

am.

# FOR INFORMATION ONLY

Form SPD-1002-1

DUKE POWER COMPANY  
PROCEDURE PREPARATION  
PROCESS RECORD

(1) ID No: EP/O/A/5000/05  
Change(s) 0 to  
0 Incorporated

(2) STATION: McGuire Nuclear Station

(3) PROCEDURE TITLE: Notification of Unusual Event

(4) PREPARED BY: M.S. Glover M. S. Glover DATE: 10/16/81

(5) REVIEWED BY: Len Fritzsche DATE: 10/16/81

Cross-Disciplinary Review By: \_\_\_\_\_ N/R: 777

(6) TEMPORARY APPROVAL (IF NECESSARY):

By: \_\_\_\_\_ (SRO) Date: \_\_\_\_\_

By: \_\_\_\_\_ Date: \_\_\_\_\_

(7) APPROVED BY: Georg W. Cag Date: 10-19-81

(8) MISCELLANEOUS:

Reviewed/Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed/Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

DUKE POWER COMPANY  
McGUIRE NUCLEAR STATION  
NOTIFICATION OF UNUSUAL EVENT

1.0 Symptoms

- 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 ensure that all actions required by the initiating Emergency Procedure have been 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.

          /          

- 3.2 The Shift Supervisor shall assure notification of the Operations Duty Engineer and the Station Manager or his designee for any Initiating Condition or implementation of any Emergency Procedure listed in Enclosure 4.1.

NOTE

The Shift Supervisor assumes 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.

          /          

- 3.3 The Emergency Coordinator will assure notification of the following personnel for any Initiating Condition or implementation of any Emergency Procedure listed in Enclosure 4.1:

Initial/N/A

- 3.3.1 The Superintendent of Operations or his designee.
- 3.3.2 The Superintendent of Technical Services or his designee.
- 3.3.3 The Projects and Licensing Engineer or his designee.
- 3.3.4 Steam Production Duty Man (Enclosure 4.4)
- 3.3.5 Duke Power Corporate Communications Staff (Enclosure 4.4)

NOTE

See Enclosure 4.2, Emergency Plan Implementing  
Procedures Telephone List for notifications.

- /
- 3.4 The Emergency Coordinator will assure prompt notification of State and Local offsite authorities (Enclosure 4.3), (State and all County Warning Points, Emergency Operations Centers if established), the Nuclear Regulatory Commission Operation Center via the Emergency Notification System in Accordance with Station Directive 3.1.4, the Senior Station Nuclear Regulatory Commission representative and the Construction Project Manager of the Unusual Event and the reason for the emergency, for any Initiating Condition listed in Enclosure 4.1 or implementation of any Emergency Procedure listed in Enclosure 4.1 as soon as discovered.

NOTE 1

See Enclosure 4.2, Emergency Plan Implementing  
Procedures Telephone List for notifications.

- /
- 3.5 The Emergency Coordinator will assure notification of the Station Health Physicist or his shift representative for the following Initiating Conditions or Emergency Procedures listed in Enclosure 4.1:

- 3.5.1 Item: 4.1.2, 4.1.3, 4.1.5, 4.1.8, 4.1.10 (for fires inside radiation control area), 4.1.11, 4.1.16.
- 3.5.2 Item: 4.1.13, 4.1.14, 4.1.15 whenever radiological hazards may be involved.

NOTE

See Enclosure 4.2, Emergency Plan Implementing  
Procedures Telephone List for notifications.

Initial/N/A

      /       3.6 The Emergency Coordinator will assure notification of the Station Safety Supervisor or his designee for the following Initiating Conditions or Emergency Procedure listed in Enclosure 4.1:

3.6.1 Item: 4.1.9, 4.1.10, 4.1.13, 4.1.14, 4.1.16.

NOTE

See Enclosure 4.2, Emergency Plan Implementing Procedures Telephone List for notifications.

      /       3.7 The Emergency Coordinator will assure notification of the Superintendent of Maintenance or his designee for the following Initiating Conditions or Emergency Procedures listed in Enclosure 4.1:

3.7.1 Item: 4.1.6, 4.1.7, 4.1.9, 4.1.10, 4.1.11, 4.1.13, 4.1.14, 4.1.15.

NOTE

See Enclosure 4.2, Emergency Plan Implementing Procedures Telephone List for notifications.

      /       3.8 The Emergency Coordinator will assure notification of the Superintendent of Administration or his designee for the following Initiating Conditions or Emergency Procedures listed in Enclosure 4.1:

3.8.1 Item: 4.1.10, 4.1.12

NOTE

See Enclosure 4.2, Emergency Plan Implementing Procedures Telephone List for notifications.

      /       3.9 Protective action recommendations shall be directed 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 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).



Initial / N/A

- 3.9.1 Whole body <1, thyroid <5, NO protective action is required. Monitor environmental radiation levels to verify.
- 3.9.2 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.
- 3.9.3 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 4.2 for Emergency Plan Implementing Procedures Telephone List for notifications.

- \_\_\_\_\_/ 3.12 The Emergency Coordinator shall augment onshift resources to assess and respond to the emergency situation as needed to ensure the protection of persons and property. 10-81
- \_\_\_\_\_/ 3.13 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.
- \_\_\_\_\_/ 3.14 The Projects and Licensing Engineer or his designee will close out the Emergency with verbal summary to offsite authorities, notified in Step 3.4, followed by written summary within 24 hours.

4.0 Enclosures

- 4.1 List of Initiating Conditions, Emergency Action Levels, and Associated Emergency Procedure/Document.
- 4.2 Emergency Plan Implementing Procedures Telephone List.
- 4.3 Notification of Emergency Conditions.
- 4.4 Notification of Emergency Conditions (Steam Production Duty Engineer/ Corporate Communication Department).

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

Initiating Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document	
4.1.1 Emergency Core Cooling Initiated (SI)	Safety Injection signal verification by redundant indication.	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	
4.1.2 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, AP/0/A/5500/28	10-81
4.1.3 Fuel Damage Indication:	<p>a. High coolant activity sample exceeding Tech Specs. (<math>&gt;1 \mu\text{Ci}/\text{gram}</math> Dose Equivalent I-131 or <math>&gt;100 \mu\text{Ci}/\text{gram}</math> gross activity) E</p> <p>NOTE: These calculations available from counting facility on request.</p> <p>b. Increase greater than 0.1% equivalent fuel failures within 30 minutes.</p> <p>c. Above verified by increased EMF48 readings and laboratory analysis.</p>	AP/1/A/5500/18	
4.1.4 Abnormal coolant temperature and/or pressure or abnormal fuel temperature outside of Technical Specification 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	10-81
4.1.5 Exceeding either primary/secondary leak rate Tech Specs or primary leak rate Technical Specifications.	<p><math>&gt;10\text{CPM}</math> total P/S leakage</p> <p><math>&gt;500 \text{ GPD}</math> from any S/G</p> <p><math>&gt;10\text{CPM}</math> Identified Primary Leakage</p> <p>Verified by EMF readings, level control, make-up rate, and or chemical/radiological analysis.</p>	EP/1/A/5000/02, EP/1/A/5000/04, AP/1/A/5500/10	10-81

Initiating Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.1.6 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 indication of valve failure.	EP/1/A/5000/02, AP/1/A/5500/11, EP/1/A/5000/03
4.1.7 Loss of offsite power or loss of onsite AC power capability.	Undervoltage alarms on 7KV buses or black-out load sequencers actuated.	AP/1/A/5500/07
4.1.8 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, <u>or</u> penetration(s) fail leak test per Tech Specs when containment integrity required.	AP/1/A/5500/24
4.1.9 Loss of engineered safety feature or fire protection system function requiring shutdown by Tech Specs (e.g., malfunction, personnel error, or procedural inadequacy).	ESF actuation system found inoperable <u>or</u> Fire Suppression Water System found inoperable per Tech Specs.	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
4.1.10 Fire within the plant lasting more than 10 minutes.	Observation <u>or</u> fire detection alarm with confirming observation of a fire lasting more than 10 minutes.	Station Directive 2.11
4.1.11 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 <u>or</u> Loss of all meteorological instrumentation onsite <u>or</u> Loss of all radio/telephone communications capability offsite.	OP/O/A/6700/03, Tech Specs 3/4.3

Initiating Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.1.12 Security threat or attempted entry or attempted sabotage.	As notified by Security Force.	Station Security Plan
4.1.13 Natural phenomenon being experienced or projected beyond usual levels.		
a. Any earthquake felt in plant or detected on station seismic instrumentation.	(<.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	As observed	
d. Any hurricane	Winds >73 mph from National Weather Service information.	AP/O/A/5500/29, AP/O/A/5500/30
4.1.14 Other hazards being experienced or projected.		
a. Aircraft crash onsite or unusual aircraft activity over facility.	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/O/A/5500/31
e. Turbine rotating component failure causing rapid plant shutdown (Loss of Condenser Heat Sink).	Turbine trip and observation of a turbine malfunction or failure.	AP/1/A/5500/23, AP/O/A/5500/32, AP/1/A/5500/02

Initiating Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.1.15 Other plant conditions exist that in the judgment of the Shift Supervisor, the Operations Duty Engineer, the Superintendent of Operations, 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 controlled shutdown (e.g., cooldown rate exceeding Tech Specs limits, pipe cracking found during operation).	As determined by the Shift Supervisor/ Emergency Coordinator.	As directed by plant conditions.
4.1.16 Transportation of contaminated injured individual from site to offsite hospital.	As observed.	AP/0/A/5500/27
4.1.17 Rapid depressurization of secondary side.	As observed and actuation of 4.1.1 and 4.1.6 above.	AP/1/A/5500/00



