### NOTE

In the event a release or potential release of radioactive materials is a threat to plant personnel or members of the general public, the Emergency Coordinator shall request Health Physics personnel to evaluate the consequences utilizing the appropriate Health Physics procedure, HP/0/B/1009/05, HP/0/B/1009/06, HP/0/B/1009/08, HP/0/B/1009/09, or HP/0/B/1009/10.

- 3.6 The Emergency Coordinator shall provide protective action recommendations as necessary to the affected county warning point(s) and to the North Carolina Warning Point (Emergency Operations Centers if established) or to state Radiological Protection Section, Department of Human Resources (See Enclosure 4.4, Telephone Listing) as directed by the state in accordance with the North Carolina Radiological Emergency Response Plan. If evaluation indicates that a potential for an actual release of radioactive materials will result in a projected dose (REM) to the population of: (EPA Protective Action Guidelines)
  - 3.6.1 Whole body <1, Thyroid <5, No protective action is required. Monitor environmental radiation levels to verify.
  - 3.6.2 Whole body 1 to <5, Thyroid 5 to <25, recommend seeking shelter and wait for further instructions. Consider evacuation particularly for children and pregnant women. Monitor environmental radiation levels. Control access to affected areas.
  - 3.6.3 Whole body 5 and above, Thyroid 25 and above, recommend mandatory evacuation of populations in the affected areas. Monitor environmental radiation levels and adjust area for Mandatory evacuation based on these levels. Control access to affected areas.

#### NOTE

See Enclosure 4.4 Telephone Listing for notification.

- 3.7 The Emergency Coordinator in coordination with the Recovery Manager, at the Crisis Management Center, will provide or make available:
  - 3.7.1 A dedicated individual for plant status updates to offsite authorities and periodic press briefings.
  - 3.7.2 Senior technical and management staff onsite available for consultation with the NRC and State on a periodic basis.

3.8	The Emergency Coordinator in coordination with the Recovery
	Manager at the Crisis Management Center will assess the
	emergency condition and determine the need to remain in a
	General Emergency, reduce the emergency class, or close out
	the emergency.
 3.9	The Recovery Manager at the Crisis Management Center will
	close out the emergency or recommend reduction of the
	Emergency class by briefing the offsite authorities at the
	Crisis Management Center or by phone if necessary, followed

by written summary within 8 hours.

### 4.0 Enclosures

- 4.1 Emergency Classification Guide Flowchart
- 4.2 List of Initiating Conditions, Emergency Action Levels, and Associated Emergency Procedure/Document.
- 4.3 Notification Chart.
- 4.4 Telephone listing.
- 4.5 Notification of Emergency Conditions.
- 4.6 Crisis Management Center Activation Format.