EMERGENCY PLAN IMPLEMENTING PROCEDURES TELEPHONE LIST

- 4.2.1 Operations Duty Engineer (PA System)  
P&T Pager -
- 4.2.2 Station Manager  
Home -  
Home -
- 4.2.3 Superintendent of Operations -  
Home -
- 4.2.4 Superintendent of Technical Services -  
Home -
- 4.2.5 Projects & Licensing Engineer -  
Home -
- 4.2.6 Steam Production Duty Man -
- 4.2.7 Duke Power Corporate Communications Staff -  
(24 hour Answering Service, ask for Mary Cartwright,  
Alex Coffin, or Ira Kaplan)
- 4.2.8 NC State Warning Point, Raleigh -
- 4.2.9 Mecklenburg County Warning Point - Primary: Ring Down Phone  
Back-up:  
Back-up: Emergency Radio, Code: \_\_\_\_\_
- 4.2.10 Lincoln County Warning Point - Primary: Ring Down Phone  
Back-up:  
Back-up: Emergency Radio, Code: \_\_\_\_\_
- 4.2.11 Catawba County Warning Point - Primary: Ring Down Phone  
Back-up:  
Back-up: Emergency Radio, Code: \_\_\_\_\_
- 4.2.12 Iredell County Warning Point - Primary: Ring Down Phone  
Back-up:  
Back-up: Emergency Radio, Code: \_\_\_\_\_
- 4.2.13 Gaston County Warning Point - Primary: Ring Down Phone  
Back-up:  
Back-up: Emergency Radio, Code: \_\_\_\_\_

NOTE

Radio Code will activate  
all county radio units.

- 4.2.14 N.R.C. Operation Center, Emergency Notification System (ENS phone)
- 4.2.15 N.R.C. Senior Station Representative  
Office  
Home -  
P&T Pager -
- 4.2.16 Construction Project Manager: Construction , Ext.  
Home -
- 4.2.17 Station Health Physicist -  
Home -  
P&T Pager

- 4.2.18 Station Safety Supervisor -  
Home -
- 4.2.19 Superintendent of Maintenance  
Home -
- 4.2.20 Superintendent of Administration -  
Home -
- 4.2.21 Radiation Protection Section Department of Human Resource -

10-81

MCGUIRE NUCLEAR STATION  
NOTIFICATION OF EMERGENCY CONDITIONS

- 4.3.1 Include as a minimum, the following information to the North Carolina State Warning Point, and to the five County Warning Points (Mecklenburg, Catawba, Iredell, Lincoln, and Gaston).

NOTE 1: See Enclosure 4.2, Implementing Procedures Telephone List.

NOTE 2: A. Complete Part A of this format as a minimal first notification of a reportable incident.

B. Complete Part A and B of this format to provide minimal followup information.

PART A: Initial Emergency Message Information

"This is \_\_\_\_\_, \_\_\_\_\_,  
(Name) (Title)

at McGuire Nuclear Station. I am notifying you of an incident at McGuire, Unit # \_\_\_\_\_. Please acknowledge when you are ready to copy emergency information."

1. This message:  
\_\_\_\_ a. Reports a real emergency.  
\_\_\_\_ b. Is an exercise message.
2. This message is from the McGuire Nuclear Plant
3. My name is \_\_\_\_\_.
4. My telephone number is \_\_\_\_\_.
5. The code word is \_\_\_\_\_.
6. This is a:  
\_\_\_\_ a. First notification.  
\_\_\_\_ b. Followup message.
7. The incident occurred at \_\_\_\_\_ on \_\_\_\_\_.  
(Time AM or PM) (Date)
8. The class of emergency is:  
\_\_\_\_ a. Notification of an Unusual Event  
\_\_\_\_ b. Alert  
\_\_\_\_ c. Site Area Emergency  
\_\_\_\_ d. General Emergency

9. The initiating event causing the Emergency Classification is:

---

---

---

10. The Emergency Condition (Select one of the below options):

- ☐ a. Does not involve the release of radioactive materials from the plant or involve public.
- ☐ b. Involves the POTENTIAL for the release of radioactive materials, but NO radioactive materials have been released.
- ☐ c. Does involve the release of some radioactive materials from the plant, but at a level below that considered a public hazard.
- ☐ d. Does involve the release of radioactive materials from the plant at a level at which Protective Actions is advisable.

11. I 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 \_\_\_\_\_ around the station remain inside with doors and windows closed. These zones are in a \_\_\_\_\_ direction from the station out to a radius of about \_\_\_\_\_ miles.
- ☐ c. People in zones \_\_\_\_\_ EVACUATE their homes and businesses. These zones are in a \_\_\_\_\_ direction from the station out to a radius of about \_\_\_\_\_ miles. We urge people in these areas to leave their home or business in a safe, orderly fashion.
- ☐ d. Other recommendations: \_\_\_\_\_

i.e.: Stay tuned to your local radio or television station for further information.

12. Relay this information to the persons indicated in your alert procedures for an incident at McGuire Nuclear Station.
13. A followup message will:  
\_\_\_\_\_ a. Follow in approximately \_\_\_\_\_ minutes.  
\_\_\_\_\_ b. Not follow.
14. I repeat, this message:  
\_\_\_\_\_ a. Reports a real emergency.  
\_\_\_\_\_ b. Is an exercise message.

NOTE: Record the Name, Title, Date, Time, and Warning Point at end of Section B.

PART B: Followup Emergency Message Information

15. The type of actual or projected release is (select one or more).  
\_\_\_\_\_ a. Airborne  
\_\_\_\_\_ b. Waterborne  
\_\_\_\_\_ c. Surface spill  
\_\_\_\_\_ d. Not Applicable
16. The source and description of the release incident is: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
17. The estimated duration of the release in time is: \_\_\_\_\_  
\_\_\_\_\_
- \*18. The chemical and physical form of the released material is:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- \*19. An estimate of the quantities of noble gases, iodines, and particulates released is: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- \*20. An estimate of the concentration of noble gases, iodines, and particulates released is: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



- \*21. The prevailing weather is:
- a. Wind velocity: \_\_\_\_\_ mph.
  - b. Wind direction (blowing from) \_\_\_\_\_ degrees.
  - c. Current temperature at the release site is: \_\_\_\_\_.
  - d. Atmospheric stability data (vertical temperature difference) is: \_\_\_\_\_.
  - e. The form of precipitation, if any, is: \_\_\_\_\_.
- \*22. The actual or projected dose rate at the site boundary is:
- a. Actual \_\_\_\_\_.
  - b. Projected \_\_\_\_\_.
23. The projected dose rate and integrated dose at 2, 5, and 10 miles is:
- a. Projected dose rate:
    - 2 miles \_\_\_\_\_
    - 5 miles \_\_\_\_\_
    - 10 miles \_\_\_\_\_
  - b. Projected integrated dose:
    - 2 miles \_\_\_\_\_
    - 5 miles \_\_\_\_\_
    - 10 miles \_\_\_\_\_
24. The evacuation zones affected are: \_\_\_\_\_
- \*25. Estimate of any surface radioactive contamination is: \_\_\_\_\_
26. The emergency response action(s) underway are: \_\_\_\_\_
27. Needed onsite support by offsite organizations is: \_\_\_\_\_
28. The prognosis for worsening or termination of the emergency based on plant information is: \_\_\_\_\_
29. Do you have any questions?
30. I repeat, this message:
- \_\_\_\_\_ a. Reports a real emergency.
  - \_\_\_\_\_ b. Is an exercise message.

NOTE: Record the Name, Title, Date, Time, and Warning Point Notified.

(1)	_____	
	(Name)	(Title)
	_____	
	(Date)	(Time)
		(County/State)
(2)	_____	
	(Name)	(Title)
	_____	
	(Date)	(Time)
		(County/State)
(3)	_____	
	(Name)	(Title)
	_____	
	(Date)	(Time)
		(County/State)
(4)	_____	
	(Name)	(Title)
	_____	
	(Date)	(Time)
		(County/State)
(5)	_____	
	(Name)	(Title)
	_____	
	(Date)	(Time)
		(County/State)
(6)	_____	
	(Name)	(Title)
	_____	
	(Date)	(Time)
		(County/State)

\*This information is not to be included in the followup information provided to Gaston, Catawba, Iredell, or Lincoln counties in accordance with a request from the county Civil Preparedness Agency or Emergency Management Director of these counties.

NOTIFICATION OF EMERGENCY CONDITIONS

(Steam Production Duty Engineer/Corporate Communications Department)

"This is \_\_\_\_\_ at  
(Name) (Title)

McGuire Nuclear Station. Please acknowledge when you are ready to copy  
Emergency Message Information."

1. My name is \_\_\_\_\_. I am the \_\_\_\_\_  
\_\_\_\_\_ (title) at McGuire Nuclear Station and am notifying you  
of a Notification of Unusual Event condition associated with Unit no. \_\_\_\_.
2. This is/is not a drill.
3. The incident occurred at \_\_\_\_\_ (hours) on \_\_\_\_/\_\_\_\_/\_\_\_\_ (date).
4. The initiating condition for this Notification of Unusual Event is as  
follows: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. Corrective measures being taken at present are as follows: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
6. Other information on the incident is as follows: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
7. Do you have any questions?
8. I repeat, this is/is not a drill.