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### **EMERGENCY CLASSIFICATION GUIDE FLOWCHART**

	EVENTCATEGORY	UNUSUAL EVENT	01501	SITE AREA EMERGENCY	GINIAN INVANCE
11	ARNORMAL PRIMARY LEAK RATE	EXCEEDING EITHER PRIMARY/	PRIMARY COOLANT LEAK RATE	KNOWN LOSS OF COOLANT ACCIDENT	SMALL OR LANGE BREAK LOCA
	ABNORMAL CORE CONDITIONS	SPECIFICATION OR PRIMARY SYSTEM LEAK RATE TECHNICAL SPECIFICATION		CAPACITY	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
"	AND FUEL DAMAGE	FUEL DAMAGE INDICATION  ABNORMAL COOLANY TEMP AND/OR  PRESSURE OR ABNORMAL FUEL TEMPS.  WHICH EXCEED TECH SPEC LIMITS	SEVERE LOSS OF FUEL CLADDING TO	OF COOLABLE GEOMETRY	BOUNDARY LOSS OF 2 OF 3 FISSION PRODUCT BARRIERS WITH POTENTIAL LOSS OF THE THIRD BARRIER
n	FAILURE	FAILURE OF A SAFETY OR RELIEF VALVE IN A SAFETY RELATED SYSTEM TO CLOSE FOLLOWING A REDUCTION OF APPLICABLE PRESSURE	MALFUNCTION CAUSING LEAKAGE	CONTAINMENT WITHOUT ISOLATION	SMALL OR LARGE LOCAS WITH FAILURE OF ECCS TO PERFORM LEADING TO CORE MELT IN MINUTES DEGRADATION OR MELT IN MINUTES
**	OTHERICOL	LOSS OF CONTAINMENT INTEGRITY RETURNING IMMEDIATE SHUTDOWN PARTINE SHOPE			TO HOURE LOSS OF CONTAINMENT INTEGRITY MAY BE IMMINENT
	ASNORMAL RADIOLOGICAL EFFLUENT OR RADIATION LEVELS	BADIOLOGICAL EFFLUENT TECHNICAL — SPECIFICATION LIMITS EXCEEDED	RADIATION LEVELS OR AIRBORNE CONTAMINATION WHICH INDICATES BEVERE DE GRADATION IN CONTROL OF RADIOACTIVE MATERIAL RADIOLOGICAL EFFLUENTS OREATER THAN 10 TIMES YECK SPEC. INSTANTANEOUS LIMITS	CORRESPONDING TO GREATER THAN SO MR/HR FOR IN HOUR ON GREATER THAN SO MR/HR FOR IN HOUR ON GREATER THAN SO MINUTES AT THE SITE BOUNDARY FOR ADVENSE METEOROLOGY THESE DOSE RATES ARE PROJECTED—SASED ON OTHER PLANT FARAMETERS OR ARE MEASURED IN THE ENVIRONS SFA PROTECTIVE ACTION GUIDELINES—ARE PROJECTED TO BE EXCEEDED	EFFLUENT MONITORS DETECT LEVELS CORRESPONDING TO 1 REMINE W B. OR B REMINE THY ROLD AT THE SITE BOUNDARY UNDER ACTUAL METEOROLOGICAL CONDITIONS THESE DOSE RATES ARE PROJECTED BASED ON OTHER PLANT PARAMETERS OR ARE MEASURED IN THE ENVIRONS
•,	LOSS OF SHUTDOWN FUNCTIONS: DECAY HEAT OR REACTIVITY		FAILURE OF REACTOR PROTECTION SYSTEM TO INITIATE AND COMPLETE A SCRAM WHICH BRINGS THE REACTOR SUBCRITICAL COMPLETE LOSS OF ANY FUNCTION NEEDED FOR PLANT COLD SHUTDOWN	OUTSIDE THE SITE BOUNDARY  TRANSIENT REQUIRING OPERATION OF SHUTDOWN SYSTEMS WITH FAILURE TO SCRAM ICONTINUED FOWER GENERATION WITH NO CORE DAMAGE IMMEDIATELY EVIDENT)  LOSS OF ANY FUNCTION NEEDED FOR	TRANSIENT IE. G. LOSS OF OFFSITE FOWER) PLUS FAILURE OF REQUISITE CORE SHUTDOWN SYSTEMS IE. G. SCRAM  COULD LEAD TO CORE MELT IN SEVERAL HOURS WITH CONTAINMENT FAILURE LIKELY MORE SEVERE
"	ELECTRICAL OR FOWER FAILURES	LOSS OF OFFSITE POWER OR LOSS OF	LOSS OF OFFSITE POWER AND LOSS OF	PLANT HOT SHUTDOWN  LOSS OF OFFSITE FOWER AND LOSS OF  ALL ONSITE AC FOWER FOR MORE  THAN 18 MIN.  LOSS OF ALL VITAL ONSITE DC FOWER	CONSEQUENCES IF FUMP TRIP DOES NOT FUNCTION. SHUTDOWN OCCURS BUT REQUISITE DECAY HEAT REMOVAL SYSTEM E.G. RHRJ OR NONSAFETY SYSTEM HEAT