FOR INFORMATION ONLY

Form SPD-1002-1

DUKE POWER COMPANY  
PROCEDURE PREPARATION  
PROCESS RECORD

(1) ID No: EP/O/A/5000/06  
Change(s) 0 to  
0 Incorporated

(2) STATION: McGuire Nuclear Station

(3) PROCEDURE TITLE: Alert

(4) PREPARED BY: M. S. Glover DATE: 10/16/81

(5) REVIEWED BY: Ken Fritschy DATE: 10/16/81

Cross-Disciplinary Review By: \_\_\_\_\_ N/R: #25

(6) TEMPORARY APPROVAL (IF NECESSARY):

By: \_\_\_\_\_ (SRO) Date: \_\_\_\_\_

By: \_\_\_\_\_ Date: \_\_\_\_\_

(7) APPROVED BY: George W. Cag Date: 10-17-81

(8) MISCELLANEOUS:

Reviewed/Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed/Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

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 ensure that all actions required by the initiating Emergency Procedure have been 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.

        /        

- 3.2 The Shift Supervisor shall assure notification of the Operations Duty Engineer and the Station Manager or his designee for any Initiating Condition or implementation of any Emergency Procedure listed in Enclosure 4.1.

NOTE

The Shift Supervisor assumes 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.

        /        

- 3.3 The Emergency Coordinator will assure notification of the following personnel for any Initiating Condition or implementation of any Emergency Procedure listed in Enclosure 4.1:

3.3.1 The Superintendent of Operations, or his designee.

3.3.2 The Superintendent of Technical Services or his designee.



Initial / N/A

- 3.3.3 The Projects and Licensing Engineer, or his designee.
- 3.3.4 The Station Health Physicist, or his shift representative.

NOTE

See Enclosure 4.2, Emergency Plan Implementing  
Procedures Telephone List for notifications.

- /       3.4 The Emergency Coordinator will assure prompt notification of State and local offsite authorities, (State and all County Warning Points or Emergency Operations Centers if established), the Nuclear Regulatory Commission Operation Center via the Emergency Notification System in accordance with Station Directive 3.1.4, the Senior Station Nuclear Regulatory Commission Representative, and the Construction Project Manager, of the Alert and the reason for the emergency, for any Initiating Condition listed in Enclosure 4.1 or implementation of any Emergency Procedure listed in Enclosure 4.1 as soon as discovered.

NOTE 1

See Enclosure 4.2, Emergency Plan Implementing  
Procedures Telephone List for notifications.

NOTE 2

See Enclosure 4.3 for Notification of Emergency  
Conditions message format.

- /       3.5 The Emergency Coordinator shall augment onsite resources by notification and activation of the onsite Technical Support Center, and the onsite Operations Support Center in accordance with Station Directive 3.8.2. He shall also activate the Duke Power Crisis Management Center. (See Enclosure 4.4, Crisis Management Center Activation Format).

NOTE

See Enclosure 4.2, Emergency Plan Implementing  
Procedures Telephone List for notifications.

- /       3.6 The Emergency Coordinator in direct contact with the onsite Technical Support Center and the Crisis Management Center will assess and respond to the emergency by:

- 3.6.1 Dispatching onsite monitoring teams with associated communication equipment. (See HF/0/5/1009/04, Environmental Monitoring for Emergency Conditions).
- 3.6.2 Providing periodic plant status updates to offsite authorities (at least every 15 minutes).

Initial / N/A

3.6.3 Providing periodic meteorological assessments to offsite authorities and, if any releases are occurring, dose estimates for actual releases.

3.7 The Emergency Coordinator will assure notification of the Superintendent of Maintenance or his designee for the following Initiating Conditions or Emergency Procedures Listed in Enclosure 4.1:

3.7.1 Item: 4.1.1, 4.1.2, 4.1.3, 4.1.4, 4.1.5, 4.1.7, 4.1.8, 4.1.9, 4.1.10, 4.1.11, 4.1.13, 4.1.14, 4.1.17, 4.1.18

NOTE

See Enclosure 4.2, Emergency Plan Implementing Procedures Telephone List for notifications.

3.8 The Emergency Coordinator will assure notification of the Superintendent of Administration or his designee for the following Initiating Conditions or Emergency Procedures listed in Enclosure 4.1:

3.8.1 Item: 4.1.13, 4.1.16, 4.1.17, 4.1.18

NOTE

See Enclosure 4.2, Emergency Plan Implementing Procedures Telephone List for notifications.

3.9 The Emergency Coordinator will assure notification of the Station Safety Supervisor or his designee for the following initiating conditions or Emergency Procedures listed in Enclosure 4.1:

3.9.1 Item: 4.1.13, 4.1.17, 4.1.18.

NOTE

See Enclosure 4.2, Emergency Plan Implementing Procedures Telephone List for Notifications.

3.10 Protective action recommendations shall be directed 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 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)

3.10.1 Whole body <1, thyroid <5, NO protective action is required. Monitor environmental radiation levels to verify.

3.10.2 Whole body 1 to <5, thyroid 5 to <25, recommend seeking shelter and wait for further instructions. Consider

Initial / N/A

evacuation particularly for children and pregnant women. Monitor environmental radiation levels. Control access to affected areas.

- 3.10.3 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 4.2 for Emergency Plan Implementing Procedures Telephone List for notifications.

- / 3.11 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.

- / 3.12 The Station Manager or his designee will close out the Emergency with a verbal summary to offsite authorities notified in Step 3.4, followed by a written summary within 8 hours.

4.0 Enclosures

- 4.1 List of Initiating Conditions, Emergency Action Levels, and Associated Emergency Procedure/Document.
- 4.2 Emergency Plan Implementing Procedures Telephone List.
- 4.3 Notification of Emergency Conditions.
- 4.4 Crisis Management Center Activation Format.

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

Initiating Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.1.1 Severe loss of fuel cladding:	a. Very high coolant activity sample (e.g., 300 $\mu\text{Ci/cc}$ equivalent of I-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
4.1.2 Rapid gross failure of one Steam Generator tube with loss of off-site power.	Pressurizer low pressure alarm and reactor trip <u>and</u> , pressurizer low level alarm <u>and</u> , pressurizer low pressure safety injection signal <u>and</u> , undervoltage alarm on 7KV buses. EMF 32, 33, and 34 Alarm(s).	EP/1/A/5000/04, AP/1/A/5500/07
4.1.3 Rapid failure of Steam Generator tubes.	Several hundred gpm primary to secondary leak rate indicated by:  a. as above in 4.1.2 for pressurizer and EMF indicators.  b. Steam generator level increasing in one or more generator(s) and falling in the others due to reactor trip.	EP/1/A/5000/04

Initiating Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.1.4 Steam line break with significant primary to secondary leak rate.	Greater than 10gpm, rapidly decreasing reactor coolant Tav <sub>g</sub> , pressurizer pressure and level <u>and</u> ,  1. Steam line differential pressure safety injection signal and increased containment building pressure if break is in containment.  2. High steam flow and Lo Lo Tav <sub>g</sub> or Low steam pressure safety injection signal for rupture downstream of MSIV's.	EP/1/A/5000/04, EP/1/A/5000/03
4.1.5 Primary coolant leak rate greater than 50 gpm.	Leak >50gpm as indicated by calculation or other indication. (i.e., sump levels)	EP/1/A/5000/02, AP/1/A/5500/10
4.1.6 High radiation levels or high airborne contamination which indicates a severe degradation in the control of radioactive materials.	Increase by a factor of 1,000 in radiation monitor reading within the station.	AP/O/A/5500/28
4.1.7 Loss of offsite power <u>and</u> loss of all onsite AC power for up to 15 minutes. (See Site Area Emergency EP/O/A/5000/07, for extended loss).	Undervoltage alarm on 7KV buses, <u>and</u> blackout load sequencers actuated.	AP/1/A/5500/07
4.1.8 Loss 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
4.1.9 Coolant pump seizure leading to fuel failure.	Reactor coolant pump auto trip alarm, <u>and</u> reactor trip on low coolant flow, <u>and</u> failed fuel monitor alarm EMF-48.	AP/1/A/5500/04, AP/1/A/5500/08, OP/O/A/6150/14, AP/1/A/5500/05



Initiating Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.1.10 Complete loss of functions needed for plant cold shutdown.	RHR not functional and inability to sustain natural or forced circulation.	AP/1/A/5500/17, OP/1/A/6100/04
4.1.11 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
4.1.12 Fuel damage accident with release of radioactivity 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, AP/0/A/5500/28
4.1.13 Fire potentially affecting safety systems.	Observation of a fire that could affect safety systems.	Station Directive 2.11 Series, Tech Specs 3/4.5
4.1.14 Most or all alarms (annunciators) lost.	As observed.	OP/0/A/6350/01A
4.1.15 Radiological effluents greater than 10 times Tech Specs instantaneous limits (an instantaneous rate which, if continued over 2 hours, would result in about lmr at the site boundary under average meteorological conditions or whenever effluent monitors or radiological monitoring detect these levels).	For EMF35 - Low Range off-scale High Range $1 \times 10^4$ cpm  For EMF36 - Low Range $2 \times 10^6$ cpm High Range $5 \times 10^6$ cpm	AP/0/A/5500/28
4.1.16 Ongoing security compromise.	As reported by Security force.	Station Security Plan

Initiating Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.1.17 Severe natural phenomena being experienced or projected:		AP/O/A/5500/30, AP/O/A/5500/29
a. Earthquake greater than Operational Basis Earthquake Levels	>0.8gH, >.053gV, Annunciator Alarm, (AD-13).	
b. Flood, low water, hurricane 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 (95 mph)/from National Weather Service information.	
4.1.18 Other hazards being experienced or projected.		AP/O/A/5500/32, AP/O/A/5500/31 AP/1/A/5500/23
a. Aircraft crash on facility.	As observed.	
b. Missile impacts from whatever source on facility.	As observed.	
c. 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 penetration.	Turbine trip and observation of turbine malfunction or failure.	