61	fint	FIRE WITHIN THE PLANT LASTING	FIRE POTENTIALLY AFFECTING	FOR MORE THAN 18 MIN	REMOVAL MEANS ARE RENDERED
91	CONTROL ROOM EVACUATION	MORE THAN 10 MINUTES	EAFETY SYSTEMS EVACUATION OF CONTROL ROOM ANTICIPATED OR REQUIRED MITH CONTROL OF SHUTDOWN SYSTEMS ESTABLISHED FROM LOCAL STATIONS	FIRE COMPROMISING THE FUNCTIONS OF SAFETY SYSTEMS EVACUATION OF CONTROL ROOM AND CONTROL OF SHUTDOWN SYSTEMS NOT ESTABLISHED FROM LOCAL STATIONS IN 18 MIN.	UNAVAILABLE CORE DEGRADATION OR MELT COULD DOCUM IN ABOUT TEN HOURS WITH SUBSEQUENT CONTAINMENT FAILURE.
1		INDICATIONS OR ALAMMS ON PROCESS OR STFLUENT PARAMETERS NOT FUNCTIONING IN CONTROL ROOM TO AN EXTENT REQUIRING PLANT SHUTDOWN. OTHER SIGNIFICANT LOSS OF ASSESSMENT OR COMMUNICATION CAPABILITY	(ANNUNICATORS) LOST	MOST OR ALL ALARMS LANNUNCIATORS LOST AND PLANT TRANSIENT INITIATED OR IN PROGRESS	ANY MAJOR INTERNAL OR EXTERNAL EVENTS (E.G. FIRES, EARTHQUAKES SUBSTANTIALLY BEYOND DESIGN BASIS) WHICH COULD CAUSE MASSIVE COMMON DAMAGE TO PLANT SYSTEMS
	FUEL HANDLING ACCIDENT		FUEL DAMAGE ACCIDENT WITH- RELEASE OF RADIOACTIVITY TO CONTAINMENT OR FUEL HANDLING BUILDING	MAJOR DAMAGE TO SPENT FUEL IN CONTAINMENT OR FUEL HANDLING BUILDING	
121	HAZARDS TO PLANT OPERATIONS	PROJECTED THAT AFFECT PLANT OPERATIONS	OR PROJECTED POTENTIALLY AFFECTING SAFETY SYSTEMS	SEVERE HAZARDS BOING EXPERIENCED	
131	SECURITY THREATS-	SECURITY THREAT, ATTEMPTED ENTRY	ONGOING SECURITY COMPROMISE	MEACTOR NOT IN COLO SHUTDOWN	
141	NATURAL EVENTS-	OR ATTEMPTED SABOTAGE NATURAL PHENOMENA BEING	SEVERS NATURAL PHENOMENA BEING	SEVERE NATURAL PHENOMENA BEING	FACILITY
151	OTHERS.	EXPERIENCED OR PROJECTED REYOND USUAL LEVELS	EXPERIENCED OR PROJECTED	EXPERIENCED OR PROJECTED THAT COMPROMISE THE FUNCTIONS OF SAFETY EVERTEMS REACTOR NOT IN	ANY MAJOR INTERNAL OR EXTERNAL EVENTS IE G. FIRES, EARTHQUAKES SUBSTANTIAL LY BEYOND DESIGN BASIS) WHICH COULD CAUSE MASSIVE
151		OTHER PLANT CONDITIONS EXIST THAT WARRANT INCREASED AWARENESS ON THE PART OF PLANT OPERATING STAFF OR STAFE AND/OR LOCAL OF SHE AUTHORITIES OR REQUIRE PLANT SHIPLDOWN UNDER TECHNICAL SPECIFICATION REQUIREMENTS OR INVOLVE OTHER THAN NORMAL CONTROLLED SHUTDOWN TRANSPORTATION OF CONTAMINATED INJURED INSURED MAINTONAL OF THE AUSTON OF CONTAMINATED INJURED INSURED MAINTAIN OF CONTAMINATED OFF SITE HOSPITAL	OTHER PLANT CONDITIONS EXIST WARRANTING PRACAUTIONARY ACTIVATION OF THE TSC	COLD BHILTDOWN  OTHER PLANT CONDITIONS EXIST WARRANTING ACTIVATION OF CMC, SMERGENCY CENTERS AND MONITORING TEAMS OR ISSUANCE OF A PRECAUTIONARY NOTIFICATION TO THE PUBLIC NEAR THE SITE	COMMON DAMAGE TO PLANT SYSTEMS OTHER PLANT CONDITIONS & RIST FROM WHATEVER SOURCE THAT MAKE RELEASE OF LARGE AMOUNTS OF RADIOACTIVITY IN A SHORT TIME PERIOD POSSIBLE, IE G. ANY CORE MELT SITUATION)

EP/0/A/5000/08 Enclosure 4.2

# LIST OF INITIATING CONDITIONS, EMERGENCY ACTION LEVELS, AND ASSOCIATED EMERGENCY PROCEDURE/DOCUMENT

Initiat	ing Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.2.1	Effluent monitors detect levels corresponding to l rem/hr Whole Body or 5 rem/hr Thyroid at the site boundary under actual meteorological conditions.  NOTE 1: These dose rates are projected base on plant parameters (e.g., radiation levels in con- tainment with leak rate appropriate for existing containment pressure with some confirmation from effluent monitors) or are measured in the environs.  NOTE 2: Consider evacuation only within about 2 miles of the site boundary unless these levels are exceeded by a fac- tor of 10 or projected to continue for 10 hours or EPA Pro- tective Action Guideline exposure levels are predicted to be exceeded at longer disc	- n- o-	HP/0/B/1009/05
4.2.2	Loss of 2 of 3 fission pro- duct barriers with a poten- tial loss of 3rd barrier, (e.g., loss of primary coolant boundary, clad- failure, and high poten-	<ol> <li>Loss of coolant accident as identified in Site Area Emergency 4.2.1, and incomplete containment isolation.</li> <li>Loss of coolant accident as iden-</li> </ol>	HP/0/B/1009/05, AP/1/A/5500/0
	tial for loss of contain- ment integrity).	tified in Site Area Emergency 4.2.1, and Containment Monitor alarms (EMF51A and/or B) greater than 10 R/hr and con- tainment pressure greater than 14.8 psi for at least 2 minutes.	

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Initiating	Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
	Loss of physical control of the facility.  NOTE: Consider 2 mile precautionary evacuation.	Physical attack of the facility has resulted in occupation of the control room and auxiliary shutdown facility.	Station Security Plan.
	Other plant conditions exist, from whatever source, that in the judge- ment of the shift super- visor, the Operations Duty Engineer, the Superinten- dent of Operations, or the Plant Manager make release of large amounts of radio- activity in a short time period possible (e.g., any core melt situation).  a. For core melt sequences where significant re- leases are not yet taking place and large amounts of fission pro- ducts are not yet in the containment atmos- phere, consider 2 mile precautionary evacua- tion. Consider 5 mile downwind evacuation (45° to 90° sector) if large amounts of fission products (greater than Gap acti- vity) are in the con- tainment atmosphere. Recommend sheltering in other parts of the plume exposure Emer-	As determined by the Shift Supervisor/ Emergency Coordinator and verified by EAL's defined in Implementing Procedures utilized up to this point.	As dictated by plant conditions

under this circumstance.

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Initiating Conditions

Emergency Action Level (EAL)

Emergency Procedure/Document

- For core melt sequences where significant releases from containment are not vet 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 evacuation to 5 miles and 10 mile downwind evacuation (45° and 90° sector).
- For core melt 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.

Initiating Conditions

Emergency Action Level (EAL)

Emergency Procedure/Document

- d. As release information becomes available adjust these actions in accordance with dose projections, time available to evacuate and estimated evacuation times given current conditions.
- e. Example Sequences:
  - Small and large LOCA's with failure of ECCS to perform leading to severe core degradation or melt. Ultimate failure of containment likely for melt sequences. (Several hours likely to be available to complete protective actions unless containment is not isolated).

Safety injection signal plus reactor trip and:

- Safety injection and RHR pumps not running.
- Flow indications for safety injection read "0".
- 3. High containment sump level.

Initiating Conditions

Emergency Action Level (EAL)

Emergency Procedure/Document

Transient initiated by loss of feedwater and condensate systems (principle heat removal system) followed by failure of emergency feedwater system for extended period. (Core melting is possible in several hours with ultimate failure of containment likely if the core melts).