Initiating Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.1.19 Other plant conditions exist that in the judgment of the Shift Supervisor, the Operations Duty Engineer, the Superintendent of Operations, or the Plant Manager warrant precautionary activation of the Technical Support Center and near site Crisis Management Center.	As determined by Shift Supervisor/ Emergency Coordinator.	As dictated by Plant Conditions.
4.1.20 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

EMERGENCY PLAN IMPLEMENTATING PROCEDURES TELEPHONE LIST

- 4.2.1 Operations Duty Engineer (PA System)  
P&T Pager
- 4.2.2 Station Manager  
Home -  
Home -
- 4.2.3 Superintendent of Operations -  
Home -
- 4.2.4 Superintendent of Technical Services -  
Home -
- 4.2.5 Projects and Licensing Engineer -  
Home -
- 4.2.6 Station Health Physicist -  
Home -  
P&T Pager -
- 4.2.7 NC State Warning Point, Raleigh -
- 4.2.8 Mecklenburg County Warning Point - Primary: Ring Down Phone  
Back-up:  
Back-up: Emergency Radio, Code: \_\_\_\_\_
- 4.2.9 Lincoln County Warning Point - Primary: Ring Down Phone  
Back-up:  
Back-up: Emergency Radio, Code: \_\_\_\_\_
- 4.2.10 Catawba County Warning Point - Primary: Ring Down Phone  
Back-up:  
Back-up: Emergency Radio, Code: \_\_\_\_\_
- 4.2.11 Iredell County Warning Point - Primary: Ring Down Phone  
Back-up:  
Back-up: Emergency Radio, Code: \_\_\_\_\_
- 4.2.12 Gaston County Warning Point - Primary: Ring Down Phone  
Back-up:  
Back-up: Emergency Radio, Code: \_\_\_\_\_

NOTE

Radio Code . will activate  
all county radio units.

- 4.2.13 N.R.C. Operation Center, Emergency Notification System (ENS Phone)
- 4.2.14 N.R.C. Station Representative  
Office .  
Home - .  
P&T Pager
- 4.2.15 Construction Project Manager - Construction , Ext.  
Home :

EMERGENCY PLAN IMPLEMENTATING PROCEDURES TELEPHONE LIST

CRISIS MANAGEMENT CENTER ACTIVATION

- 4.2.16 Hal B. Tucker Office:  
or Home:
- 4.2.17 William O. Parker - Office:  
or Home:
- 4.2.18 Robert M. Koehler - Office:  
or Home:
- 4.2.19 Steam Production Duty Man -
- 4.2.20 Superintendent of Maintenance  
Home:
- 4.2.21 Superintendent of Administration  
Home:
- 4.2.22 Station Safety Supervisor  
Home:
- 4.2.23 Radiation Protection Section, Department of Human Resources-

10-81

MCGUIRE NUCLEAR STATION  
NOTIFICATION OF EMERGENCY CONDITIONS

4.3.1 Include as a minimum, the following information to the North Carolina State Warning Point, and to the five County Warning Points (Mecklenburg, Catawba, Iredell, Lincoln, and Gaston).

NOTE 1: See Enclosure 4.2, Implementing Procedures Telephone List.

NOTE 2: A. Complete Part A of this format as a minimal first notification of a reportable incident.

B. Complete Part A and B of this format to provide minimal followup information.

PART A: Initial Emergency Message Information

"This is \_\_\_\_\_, \_\_\_\_\_,  
(Name) (Title)

at McGuire Nuclear Station. I am notifying you of an incident at McGuire, Unit # \_\_\_\_\_. Please acknowledge when you are ready to copy emergency information."

1. This message:

- \_\_\_\_\_ a. Reports a real emergency.
- \_\_\_\_\_ b. Is an exercise message.

2. This message is from the McGuire Nuclear Plant

3. My name is \_\_\_\_\_.

4. My telephone number is \_\_\_\_\_.

5. The code word is \_\_\_\_\_.

6. This is a:

- \_\_\_\_\_ a. First notification.
- \_\_\_\_\_ b. Followup message.

7. The incident occurred at \_\_\_\_\_ on \_\_\_\_\_.  
(Time AM or PM) (Date)

8. The class of emergency is:

- \_\_\_\_\_ a. Notification of an Unusual Event
- \_\_\_\_\_ b. Alert
- \_\_\_\_\_ c. Site Area Emergency
- \_\_\_\_\_ d. General Emergency



9. The initiating event causing the Emergency Classification is:

---

---

---

10. The Emergency Condition (Select one of the below options):

- ☐ a. Does not involve the release of radioactive materials from the plant or involve public.
- ☐ b. Involves the POTENTIAL for the release of radioactive materials, but NO radioactive materials have been released.
- ☐ c. Does involve the release of some radioactive materials from the plant, but at a level below that considered a public hazard.
- ☐ d. Does involve the release of radioactive materials from the plant at a level at which Protective Actions is advisable.

11. I 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 \_\_\_\_\_ around the station remain inside with doors and windows closed. These zones are in a \_\_\_\_\_ direction from the station out to a radius of about \_\_\_\_\_ miles.
- ☐ c. People in zones \_\_\_\_\_ EVACUATE their homes and businesses. These zones are in a \_\_\_\_\_ direction from the station out to a radius of about \_\_\_\_\_ miles. We urge people in these areas to leave their home or business in a safe, orderly fashion.
- ☐ d. Other recommendations: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
i.e.: Stay tuned to your local radio or television station for further information.

12. Relay this information to the persons indicated in your alert procedures for an incident at McGuire Nuclear Station.
13. A followup message will:
- ☐ a. Follow in approximately \_\_\_\_\_ minutes.
  - ☐ b. Not follow.
14. I repeat, this message:
- ☐ a. Reports a real emergency.
  - ☐ b. Is an exercise message.

NOTE: Record the Name, Title, Date, Time, and Warning Point at end of Section B.

PART B: Followup Emergency Message Information

15. The type of actual or projected release is (select one or more).
- ☐ a. Airborne
  - ☐ b. Waterborne
  - ☐ c. Surface spill
  - ☐ d. Not Applicable
16. The source and description of the release incident is: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
17. The estimated duration of the release in time is: \_\_\_\_\_  
\_\_\_\_\_
- \*18. The chemical and physical form of the released material is: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- \*19. An estimate of the quantities of noble gases, iodines, and particulates released is: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- \*20. An estimate of the concentration of noble gases, iodines, and particulates released is: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- \*21. The prevailing weather is:
- a. Wind velocity: \_\_\_\_\_ mph.
  - b. Wind direction (blowing from) \_\_\_\_\_ degrees.
  - c. Current temperature at the release site is: \_\_\_\_\_.
  - d. Atmospheric stability data (vertical temperature difference) is: \_\_\_\_\_.
  - e. The form of precipitation, if any, is: \_\_\_\_\_.
- \*22. The actual or projected dose rate at the site boundary is:
- a. Actual \_\_\_\_\_.
  - b. Projected \_\_\_\_\_.
23. The projected dose rate and integrated dose at 2, 5, and 10 miles is:
- a. Projected dose rate:
    - 2 miles \_\_\_\_\_
    - 5 miles \_\_\_\_\_
    - 10 miles \_\_\_\_\_
  - b. Projected integrated dose:
    - 2 miles \_\_\_\_\_
    - 5 miles \_\_\_\_\_
    - 10 miles \_\_\_\_\_
24. The evacuation zones affected are: \_\_\_\_\_
- \*25. Estimate of any surface radioactive contamination is: \_\_\_\_\_
26. The emergency response action(s) underway are: \_\_\_\_\_
27. Needed onsite support by offsite organizations is: \_\_\_\_\_
28. The prognosis for worsening or termination of the emergency based on plant information is: \_\_\_\_\_
29. Do you have any questions?
30. I repeat, this message:
- \_\_\_\_\_ a. Reports a real emergency.
  - \_\_\_\_\_ b. Is an exercise message.

NOTE: Record the Name, Title, Date, Time, and Warning Point Notified.

(1)	_____		_____
	(Name)		(Title)
	_____		_____
	(Date)	(Time)	(County/State)
(2)	_____		_____
	(Name)		(Title)
	_____		_____
	(Date)	(Time)	(County/State)
(3)	_____		_____
	(Name)		(Title)
	_____		_____
	(Date)	(Time)	(County/State)
(4)	_____		_____
	(Name)		(Title)
	_____		_____
	(Date)	(Time)	(County/State)
(5)	_____		_____
	(Name)		(Title)
	_____		_____
	(Date)	(Time)	(County/State)
(6)	_____		_____
	(Name)		(Title)
	_____		_____
	(Date)	(Time)	(County/State)

\*This information is not to be included in the followup information provided to Gaston, Catawba, Iredell, or Lincoln counties in accordance with a request from the county Civil Preparedness Agency or Emergency Management Director of these counties.