Reactor trip on Lo Lo Steam Generator level and wide range generator levels toward offscale low on all steam generators and emergency feedwater flow indicators indicate "0" flow or emergency feedwater pumps not running and cannot be restored within 30 minutes or >3% reactor power and loss of both main feedwater pumps, manually trip reactor.

AP/1/A/5500/06, EP/1/A/5000/04

3. Transient requiring operation of shutdown systems with failure to scram. Core damage is likely. Additional failure of the core cooling and makeup system would lead to core melt.

Reactor remains critical after all attempts to trip the reactor are complete and flow indicators on safety injection and RHR show "0" flow after initiation (NVP5440, NDP5190, 5191, 5180, 5181, NIP5120, 5450) or safety injection and RHR pumps not running with safety injection initiated.

AP/0/A/5500/34

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Initiat	ing Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document	
	4. Failure of offsite and onsite power along with total loss of emergency feedwater makeup capability for several hours. Would lead to eventual core melt and likely failure of containment.	Undervoltage alarms on 7KV buses and blackout load sequencers actuated and auxiliary feedwater pump(s) fail to start.	AP/1/A/5500/07	
	5. Small LOCA and initially successful ECCS. Subsequent failure of containment heat removal system over several hours could lead to core melt and likely failure of containment.	Pressurizer low pressure reactor trip and pressurizer low pressure safety injection signal and RHR flow indicators show "0" flow after shift to RHR is attempted and for greater than 2 hours (NDP5190, 5191, 5180, 5181) and Reactor Coolant (NC) To is rising, and containment air handling system fails to function.	EP/1/A/5000/02, AP/1/A/5500/05	
	NOTE: For melt sequences or for failure of containment isolation systems, the likel failure mode is melt through with release of gases.	y		
4.2.5	Any major internal or ex- ternal events (e.g., fires, earthquakes substantially beyond design levels) which could cause massive common damage to plant systems,	As determined by the Shift Supervisor/ Emergency Coordinator.	As dictated by plant conditions.	

### NOTIFICATION/ACTIVATION GENERAL EMERGENCY

Notify/Activate the following personnel/or Emergency Centers for all Initiating Conditions listed in Enclosure 4.2. (See Enclosure 4.4 for Telephone Listing)

NOTIFY/ACTIVATE	NOTIFICATION	COMPLETE-INITIAL
Shift Supervisor		Libitaria d
Operations Duty Engineer		
Station Manager		
Superintendent of Operations		
Superintendent of Technical Services		
Projects and Licensing Engineer		
Station Health Physicist		
North Carolina State Warning Point		
Mecklenburg County Warning Point		
Lincoln County Warning Point	<u> </u>	
Catawba County Warning Point		
Iredell County Warning Point		
Gaston County Warning Point		
Cabarrus County Warning Point		
South Carolina State Warning Point		
N.R.C. via ENS (Red Phone)		
N.R.C. Station Representative		
Superintendent of Maintenance		
Superintendent of Administration		
Construction Project Manager		
Activate T.S.C. (Station Directive 3.8.2)		
Activate O.S.C. (Station Directive 3.8.2)		
Activate C.M.C. (Enclosure 4.4, Enclosure 4.6)		

### TELEPHONE LISTING

4.4.1	Operations Duty Engineer (PA System P&T Pager -	em)	
4.4.2	Station Manager		
		Speed -	
4.4.3	Superintendent of Operations - Home System	n Speed	
4.4.4	Superintendent of Technical Service	es -	
	Home System	Speed	
4.4.5	Projects and Licensing Engineer - Home System	Speed	
4.4.6	Station Health Physicist - Home System S P&T Pager	Speed -	
4.4.7	NC State Warning Point, Raleigh -	•	- System Speed -
4.4.8	Mecklenburg County Warning Point -	Back-up:	
4.4.9	Lincoln County Warning Point -	Primary: Back-up: Back-up:	- System Speed
4.4.10	Catawba County Warning Point -	Primary: Back-up: Back-up:	
4.4.11	Iredell County Warning Point -	Primary: Back-up: Back-up:	Ring Down Phone - System Speed Emergency Radio, Code:
4.4.12	Gaston County Warning Point -	Primary: Back-up: Back-up:	Ring Down Phone - System Speed Emergency Radio, Code:
4.4.13	Cabarrus County Warning Point -	Primary: Back-up: Back-up:	Rino Down Phone - System Speed Emergency Radio, Code:

### NOTE

Radio Code will activate all county radio units.