## CRISIS MANAGEMENT CENTER ACTIVATION FORMAT

1. My name is \_\_\_\_\_. I am the \_\_\_\_\_  
\_\_\_\_\_ (title) at McGuire Nuclear Station. I am notifying you  
of an incident at McGuire Nuclear Station, Unit # \_\_\_\_\_. Please acknow-  
ledge when you are ready to copy emergency information.
2. This is/is not a drill.
3. The incident occurred at \_\_\_\_\_ (Hours) on \_\_\_\_/\_\_\_\_/\_\_\_\_ (Date).
4. The class of emergency is: \_\_\_\_\_.
5. The initiating condition causing the emergency is as follows: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
6. Release of radioactivity: \_\_\_\_\_ is taking place \_\_\_\_\_ is not taking place.
7. Wind direction (blowing from) \_\_\_\_\_ degrees.
8. Corrective measures being taken at present are as follows: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
9. It is recommended that you activate the Crisis Management Center in  
accordance with the Crisis Management Plan.
10. Do you have any questions?
11. I repeat, this is/is not a drill.
12. Record name of person notified, title, and time notified.

(Name)

(Title)

(Time)



**FOR INFORMATION ONLY**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(4) PREPARED BY: M. S. GloverDATE: 10/16/81(5) REVIEWED BY: Gene F. [unclear]DATE: 10/16/81

Cross-Disciplinary Review By: \_\_\_\_\_

N/R: Yes

(6) TEMPORARY APPROVAL (IF NECESSARY):

By: \_\_\_\_\_ (SRO)

Date: \_\_\_\_\_

By: \_\_\_\_\_

Date: \_\_\_\_\_

(7) APPROVED BY: George V. CageDate: 10-19-81

(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 ensure that all actions required by the initiating Emergency Procedure have been 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.

- 3.2 The Shift Supervisor shall assure notification of the Operations Duty Engineer and the Station Manager or his designee for any Initiating Condition or implementation of any Emergency Procedure listed in Enclosure 4.1.

IV. IE

The Shift Supervisor assumes 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.

- 3.3 The Emergency Coordinator will assure notification of the following personnel for any Initiating Condition or implementation of any Emergency Procedure listed in Enclosure 4.1:

- 3.3.1 The Superintendent of Operations or his designee.  
3.3.2 The Superintendent of Technical Services or his designee.  
3.3.3 The Projects and Licensing Engineer or his designee.  
3.3.4 The Station Health Physicist or his shift representative.

Initial / N/ANOTE

See Enclosure 4.2, Emergency Plan Implementing  
Procedures Telephone List for notifications.

- / 3.4 The Emergency Coordinator will assure prompt notification of State and Local offsite authorities, (State and all County Warning Points or Emergency Operations Centers if established) the Nuclear Regulatory Commission Operation Center via the Emergency Notification System in accordance with Station Directive 3.1.4, the Senior Station Nuclear Regulatory Commission representative, and the Construction Project Manager of the Site Emergency and the reason for the emergency, for any Initiating Condition Listed in Enclosure 4.1 or implementation of any Emergency Procedure listed in Enclosure 4.1 as soon as discovered.

NOTE 1

See Enclosure 4.2, Emergency Plan Implementing  
Procedures Telephone List for notifications.

NOTE 2

See Enclosure 4.3 for Notification of Emergency  
Conditions message format.

- / 3.5 The Emergency Coordinator shall augment onsite resources by notification and activation of the onsite Technical Support Center, and the onsite Operations Support Center in accordance with Station Directive 3.8.2. He shall also activate the Duke Power Crisis Management Center. (See Enclosure 4.4, Crisis Management Center Activation Format).

NOTE

See Enclosure 4.2, Emergency Plan Implementing  
Procedures Telephone List for notifications.

- / 3.6 The Emergency Coordinator in direct contact with the onsite Technical Support Center and the Crisis Management Center will assess and respond to the emergency by:

- 3.6.1 Dispatching the Onsite and Offsite Monitoring teams with associated communications. (See HP/O/A/1009/04, Environmental Monitoring for Emergency Conditions).
- 3.6.2 Providing meteorological and dose estimates to offsite authorities for actual releases via a dedicated individual or automated data transmission.
- 3.6.3 Providing release and dose projections based on available plant condition information and foreseeable contingencies to offsite authorities.

Initial / N/A

- 3.7 Protective action recommendations shall be directed 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 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)
- 3.7.1 Whole body <1, thyroid <5, NO protective action is required. Monitor environmental radiation levels to verify.
- 3.7.2 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.
- 3.7.3 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 4.2 for Emergency Plan Implementing Procedures Telephone List for notification.

- 3.8 The Emergency Coordinator in coordination with the Recovery Manager, at the Crisis Management Center, will provide or make available:
- 3.8.1 A dedicated individual for plant status updates to offsite authorities and periodic press briefings.
- 3.8.2 Senior technical and management staff onsite available for consultation with the NRC and State on a periodic basis.
- 3.9 The Emergency Coordinator will assure notification of all station management personnel not already informed of the emergency situation including the Superintendent of Maintenance or his designee, and the Superintendent of Administration or his designee.

NOTE

See Enclosure 4.2, Emergency Plan Implementing Procedures Telephone List for notification.

Initial / N/A

3.10 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.

3.11 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 List of Initiating Conditions, Emergency Action Levels, and Associated Emergency Procedure/Document.
- 4.2 Emergency Plan Implementing Procedures Phone List.
- 4.3 Notification of Emergency Conditions.
- 4.4 Crisis Management Center Activation Format.



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

Initiating Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.1.1 Known loss of coolant accident greater than makeup pump capacity.	Pressurizer low pressure reactor trip <u>and</u> pressurizer low pressure safety injection signal <u>and</u> high containment building pressure, (INSP-5040, 5050, 5060, 5070) <u>and</u> high containment building sump level, (INIP-5260, 5270) <u>and</u> high containment humidity, (INSP-5400, 5410) <u>and</u> EMF 38, 39, and 40 alarm.	EP/1/A/5000/02
4.1.2 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°F <u>and</u> $\Delta T$ rapidly increasing or no $\Delta T$ across core.	AP/1/A/5500/05
4.1.3 Rapid failure of steam generator tubes with loss of offsite power (e.g., several hundred gpm primary to secondary leak rate).	Pressurizer low pressure alarm and reactor trip, <u>and</u> pressurizer low level alarm, <u>and</u> EMF 32, 33, and 34 alarm, <u>and</u> undervoltage alarms on 7KV buses, and steam generator water level rapidly increasing in one or more steam generators falling in the others, <u>and</u> pressurizer level rapidly decreasing, (INCP-5151, 5160, 5172) <u>and</u> possible lifting of steam generator PRV's and/or safety valves.	EP/1/A/5000/04, AP/1/A/5500/07

Initiating Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.1.4 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, <u>and</u> High containment building pressure, if steamline break is in containment (INSP-5040, 5050, 5060, 5070) <u>and</u> EMF 51A and/or B alarm, <u>or</u> high steam flow and Lo Lo Tavg or low steam pressure safety injection signal, <u>and</u> EMF 48 alarm.	EP/1/A/5000/03
4.1.5 Loss of offsite power <u>and</u> loss of onsite AC power for more than 15 minutes.	Undervoltage alarms on 7KV buses.	AP/1/A/5500/07
4.1.6 Loss of all vital onsite DC power for more than 15 minutes.	Blackout load sequencers actuated, DC bus undervoltage all buses <u>and</u> indications as in 4.1.5 above.	Tech Specs 3/8.2.3, 3/8.2.4
4.1.7 Complete loss of any function needed for plant hot shutdown.	Inability to establish charging pump injection, <u>and</u> Inability to establish emergency feedwater flow, <u>or</u> Inability to establish service water flow, <u>and</u> Inability to establish component cooling water flow.	OP/1/A/6100/04, AP/1/A/5500/17
4.1.8 Transient requiring operation of shutdown systems with failure to scram (continued power generation 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
4.1.9 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 EMF-16, 17, 38, 39, 40, or 42 alarm.	AP/1/A/5500/25

Initiating Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.1.10 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
4.1.11 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
4.1.12 Effluent monitors detect levels corresponding to greater than 50 mr/hr for 1/2 hour <u>or</u> greater than 500 mr/hr W.B. for two minutes (or five times these levels to the thyroid) at the site boundary <u>for adverse meteorology</u> (See Note 2).	<p>For EMF-35 - Low Range, offscale High Range <math>8 \times 10^3</math> cpm. (See Note 1)</p> <p>For EMF-36 - Low Range <math>3 \times 10^5</math> cpm High Range <math>7 \times 10^1</math> cpm (See Note 1)</p> <p>For EMF-37 - Change of 143 cpm/minute for 30 minutes or a change of 1430 cpm/minute for 2 minutes (See Note 1).</p>	AP/O/A/5500/28, HP/O/B/1009/09

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).

Initiating Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.1.13 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
4.1.14 Severe natural phenomena being experienced or projected with plant not in cold shutdown.		AP/O/A/5500/29, AP/O/A/5500/30
4.1.14.1		
Earthquake greater than SSE (Safe Shutdown Earthquake) levels.	(>.15gH, >.1gV) as determined by monitoring seismic instrumentation and recording devices. (SMP-1)	
4.1.14.2		
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.	
4.1.14.3		
Sustained winds or tornadoes in excess of design levels.	(>95mph) as observed or documented by the National Weather Service Information.	
4.1.15 Other hazards being experienced or projected with plant not in cold shutdown.		AP/O/A/5500/32, AP/O/A/5500/31

## Initiating Conditions

## Emergency Action Level (EAL)

## Emergency Procedure/Document

## 4.1.15.1

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.

## 4.1.15.2

Severe damage to safe shutdown equipment from missiles or explosion.

Loss of functions needed for hot shutdown as in 4.1.7.

## 4.1.15.3

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.

## 4.1.16

Other plant conditions exist that in the judgment 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.

## 4.1.17

Evacuation of control room and control of shutdown systems not established from local stations in 15 minutes.

As determined by Shift Supervisor/

OP/O/A/6350/02, AP/1/A/5500/17



EMERGENCY PLAN IMPLEMENTATING PROCEDURES TELEPHONE LIST

CRISIS MANAGEMENT CENTER ACTIVATION

- |        |  |         |
|--------|--|---------|
| 4.2.16 | Hal B. Tucker  | Office: |
|        | or   | Home:   |
| 4.2.17 | William O. Parker -  | Office: |
|        | or   | Home:   |
| 4.2.18 | Robert M. Koehler -  | Office: |
|        | or   | Home:   |
| 4.2.19 | Steam Production Duty Man -                                  |         |
| 4.2.20 | Superintendent of Maintenance                                | Home:   |
| 4.2.21 | Superintendent of Administration -                           |         |
|        |  | Home:   |
| 4.2.22 | Radiation Protection Section, Department of Human Resources- |         |

16-81

EMERGENCY PLAN IMPLEMENTATING PROCEDURES TELEPHONE LIST

- 4.2.1 Operations Duty Engineer (PA System)  
P&T Pager -
- 4.2.2 Station Manager  
Home -  
Home -
- 4.2.3 Superintendent of Operations -  
Home -
- 4.2.4 Superintendent of Technical Services -  
Home -
- 4.2.5 Projects and Licensing Engineer -  
Home -
- 4.2.6 Station Health Physicist -  
Home -  
P&T Pager -
- 4.2.7 NC State Warning Point, Raleigh -
- 4.2.8 Mecklenburg County Warning Point - Primary: Ring Down Phone  
Back-up:  
Back-up: Emergency Radio, Code: \_ \_
- 4.2.9 Lincoln County Warning Point - Primary: Ring Down Phone  
Back-up:  
Back-up: Emergency Radio, Code: \_ \_
- 4.2.10 Catawba County Warning Point - Primary: Ring Down Phone  
Back-up:  
Back-up: Emergency Radio, Code: \_ \_
- 4.2.11 Iredell County Warning Point - Primary: Ring Down Phone  
Back-up:  
Back-up: Emergency Radio, Code: \_ \_
- 4.2.12 Gaston County Warning Point - Primary: Ring Down Phone  
Back-up:  
Back-up: Emergency Radio, Code: \_ \_

NOTE

Radio Code will activate  
all county radio units.

- 4.2.13 N.R.C. Operation Center, Emergency Notification System (ENS Phone)
- 4.2.14 N.R.C. Station Representative  
Office -  
Home -  
P&T Pager
- 4.2.15 Construction Project Manager - Construction  
Home :

MCGUIRE NUCLEAR STATION  
NOTIFICATION OF EMERGENCY CONDITIONS

4.3.1 Include as a minimum, the following information to the North Carolina State Warning Point, and to the five County Warning Points (Mecklenburg, Catawba, Iredell, Lincoln, and Gaston).

NOTE 1: See Enclosure 4.2, Implementing Procedures Telephone List.

NOTE 2: A. Complete Part A of this format as a minimal first notification of a reportable incident.

B. Complete Part A and B of this format to provide minimal followup information.

PART A: Initial Emergency Message Information

"This is \_\_\_\_\_, \_\_\_\_\_,  
(Name) (Title)

at McGuire Nuclear Station. I am notifying you of an incident at McGuire, Unit # \_\_\_\_\_. Please acknowledge when you are ready to copy emergency information."

1. This message:

- \_\_\_\_\_ a. Reports a real emergency.  
\_\_\_\_\_ b. Is an exercise message.

2. This message is from the McGuire Nuclear Plant

3. My name is \_\_\_\_\_.

4. My telephone number is \_\_\_\_\_.

5. The code word is \_\_\_\_\_.

6. This is a:

- \_\_\_\_\_ a. First notification.  
\_\_\_\_\_ b. Followup message.

7. The incident occurred at \_\_\_\_\_ on \_\_\_\_\_.  
(Time AM or PM) (Date)

8. The class of emergency is:

- \_\_\_\_\_ a. Notification of an Unusual Event  
\_\_\_\_\_ b. Alert  
\_\_\_\_\_ c. Site Area Emergency  
\_\_\_\_\_ d. General Emergency

9. The initiating event causing the Emergency Classification is:

---

---

---

10. The Emergency Condition (Select one of the below options):

- ☐ a. Does not involve the release of radioactive materials from the plant or involve public.
- ☐ b. Involves the POTENTIAL for the release of radioactive materials, but NO radioactive materials have been released.
- ☐ c. Does involve the release of some radioactive materials from the plant, but at a level below that considered a public hazard.
- ☐ d. Does involve the release of radioactive materials from the plant at a level at which Protective Actions is advisable.

11. I 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 \_\_\_\_\_ around the station remain inside with doors and windows closed. These zones are in a \_\_\_\_\_ direction from the station out to a radius of about \_\_\_\_\_ miles.
- ☐ c. People in zones \_\_\_\_\_ EVACUATE their homes and businesses. These zones are in a \_\_\_\_\_ direction from the station out to a radius of about \_\_\_\_\_ miles. We urge people in these areas to leave their home or business in a safe, orderly fashion.
- ☐ d. Other recommendations: \_\_\_\_\_

i.e.: Stay tuned to your local radio or television station for further information.

12. Relay this information to the persons indicated in your alert procedures for an incident at McGuire Nuclear Station.

13. A followup message will:

- ☐ a. Follow in approximately \_\_\_\_\_ minutes.  
☐ b. Not follow.

14. I repeat, this message:

- ☐ a. Reports a real emergency.  
☐ b. Is an exercise message.

NOTE: Record the Name, Title, Date, Time, and Warning Point at end of Section B.

PART B: Followup Emergency Message Information

15. The type of actual or projected release is (select one or more).

- ☐ a. Airborne  
☐ b. Waterborne  
☐ c. Surface spill  
☐ d. Not Applicable

16. The source and description of the release incident is: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

17. The estimated duration of the release in time is: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\*18. The chemical and physical form of the released material is:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\*19. An estimate of the quantities of noble gases, iodines, and particulates released is: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

\*20. An estimate of the concentration of noble gases, iodines, and particulates released is: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_



- \*21. The prevailing weather is:
- Wind velocity: \_\_\_\_\_ mph.
  - Wind direction (blowing from) \_\_\_\_\_ degrees.
  - Current temperature at the release site is: \_\_\_\_\_.
  - Atmospheric stability data (vertical temperature difference) is: \_\_\_\_\_.
  - The form of precipitation, if any, is: \_\_\_\_\_.
- \*22. The actual or projected dose rate at the site boundary is:
- Actual \_\_\_\_\_.
  - Projected \_\_\_\_\_.
23. The projected dose rate and integrated dose at 2, 5, and 10 miles is:
- Projected dose rate:  
2 miles \_\_\_\_\_  
5 miles \_\_\_\_\_  
10 miles \_\_\_\_\_
  - Projected integrated dose:  
2 miles \_\_\_\_\_  
5 miles \_\_\_\_\_  
10 miles \_\_\_\_\_
24. The evacuation zones affected are: \_\_\_\_\_
- \*25. Estimate of any surface radioactive contamination is: \_\_\_\_\_  
\_\_\_\_\_
26. The emergency response action(s) underway are: \_\_\_\_\_  
\_\_\_\_\_
27. Needed onsite support by offsite organizations is: \_\_\_\_\_  
\_\_\_\_\_
28. The prognosis for worsening or termination of the emergency based on plant information is: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
29. Do you have any questions?
30. I repeat, this message:
- \_\_\_\_\_. Reports a real emergency.
  - \_\_\_\_\_. Is an exercise message.

NOTE: Record the Name, Title, Date, Time, and Warning Point Notified.

(1)	_____		_____
	(Name)		(Title)
	_____		_____
	(Date)	(Time)	(County/State)
(2)	_____		_____
	(Name)		(Title)
	_____		_____
	(Date)	(Time)	(County/State)
(3)	_____		_____
	(Name)		(Title)
	_____		_____
	(Date)	(Time)	(County/State)
(4)	_____		_____
	(Name)		(Title)
	_____		_____
	(Date)	(Time)	(County/State)
(5)	_____		_____
	(Name)		(Title)
	_____		_____
	(Date)	(Time)	(County/State)
(6)	_____		_____
	(Name)		(Title)
	_____		_____
	(Date)	(Time)	(County/State)

\*This information is not to be included in the followup information provided to Gaston, Catawba, Iredell, or Lincoln counties in accordance with a request from the county Civil Preparedness Agency or Emergency Management Director of these counties.

CRISIS MANAGEMENT CENTER ACTIVATION FORMAT

1. My name is \_\_\_\_\_. I am the \_\_\_\_\_  
\_\_\_\_\_ (title) at McGuire Nuclear Station. I am notifying you  
of an incident at McGuire Nuclear Station, Unit # \_\_\_\_\_. Please acknow-  
ledge when you are ready to copy emergency information.
2. This is/is not a drill.
3. The incident occurred at \_\_\_\_\_ (Hours) on \_\_\_\_/\_\_\_\_/\_\_\_\_ (Date).
4. The class of emergency is: \_\_\_\_\_.
5. The initiating condition causing the emergency is as follows: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
6. Release of radioactivity: \_\_\_\_ is taking place \_\_\_\_ is not taking place.
7. Wind direction (blowing from) \_\_\_\_\_ degrees.
8. Corrective measures being taken at present are as follows: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
9. It is recommended that you activate the Crisis Management Center in  
accordance with the Crisis Management Plan.
10. Do you have any questions?
11. I repeat, this is/is not a drill.
12. Record name of person notified, title, and time notified.

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Time)

FOR INFORMATION ONLY

DUKE POWER COMPANY  
PROCEDURE PREPARATION  
PROCESS RECORD

(1) ID No: EP/O/A/5000/08  
Change(s) 0 to  
0 Incorporated

(2) STATION: McGuire Nuclear Station

(3) PROCEDURE TITLE: General Emergency

(4) PREPARED BY: M. S. Glover

DATE: 10/16/81

(5) REVIEWED BY: Len Fairbank

DATE: 10/16/81

Cross-Disciplinary Review By: \_\_\_\_\_

N/R: 177

(6) TEMPORARY APPROVAL (IF NECESSARY):

By: \_\_\_\_\_ (SRO)

Date: \_\_\_\_\_

By: \_\_\_\_\_

Date: \_\_\_\_\_

(7) APPROVED BY: George W. Cox

Date: 10-19-81

(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 ensure that all actions required by the initiating Emergency Procedure have been 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.

- \_\_\_\_\_/\_\_\_\_ 3.2 The Shift Supervisor shall assure notification of the Operations Duty Engineer and the Station Manager or his designee for any Initiating Condition or implementation of any Emergency Procedure listed in Enclosure 4.1

NOTE

The Shift Supervisor assumes 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.

- \_\_\_\_\_/\_\_\_\_ 3.3 The Emergency Coordinator will assure notification of the following personnel for any Initiating Condition or implementation of any Emergency Procedure listed in Enclosure 4.1:



Initial/N/A

- 3.3.1 The Superintendent of Operations or his designee.
- 3.3.2 The Superintendent of Technical Services or his designee.
- 3.3.3 The Projects and Licensing Engineer or his designee.
- 3.3.4 The Station Health Physicist or his shift representative.

NOTE

See Enclosure 4.2 for Emergency Plan Implementing Procedures Telephone List for notifications.

- \_\_\_\_\_/\_\_\_\_ 3.4 The Emergency Coordinator will assure prompt (within 15 minutes of declaring a General Emergency) notification of State and Local offsite authorities, (State and all County Warning Points or Emergency Operations Centers if established) the Nuclear Regulatory Commission Operation Center via the Emergency Notification System in accordance with Station Directive 3.1.4, the Senior Station Nuclear Regulatory Commission Representative, and the Construction Project Manager of the General Emergency and the reason for the emergency, for any Initiating Condition listed in Enclosure 4.1 as soon as discovered.

NOTE 1

See Enclosure 4.2 for Emergency Plan Implementing Procedure Telephone List for notification.

NOTE 2

See Enclosure 4.3 for Notification of Emergency Conditions message format.

- \_\_\_\_\_/\_\_\_\_ 3.5 The Emergency Coordinator shall augment onsite resources by notification and activation of the onsite Technical Support Center, and the onsite Operations Support Center in accordance with Station Directive 3.8.2. He shall also activate the Duke Power Crisis Management Center. (See Enclosure 4.4, Crisis Management Center Activation Format).

NOTE

See Enclosure 4.2 for Emergency Plan Implementing Procedures Telephone List for notifications.

- \_\_\_\_\_/\_\_\_\_ 3.6 The Emergency Coordinator in direct contact with the onsite

Initial/N/A

Technical Support Center and the Crisis Management Center will assess and respond to the emergency by:

- 3.6.1 Dispatching the onsite and offsite monitoring teams with associated communications, (See HP/O/B/1009/04, Environmental Monitoring for Emergency Conditions).
- 3.6.2 Provide meteorological and dose estimates to offsite authorities for actual releases via a dedicated individual or automated data transmission.
- 3.6.3 Provide release and dose projections based on available plant condition information and foreseeable contingencies to offsite authorities.

\_\_\_\_\_/\_\_\_\_ 3.7 Protective action recommendations shall be directed 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 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)

- 3.7.1 Whole body <1, Thyroid <5, No protective action is required. Monitor environmental radiation levels to verify.
- 3.7.2 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.
- 3.7.3 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 4.2 for Emergency Plan  
Implementing Procedures Telephone List  
for notification.

Initial/N/A           /           

3.8 The Emergency Coordinator in coordination with the Recovery Manager, at the Crisis Management Center, will provide or make available:

3.8.1 A dedicated individual for plant status updates to offsite authorities and periodic press briefings.

3.8.2 Senior technical and management staff onsite available for consultation with the NRC and State on a periodic basis.

           /           

3.9 The Emergency Coordinator will assure notification of all Station Management personnel not already informed of the emergency situation including the Superintendent of Maintenance or his designee, and the Superintendent of Administration or his designee.

NOTE

See Enclosure 4.2, Emergency Plan Implementing Procedures Telephone List.

           /           

3.10 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.

           /           

3.11 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 notified in step 3.4 at the Crisis Management Center or by phone if necessary, followed by written summary within 8 hours.

4.0 Enclosures

4.1 List of Initiating Conditions, Emergency Action Levels, and Associated Emergency Procedure/Document.

4.2 Emergency Plan Implementing Procedures Telephone list.

4.3 Notification of Emergency Conditions.

4.4 Crisis Management Center Activation Format.

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

Initiating Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
<p>4.1.1 Effluent monitors detect levels corresponding to 1 rem/hr Whole Body or 5 rem/hr Thyroid at the site boundary under <u>actual meteorological conditions</u>.</p> <p>NOTE 1: These dose rates are projected base on plant parameters (e.g., radiation levels in containment with leak rate appropriate for existing containment pressure with some confirmation from effluent monitors) or are measured in the environs.</p> <p>NOTE 2: Consider evacuation only within about 2 miles of the site boundary unless these levels are exceeded by a factor of 10 or projected to continue for 10 hours or EPA Protective Action Guideline exposure levels are predicted to be exceeded at longer distances.</p>	As observed by control room personnel.	AP/O/A/5500/28
<p>4.1.2 Loss of 2 of 3 fission product barriers with a potential loss of 3rd barrier, (e.g., loss of primary coolant boundary, clad-failure, and high potential for loss of containment integrity).</p>	<ol style="list-style-type: none"> <li>1. Loss of coolant accident as identified in Site Area Emergency 4.1.1, <u>and</u> incomplete containment isolation.</li> <li>2. Loss of coolant accident as identified in Site Area Emergency 4.1.1, <u>and</u> Containment Monitor alarms (EMF-51A and/or B) greater than 10<sup>4</sup> R/hr and containment pressure greater than 14.8 psig for at least 2 minutes.</li> </ol>	AP/O/A/5500/28, AP/1/A/5500/05

Initiating Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
<p>4.1.3 Loss of physical control of the facility.</p> <p><u>NOTE:</u> Consider 2 mile precautionary evacuation.</p>	<p>Physical attack of the facility has resulted in occupation of the control room and auxiliary shutdown facility.</p>	<p>Station Security Plan.</p>
<p>4.1.4 Other plant conditions exist, from whatever source, that in the judgement of the shift supervisor, the Operations Duty Engineer, the Superintendent of Operations, or the Plant Manager make release of large amounts of radioactivity in a short time period possible (e.g., any core melt situation).</p> <p>a. For core melt sequences where significant releases are not yet taking place and large amounts of fission products are not yet in the containment atmosphere, consider 2 mile precautionary evacuation. Consider 5 mile downwind evacuation (45° to 90° sector) if large amounts of fission products (greater than Gap activity) are in the containment atmosphere. Recommend sheltering in other parts of the plume exposure Emergency Planning Zone under this circumstance.</p>	<p>As determined by the Shift Supervisor/ Emergency Coordinator and verified by EAL's defined in Implementing Procedures utilized up to this point.</p>	<p>As dictated by plant conditions.</p>



## Initiating Conditions

## Emergency Action Level (EAL)

## Emergency Procedure/Document

- b. For core melt sequences where significant releases from containment are not yet taking place and containment failure leading to a direct atmospheric release is likely in the sequence but not imminent and large amounts of fission products in addition to noble gases are in the containment atmosphere, consider precautionary evacuation to 5 miles and 10 mile downwind evacuation (45° and 90° sector).
- c. 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:

1. 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:

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

Initiating Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
2. 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 <u>and</u> wide range generator levels toward offscale low on all steam generators <u>and</u> emergency feedwater flow indicators indicate "0" flow <u>or</u> emergency feedwater pumps not running and cannot be restored within 30 minutes <u>or</u> >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 <u>and</u> flow indicators on safety injection and RIHR show "0" flow after initiation (NVP-5440, NDP-5190, 5191, 5180, 5181, NIP-5120, 5450) <u>or</u> safety injection and RIHR pumps not running with safety injection initiated.	AP/0/A/5500/34
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 con-	Undervoltage alarms on 7KV buses and blackout load sequencers actuated <u>and</u> auxiliary feedwater pump(s) fail to start.	AP/1/A/5500/07

Initiating Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
<p>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.</p> <p>NOTE: For melt sequences or for failure of containment isolation systems, the likely failure mode is melt through with release of gases.</p>	<p>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 (NDP-5190, 5191, 5180, 5181) and RCS T<sup>0</sup> is rising, and containment air handling system fail to function.</p>	<p>EP/1/A/5000/02, AP/1/A/5500/05</p>
<p>4.1.5 Any major internal or external events (e.g., fires, earthquakes substantially beyond design levels) which could cause massive common damage to plant systems.</p>	<p>As determined by the Shift Supervisor/ Emergency Coordinator.</p>	<p>As dictated by plant conditions.</p>

## EMERGENCY PLAN IMPLEMENTATING PROCEDURES TELEPHONE LIST

- 4.2.1 Operations Duty Engineer (PA System)  
P&T Pager -
- 4.2.2 Station Manager  
Home -  
Home -
- 4.2.3 Superintendent of Operations -  
Home -
- 4.2.4 Superintendent of Technical Services  
Home -
- 4.2.5 Projects and Licensing Engineer  
Home -
- 4.2.6 Station Health  
Home -  
P&T Pager -
- 4.2.7 NC State Warning Point, Raleigh -
- 4.2.8 Mecklenburg County Warning Point - Primary: Ring Down Phone  
Back-up:  
Back-up: Emergency Radio, Code: \_\_\_\_\_
- 4.2.9 Lincoln County Warning Point - Primary: Ring Down Phone  
Back-up:  
Back-up: Emergency Radio, Code: \_\_\_\_\_
- 4.2.10 Catawba County Warning Point - Primary: Ring Down Phone  
Back-up:  
Back-up: Emergency Radio, Code: \_\_\_\_\_
- 4.2.11 Iredell County Warning Point - Primary: Ring Down Phone  
Back-up:  
Back-up: Emergency Radio, Code: \_\_\_\_\_
- 4.2.12 Gaston County Warning Point - Primary: Ring Down Phone  
Back-up:  
Back-up: Emergency Radio, Code: \_\_\_\_\_

NOTE

Radio Code will activate  
all county radio units.

- 4.2.13 N.R.C. Operation Center, Emergency Notification System (ENS Phone)
- 4.2.14 N.R.C. Station Representative  
Office  
Home -  
P&T Pager
- 4.2.15 Construction Project Manager - Construction , Ext.  
Home :



## EMERGENCY PLAN IMPLEMENTATING PROCEDURES TELEPHONE LIST

## CRISIS MANAGEMENT CENTER ACTIVATION

- 4.2.16 Hal E. Tucker Office:  
or Home:
- 4.2.17 William O. Parker - Office:  
or Home:
- 4.2.18 Robert M. Koehler - Office:  
or Home:
- 4.2.19 Steam Production Duty Man -
- 4.2.20 Superintendent of Maintenance  
Home:
- 4.2.21 Superintendent of Administration  
Home:
- 4.2.22 Radiation Protection Section, Department of Human Resources-

10-81

MCGUIRE NUCLEAR STATION  
NOTIFICATION OF EMERGENCY CONDITIONS

4.3.1 Include as a minimum the following information to the North Carolina State Warning Point, and to the five County Warning Points (Mecklenburg, Catawba, Iredell, Lincoln, and Gaston).

NOTE 1: See Enclosure 4.2, Implementing Procedures Telephone List.

NOTE 2: A. Complete Part A of this format as a minimal first notification of a reportable incident.  
B. Complete Part A and B of this format to provide minimal followup information.

PART A: Initial Emergency Message Information

"This is \_\_\_\_\_, \_\_\_\_\_,  
(Name) (Title)  
at McGuire Nuclear Station. I am notifying you of an  
incident at McGuire, Unit # \_\_\_\_\_. Please acknowledge  
when you are ready to copy emergency information."

1. This message:
  - \_\_\_\_\_ a. Reports a real emergency.
  - \_\_\_\_\_ b. Is an exercise message.
2. This message is from the McGuire Nuclear Plant
3. My name is \_\_\_\_\_.
4. My telephone number is \_\_\_\_\_.
5. The code word is \_\_\_\_\_.
6. This is a:
  - \_\_\_\_\_ a. First notification.
  - \_\_\_\_\_ b. Followup message.
7. The incident occurred at \_\_\_\_\_ on \_\_\_\_\_.  
(Time AM or PM) (Date)
8. The class of emergency is:
  - \_\_\_\_\_ a. Notification of an Unusual Event
  - \_\_\_\_\_ b. Alert
  - \_\_\_\_\_ c. Site Area Emergency
  - \_\_\_\_\_ d. General Emergency

9. The initiating event causing the Emergency Classification is:

---

---

---

10. The Emergency Condition (Select one of the below options):

- ☐ a. Does not involve the release of radioactive materials from the plant or involve public.
- ☐ b. Involves the POTENTIAL for the release of radioactive materials, but NO radioactive materials have been released.
- ☐ c. Does involve the release of some radioactive materials from the plant, but at a level below that considered a public hazard.
- ☐ d. Does involve the release of radioactive materials from the plant at a level at which Protective Actions is advisable.

11. I 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 \_\_\_\_\_ around the station remain inside with doors and windows closed. These zones are in a \_\_\_\_\_ direction from the station out to a radius of about \_\_\_\_\_ miles.
- ☐ c. People in zones \_\_\_\_\_ EVACUATE their homes and businesses. These zones are in a \_\_\_\_\_ direction from the station out to a radius of about \_\_\_\_\_ miles. We urge people in these areas to leave their home or business in a safe, orderly fashion.
- ☐ d. Other recommendations: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
i.e.: Stay tuned to your local radio or television station for further information.

12. Relay this information to the persons indicated in your alert procedures for an incident at McGuire Nuclear Station.
13. A followup message will:
- ☐ a. Follow in approximately \_\_\_\_\_ minutes.
  - ☐ b. Not follow.
14. I repeat, this message:
- ☐ a. Reports a real emergency.
  - ☐ b. Is an exercise message.

NOTE: Record the Name, Title, Date, Time, and Warning Point at end of Section B.

PART B: Followup Emergency Message Information

15. The type of actual or projected release is (select one or more).
- ☐ a. Airborne
  - ☐ b. Waterborne
  - ☐ c. Surface spill
  - ☐ d. Not Applicable
16. The source and description of the release incident is: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
17. The estimated duration of the release in time is: \_\_\_\_\_  
\_\_\_\_\_
- \*18. The chemical and physical form of the released material is: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- \*19. An estimate of the quantities of noble gases, iodines, and particulates released is: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- \*20. An estimate of the concentration of noble gases, iodines, and particulates released is: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- \*21. The prevailing weather is:
- Wind velocity: \_\_\_\_\_ mph.
  - Wind direction (blowing from) \_\_\_\_\_ degrees.
  - Current temperature at the release site is: \_\_\_\_\_.
  - Atmospheric stability data (vertical temperature difference) is: \_\_\_\_\_.
  - The form of precipitation, if any, is: \_\_\_\_\_.
- \*22. The actual or projected dose rate at the site boundary is:
- Actual \_\_\_\_\_.
  - Projected \_\_\_\_\_.
23. The projected dose rate and integrated dose at 2, 5, and 10 miles is:
- Projected dose rate:  
2 miles \_\_\_\_\_  
5 miles \_\_\_\_\_  
10 miles \_\_\_\_\_
  - Projected integrated dose:  
2 miles \_\_\_\_\_  
5 miles \_\_\_\_\_  
10 miles \_\_\_\_\_
24. The evacuation zones affected are: \_\_\_\_\_
- \*25. Estimate of any surface radioactive contamination is: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
26. The emergency response action(s) underway are: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
27. Needed onsite support by offsite organizations is: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
28. The prognosis for worsening or termination of the emergency based on plant information is: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
29. Do you have any questions?
30. I repeat, this message:
- \_\_\_\_\_. Reports a real emergency.
  - \_\_\_\_\_. Is an exercise message.



NOTE: Record the Name, Title, Date, Time, and Warning Point Notified.

(1)	_____		_____
	(Name)		(Title)
	_____		_____
	(Date)	(Time)	(County/State)
(2)	_____		_____
	(Name)		(Title)
	_____		_____
	(Date)	(Time)	(County/State)
(3)	_____		_____
	(Name)		(Title)
	_____		_____
	(Date)	(Time)	(County/State)
(4)	_____		_____
	(Name)		(Title)
	_____		_____
	(Date)	(Time)	(County/State)
(5)	_____		_____
	(Name)		(Title)
	_____		_____
	(Date)	(Time)	(County/State)
(6)	_____		_____
	(Name)		(Title)
	_____		_____
	(Date)	(Time)	(County/State)

\*This information is not to be included in the followup information provided to Gaston, Catawba, Iredell, or Lincoln counties in accordance with a request from the county Civil Preparedness Agency or Emergency Management Director of these counties.

CRISIS MANAGEMENT CENTER ACTIVATION FORMAT

1. My name is \_\_\_\_\_. I am the \_\_\_\_\_  
\_\_\_\_\_ (title) at McGuire Nuclear Station. I am notifying you  
of an incident at McGuire Nuclear Station, Unit # \_\_\_\_\_. Please acknow-  
ledge when you are ready to copy emergency information.
2. This is/is not a drill.
3. The incident occurred at \_\_\_\_\_ (Hours) on \_\_\_\_/\_\_\_\_/\_\_\_\_ (Date).
4. The class of emergency is: \_\_\_\_\_.
5. The initiating condition causing the emergency is as follows: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
6. Release of radioactivity: \_\_\_\_ is taking place \_\_\_\_ is not taking place.
7. Wind direction (blowing from) \_\_\_\_\_ direction.
8. Corrective measures being taken at present are as follows: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
9. It is recommended that you activate the Crisis Management Center in  
accordance with the Crisis Management Plan.
10. Do you have any questions?
11. I repeat, this is/is not a drill.
12. Record name of person notified, title, and time notified.

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Time)