### TELEPHONE LIST

4.4.14	SC State Warning P	oint -	
4.4.15	N.R.C. Operation C	enter, Emergency	Notification System (ENS Phone)
4.4.16	N.R.C. Station Rep	resentative Office - Home - Wife work	System Speed
		P&T Pager	
4.4.17	Construction Proje	ct Manager Const Home	- System Speed or - System Speed
4.4.18	Superintendent of	Maintenance Home -	System Speed -
4.4.19	Superintendent of	Administration - Home -	System Speed -
4.4.20	CRISIS MANAGEMENT	CENTER ACTIVATION	
	Hal B. Tucker or	Office:	- System Speed -
	J. Ed. Smith or	Office: Home:	Extension - System Speed -
	J. W. Hampton or	Office: Home:	Extension - System Speed ·
	R. W. Bostian or	Office: Home:	- System Speed -
	Nuclear Production	Duty Engineer P&T Pager	- System Speed -
4.4.21	Radiation Protecti	on Section, Depar	tment of Human Resources- System Speed

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## MCGUIRE NUCLEAR STATION NOTIFICATION OF EMERGENCY CONDITIONS

4.5.1	Include	e as a minimum, the following information to the	North Carolina
	State V	Warning Point, the six County Warning Points, (Me	cklenburg, Catawba,
	Iredell	l, Lincoln, Gaston, and Cabarrus) and the South C	arolina Warning
	Point.		
	NOTE 1:	: See Enclosure 4.4, Telephone Listing	
	NOTE 2	: A. Complete Part I of this format as a mini	mal first
		notification of a reportable incident.	
		B. Complete Part I and II of this format to	provide
		minimal followup information.	,
	PART I	: Initial Emergency Message Information	ACKNOWLEDGEMENT
		TELEPHONE RESPONSE:	Mecklenburg
			Gaston
		"This is McGuire Nuclear Station.	Iredell
		Please acknowledge when you are	Lincoln
		ready to copy Emergency Information."	Cabarrus
			Catawba
	1. T	his is McGuire Nuclear Station.	
	2. M	y name is	
	3. T	his message (Number)	
	_	a. Reports a real emergency.	
		b. Is an exercise message.	
		y telephone number is	
		essage Authentication:	
	6. T	he class of emergency is:	
		a. Notification of an Unusual Event	
	-	b. Alert c. Site Area Emergency	
		d. General Emergency	
	7. T	he Classification of Emergency was declared at:	on
			(A.M./P.M.)
		(Date)	

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T	he E	merge	ency Condition (Select one of the below options):	
		a.	Does not involve the release of radioactive materia	ls
Ī			from the plant.	
		ъ.	Involves the POTENTIAL for a release, but NO releas	se is
			occurring.	
		c.	Involves a release of radioactive material.	
W	e re	comme	end the following protective action: (select one of	the
Ъ	elow	opt:	ions)	
		а.	No protective action is recommended at this time.	
		ъ.	People living in zones	rema
			indoors with doors and windows closed.	
		c.	People in zones	EVACUA
		7	their homes and businesses.	
		d.	Pregnant women and children in zones	
			remain indoors with the doors and windows closed.	
		e.	Pregnant women and children in zones	
			evacuate to the nearest shelter/reception center.	
		f.	Other recommendations:	
T	here	wil	1 be:	
-		а.	A followup message	
_		ъ.	No further communications	
I	rep	eat,	this message:	
_		а.	Reports an actual emergency.	
_		ъ.	Is an exercise message.	
	lelay	thi	s information to the persons indicated in your alers	pro-
R				

a. Airborne b. Waterborne c. Surface spill d. Other	jected release is:
b. Waterborne c. Surface spill	
c. Surface spill	
d. Other	
he source and description	n of the release is:
a. Release began/w	ill begin ata.m./p.m.; time since
reactor trip is	hours.
b. The estimated d	uration of the release is hours.
ose projection base data	
adiological release:	curies, or curies/sec.
ind speed:	mph
ind direction:	From
cability class:	(A,B,C,D,Z,F, or G)
elease height:	Ft.
ose conversion factor:	R/hr/Ci/M³ (whole body)
	R/hr/Ci/M3 (Child Thyroid)
recipitation	
emperature at the site:	°F
	e Commitment*
	a. Release began/w reactor trip is b. The estimated dose projection base data adiological release: ind speed: ind direction: cability class: elease height: ose conversion factor: recipitation emperature at the site: ose projections:

Distance	Whole Body Rem/hour	(Child Thyroid) Rem/hour of inhalation
Site boundary		
2 miles		
5 miles		
10 miles		

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Child Thyroid

## \*Projected Integrated Dose In Rem\*

Whole Body

Distance

1						
S	Site Boundary					1
2	2 miles					
5	5 miles					
1	10 miles					1
F	Field measurement of dose rat	te or conta	mination	n (if ava	ailable):	_
E	Emergency actions underway as	n nh n 641				_
Ī	amergency accions underway at	t the facil	ity inc	lude: _		_
_	Onsite support needed from of					_
0						
- O	Onsite support needed from of	ffsite orga				-
O P a	Onsite support needed from of	ffsite orga	nizatio	ns:	n/cooling	do
- O P a b	Onsite support needed from of Plant status:  a. Reactor is: not tripped	ffsite orga d/tripped /hot shutdo	nization	ns:		do
o P a b c	Onsite support needed from of  Plant status:  a. Reactor is: not tripped  b. Plant is at:% power.	ffsite orga d/tripped /hot shutdo	nization	ns:		do
-O -P a b c I	Onsite support needed from of  Plant status:  a. Reactor is: not tripped  b. Plant is at:% power  c. Prognosis is: stable/in	ffsite orga  d/tripped /hot shutdo	nization	ns:		do
-O -P a b c I	Onsite support needed from of  Plant status:  a. Reactor is: not tripped  b. Plant is at:% power  c. Prognosis is: stable/in  I repeat, this message:	ffsite orgadd/tripped/hot shutdomproving/deemergency.	nization	ns:		do

\*\*\*END OF FOLLOW-UP MESSAGE\*\*\*

NOTE: Record the name, title, date, time, and warning point notified.

		Communicator
(Name	)	(Title)
		Mecklenburg
(Date	) (Time)	(Warning Point)
		Communicator
(Name	)	(Title)
/5		Gaston
(Date	) (Time)	(Warning Point)
/N		Communicator
(Name	,	(Title)
/5		Iredel1
(Date	) (Time)	(warning Point)
(Name		Communicator
(Name	,	(Title)
(Date	) (Time)	Catawba
(Date	) (lime)	(Warning Point)
(Name		Communicator (Title)
(Name	,	(IICLE)
(Date	) (Time)	Lincoln (Warning Point)
(Date	) (Time)	(warning roint)
(Name	·	Communicator (Title)
(Name		(IICIE)
(Date	) (Time)	(Warning Point)
(2010	/ (************************************	
(Name	7	Communicator (Title)
(		
(Date	) (Time)	North Carolina (Warning Point)
(Name	)	Communicator (Title)
	) (Time)	South Carolina

### CRISIS MANAGEMENT CENTER ACTIVATION FORMAT

THITS IS	at McGuire Nucl	ear Station. This
	Open your Crisis Management Plan	
following message.	. Do you have that Figure?	
My name is	I am the	(title)
	Station and am notifying you of an	
Nuclear Station, U	Jnit No	
The incident occur	rred at(Hours) on/_	/ (Date).
	gency is:	
	ndition causing the emergency is as	
Release of radioad	ctivity:is taking placeis n	ot taking place.
	landar from	
Wind direction (b)	Lowing from)degree	3.
	es being taken at present are as fol	
Corrective measure		lows:
It is recommended	es being taken at present are as fol	lows:
It is recommended	that you activate the Crisis Manage	lows:
It is recommended accordance with the	that you activate the Crisis Manage ne Crisis Management Plan.	lows: