

DUKE POWER COMPANY  
McGUIRE NUCLEAR STATION  
BOMB THREAT/BOMB SEARCH PLAN

OBJECTIVE

The objective of this directive is to outline a plan that will provide for the safety and protection of Station personnel and equipment in the event of a bomb threat and to ensure continuity of service, if possible.

GENERAL

In the event of a bomb threat, an organized plan must be utilized. The following is an outline of the procedure to be used at McGuire Nuclear Station in the event that a bomb threat is received or a suspected device is detected.

HANDLING OF TELEPHONE CALL

In the event a bomb threat telephone call is received, a Telephone Procedure Bomb Threat Check List (Attachment #1) has been placed at the Switchboard, the Control Room, Central and Secondary Alarm Station, Station Manager Clerk's Office, and in the Station Manager's Office; this list should be used to record all the information possible during the telephone conversation.

IMPLEMENTATION AND NOTIFICATION

In the event a bomb threat is received, the following action should be taken:

- 1) The person receiving the call should immediately notify the Operations Shift Supervisor, extension . or
- 2) The Operations Shift Supervisor shall take the following action:
  - a) Implement EF/O/A/5000/05, Notification of Unusual Event
  - b) Notify the CAS/SAS Operator at extension

- 3) The Emergency Coordinator shall proceed to assemble personnel and evacuate any affected station areas based on information available. (See Station Directive 3.8.1, Site Assembly/Evacuation).
- 4) In the event the bomb threat involves discovery of a suspected device or information provided leads the Emergency Coordinator/Shift Supervisor to believe a bomb actually exists that may affect Reactor Safety Systems or potential release of radioactive materials the Shift Supervisor should consider taking the following steps:
  - 1) Place the reactor(s) in a safe operating mode.
  - 2) Take necessary precautions to prevent the release of radioactive materials (i.e. stop all releases of radioactive materials, secure high radiation areas).

#### SEARCH AND REPORT

The Station will be searched by available Health Physics, Operations Fire Brigade and Security Force (to be provided by Security Shift Lieutenant) personnel in accordance with guidance provided in Bomb Threat Search Plan (attachment #2). If a Bomb Threat should occur during the backshifts or on weekends, the Emergency Coordinator shall call-out additional Fire Brigade, Health Physics and Security Force personnel thru appropriate supervision to assist in the Bomb Threat search. Each individual involved in the search will report results of the search to the Emergency Coordinator, he will issue any additional instructions.

#### DETECTION OF A DEVICE

It is possible that a bomb threat could develop by mere detection of a suspicious device. The person discovering a suspected explosive device should immediately advise their supervisor of the location, time discovered, and any pertinent information. This situation would then be handled similar to the case of finding the device during the response to a bomb threat phone call as outlined in this Directive.

CAUTION: Personnel should not move, tamper with, or handle any suspected explosive device. Do not use radio systems for communications.



#### FURTHER ACTION REQUIRED

The Emergency Coordinator shall take appropriate action based on the existence of a suspected explosive device. If a suspected explosive device is found, the Emergency Coordinator shall ensure the following action is taken:

- 1) Contact the Charlotte/Mecklenburg Bomb Disposal Team after a suspected explosive device has been found. The contacts for McGuire are:

Responding Team: Charlotte/Mecklenburg Bomb Disposal Team  
Telephone Number \

- 2) Evacuate the affected area and ensure that all personnel stay clear of the danger zone (300 feet).

#### ALL CLEAR REPORT

When a bomb threat no longer exists, the Emergency Coordinator will ensure that an "All Clear Report" is made and Station Personnel shall be allowed to return to their normal work locations.

ATTACHMENT NO. 1REVISION 1 DATE 5/18/82APPROVAL [Signature]TELEPHONE PROCEDURES/BOMB THREAT CHECK LIST

INSTRUCTIONS: Be calm, courteous, and listen; do not interrupt the caller.

CALLERS IDENTITY: \_\_\_\_\_ Sex \_\_\_\_\_ Approximate Age \_\_\_\_\_

ORIGIN OF CALL: \_\_\_\_\_ Local \_\_\_\_\_ Long Distance \_\_\_\_\_ Internal \_\_\_\_\_

VOICE CHARACTERISTICS:SPEECH:LANGUAGE:

_____ Loud	_____ Soft	_____ Fast	_____ Slow	_____ Excellent	_____ Poor
_____ High Pitch	_____ Deep	_____ Distant	_____ Lisp	_____ Fair	_____ Other
_____ Pleasant	_____ Raspy	_____ Stutters	_____ Nasal	_____ Foul	
_____ Intoxicated	_____ Other	_____ Slurred	_____ Other	_____ Good	

ACCENT:MANNER:BACKGROUND NOISES

_____ Local	_____ Calm	_____ Angry	_____ Factory Machines	_____ Trains
_____ Foreign	_____ Rational	_____ Irrational	_____ Music	_____ Voices
_____ Familiar	_____ Coherent	_____ Incoherent	_____ Street Traffic	_____ Quiet
_____ If familiar	_____ Deliberate	_____ Emotional	_____ Animals	_____ Office
_____ who did it	_____ Crying	_____ Laughing	_____ Airplanes	_____ Other
_____ sound like?				

BOMB FACTS

Pretend difficulty in hearing.

Keep caller talking.

If the caller seems agreeable to further conversation, ASK THESE QUESTIONS:

1. When will the bomb explode? \_\_\_\_\_
2. Where is the bomb located? \_\_\_\_\_
3. What kind of bomb is it? \_\_\_\_\_
4. Where are you now? \_\_\_\_\_
5. What is your name and address? \_\_\_\_\_

If the building is occupied, inform the caller that detonation could cause death or injury.

Did the caller appear familiar with the premises by his description of the bomb location? \_\_\_\_\_

Notify the Operations Shift Supervisor or one of the Station Superintendents. Talk to no one other than instructed by your supervisor.

SIGNED \_\_\_\_\_ TIME \_\_\_\_\_ DATE \_\_\_\_\_

STATION DIRECTIVE 3.7.3

ATTACHMENT NO. 2REVISION 6 DATE 5/19/82APPROVAL [Signature]BOMB THREAT SEARCH PLAN AND CHECK SHEET

In the event a bomb threat received included information about the location of the bomb, this area should be searched first. If the bomb threat contained no information about the bomb location, the following search plan will be utilized:

- NOTE:
- (1) Health Physics coverage of some areas and search personnel may be required. Contact Health Physics for support in these areas.
  - (2) The Emergency Coordinator shall designate search plan priorities based on available information. Areas that are known to be inaccessible for long periods of time i.e.: Containment, filter and demineralizer rooms, should not be given priority for search.
  - (3) For locked areas where keys are not available from the Shift Supervisor or Health Physics, the appropriate personnel in charge of the area shall be contacted for access.

AREA	RESPONSIBILITY	SEARCH COMPLETED	
		INITIALS	TIME
Vital Electrical/Cablerooms	Fire Brigade	_____	_____
All Other Station "Vital" Areas	Security	_____	_____
Unit 1, Fuel Building	Fire Brigade	_____	_____
Unit 2, Fuel Building	Fire Brigade	_____	_____
Unit 1 Containment Bldg. (all elevations)	Fire Brigade	_____	_____
Unit 2 Containment Bldg. (all elevations)	Fire Brigade	_____	_____
Auxiliary Bldg. Elv. 695	Fire Brigade	_____	_____
Auxiliary Bldg. Elv. 716	Fire Brigade	_____	_____

BOMB THREAT SEARCH PLAN AND CHECK SHEET CONTINUED

AREA	RESPONSIBILITY	SEARCH COMPLETED	
		INITIALS	TIME
Auxiliary Bldg. & Service Bldg. Elv. 733 and Elv. 739	Fire Brigade	_____	_____
Auxiliary Bldg. & Service Bldg. Elv. 750	Fire Brigade	_____	_____
Auxiliary Bldg. & Service Bldg. Elv. 760, 767, 777 (Q.A. Darkroom, Planning, Ventilation Room)	Fire Brigade	_____	_____
Auxiliary Bldg. Elv. 786	Fire Brigade	_____	_____
Unit 1 Inboard/Outboard Doghouse	Fire Brigade	_____	_____
Unit 2 Inboard/Outboard Doghouse	Fire Brigade	_____	_____
Unit 1, 2, Turbine Bldg. Elv. 739	Fire Brigade	_____	_____
Unit 1, 2, Turbine Bldg. Elv. 760	Fire Brigade	_____	_____
Unit 1, 2, Turbine Bldg. Elv. 790	Fire Brigade	_____	_____
All Extremely High Radiation Areas	Health Physics	_____	_____
Station Grounds "Inside" Protected Area	Security	_____	_____
Turbine Building, Service Building, Auxiliary Building, and Containment Building Roof's and Structures	Security	_____	_____
Intake Structure	Security	_____	_____
RadWaste Solidification	Health Physics	_____	_____

BOMB THREAT SEARCH PLAN AND CHECK SHEET CONTINUED

AREA	RESPONSIBILITY	SEARCH COMPLETED	
		INITIALS	TIME
Contaminated Parts Whse.	Health Physics	_____	_____
Safe Shutdown Facility	Security	_____	_____
All Trailers - Inside Protected Area	Security	_____	_____
Warehouse #5	Security	_____	_____
Interim Waste Building	Health Physics	_____	_____
Oil Storage House	Security	_____	_____
Bulk H <sub>2</sub> Storage House	Security	_____	_____
Bulk N <sub>2</sub> Storage House	Security	_____	_____
Bulk O <sub>2</sub> Storage House	Security	_____	_____
Inside FWST Missile Shield	Security	_____	_____
Administrative Building	Security	_____	_____
Trailers and Grounds near Admin. Bldg. (Outside Protected Area)	Security	_____	_____

DUKE POWER COMPANY  
PROCEDURE PREPARATION  
PROCESS RECORD

(1) ID No: PT/0/A/4600/06  
Change(s) 0 to  
0 Incorporated

(2) STATION: McGuire Nuclear Station

(3) PROCEDURE TITLE: Exercises & Drills

(4) PREPARED BY: M. S. Glover DATE: 2/3/82

(5) REVIEWED BY: Morris Sample DATE: 2/4/82

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

(6) TEMPORARY APPROVAL (IF NECESSARY):

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

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

(7) APPROVED BY: Tommy L. McConnell Date: 2/4/82

(8) MISCELLANEOUS:

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

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



DUKE POWER COMPANY  
NUCLEAR SAFETY EVALUATION CHECK LIST

- (1) STATION: McGuire Nuclear Station UNIT: 1 X 2 X 3       
OTHER:
- (2) CHECK LIST APPLICABLE TO: PT/O/A/4600/06

## (3) SAFETY EVALUATION - PART A

The item to which this evaluation is applicable represents:

Yes      No ✓ A change to the station or procedures as described in the FSAR;  
or a test or experiment not described in the FSAR?

If the answer to the above is "Yes", attach a detailed description of the item being evaluated and an identification of the affected section(s) of the FSAR.

## (4) SAFETY EVALUATION - PART B

Yes      No ✓ Will this item require a change to the station Technical Specifications?

If the answer to the above is "Yes," identify the specification(s) affected and/or attach the applicable pages(s) with the change(s) indicated.

## (5) SAFETY EVALUATION - PART C

As a result of the item to which this evaluation is applicable:

- Yes      No ✓ Will the probability of an accident previously evaluated in the FSAR be increased?
- Yes      No ✓ Will the consequences of an accident previously evaluated in the FSAR be increased?
- Yes      No ✓ May the possibility of an accident which is different than any already evaluated in the FSAR be created?
- Yes      No ✓ Will the probability of a malfunction of equipment important to safety previously evaluated in the FSAR be increased?
- Yes      No ✓ Will the consequences of a malfunction of equipment important to safety previously evaluated in the FSAR be increased?
- Yes      No ✓ May the possibility of malfunction of equipment important to safety different than any already evaluated in the FSAR be created?
- Yes      No ✓ Will the margin of safety as defined in the bases to any Technical Specification be reduced?

This Procedure does not affect the Safety Analysis of the Plant.  
If the answer to any of the preceding is "Yes", an unreviewed safety question is involved. Justify the conclusion that an unreviewed safety question is or is not involved. Attach additional pages as necessary.

- (6) PREPARED BY: M.S. Glover DATE: 2/3/82
- (7) REVIEWED BY: Mavis Sample DATE: 2/4/82

(8) Page 1 of 1

Procedure does not affect safety or unit operations.

DUKE POWER COMPANY  
McGUIRE NUCLEAR STATION  
EXERCISES AND DRILLS

1.0 Purpose

This procedure provides for periodic exercises/drills to be conducted to evaluate major portions of the emergency response capability, and to develop and maintain key skills. Corrective actions and recommendations identified as a result of an exercise or drill will be corrected, and records maintained in accordance with this procedure.

2.0 References

2.1 McGuire Nuclear Station Emergency Plan

3.0 Time Required

2 hours

4.0 Prerequisite Tests

N/A

5.0 Test Equipment

N/A

6.0 Limits and Precautions

6.1 Exercise scenario's should be varied from year to year to test emergency team response to many of the initiating conditions listed in procedures EP/O/A/5000/05, EP/O/A/5000/06, EP/O/A/5000/07 and EP/O/A/5000/08.

6.2 Exercises should be scheduled to start between 6:00 PM and midnight and another between midnight and 6:00 AM once every six years.

6.3 Drills should be conducted more frequently than exercises and shall be supervised and evaluated by a drill instructor.

7.0 Required Station Status

N/A

8.0 Prerequisite System Conditions

N/A

9.0 Test Method

N/A

10.0 Data Required

Enclosure 13.1 Exercise/Drill Format and Critique Findings

Enclosure 13.2 Exercise/Drill, Controller/Evaluator Report

## 11.0 Acceptance Criteria

11.1 Completion of required exercise or drill and the subsequent critique.

## 12.0 Procedure

### 12.1 Exercises

- 12.1.1. A full-scale exercise is an event that tests the integrated capability and a major portion of the basic elements existing within emergency preparedness plans and organizations. A full-scale exercise shall include mobilization of state and local personnel and resources adequate to verify the capability to respond to an accident scenario requiring response. A full-scale exercise will be supervised and evaluated by a qualified exercise director. A full-scale exercise will be held no less than once every 5 years.
- 12.1.2. A small-scale exercise is an event which tests the adequacy of communication links, establishes that response agencies at the utility and local level understand the emergency action levels, and tests at least one other component (e.g. medical or offsite monitoring) of the emergency plan. A small-scale exercise will be conducted each year that a full-scale exercise is not held at the station. A small-scale exercise will be supervised and evaluated by a qualified exercise director.
- 12.1.3. An exercise will simulate an emergency that results in off-site protective actions and requires response by offsite agencies.
- 12.1.4. An exercise scenario shall provide for a critique of the exercise by all concerned personnel and organizations.

### 12.2 Drills

- 12.2.1 A drill is a supervised instruction period aimed at testing, developing and maintaining skills in a particular operation. A drill is often a component of an exercise. A drill will be supervised and evaluated by a qualified drill instructor.

12.2.2 Drills will be conducted at the frequencies indicated below:

- (a) Communication drills with state and local government located within the 10 mile Emergency Planning Zone shall be conducted monthly.
- (b) Communication drills with Federal emergency response organizations and states within the 50 mile Ingestion Pathway shall be conducted quarterly.
- (c) Communication drills with state and local emergency operations centers and field assessment teams shall be conducted annually.

NOTE Sample message information for the above communication drills shall test the ability to understand the content of messages.

- (d) Fire drills shall be conducted in accordance with Station Directive 2.11.1 and documented by the Safety Department.
- (e) Medical emergency drills involving a simulated contaminated individual shall be conducted annually. This drill will involve participation by the North Mecklenburg Ambulance Service and the North Mecklenburg Rescue Squad and Charlotte Memorial Hospital. A communication check to Oak Ridge REACTS as the provider of backup medical support shall be conducted during this drill.
- (f) A radiological monitoring drill involving onsite and offsite radiological monitoring teams will be conducted annually. The monitoring teams will actually collect and analyze air samples, as appropriate. Soil and water samples will not be taken as this is done on a weekly basis at the station. The exercise controllers will provide them simulated analysis results indicative of contamination or plume location.
- (g) Health Physics drills shall be conducted semi-annually which involve response to, and analysis of, simulated elevated airborne and liquid samples and direct radiation measurements in the environment.

- (h) Health Physics drills shall also be conducted annually which involve analysis of implant liquid samples with actual radiation levels, including use of the post-accident sampling system.
- (i) Site assembly drills shall be conducted semi-annually. These drills shall provide for the capability to account for all individuals onsite at the time of the emergency and to ascertain the names of missing individuals within 30 minutes of the start of an emergency condition. The capability to account for onsite individuals continuously after the initial accountability shall be included.

12.2.3 File Enclosure(s) 13.1 and 13.2 with completed procedure process record.

### 13.0 Enclosures

13.1 Exercise/Drill Format and Critique Findings.

13.2 Exercise/Drill, Controller/Evaluator Report

EXERCISE/DRILL FORMAT AND CRITIQUE FINDINGS

1.0 Classification of Exercise/Drill. (Check appropriate box)



- ☐ - Emergency Exercise, 12.1
- ☐ - Communication Drill (state and local government within 10 mile EPZ), 12.2.2, a. (monthly)
- ☐ - Communication Drill (Emergency response organizations and state within 50 mile I.P.Z.), 12.2.2, b. (quarterly)
- ☐ - Communication Drill (State and local Emergency Operations Centers and Field Assessment Teams), 12.2.2, c. (annually)
- ☐ - Medical Emergency Drill, 12.2.2, e. (annually)
- ☐ - Radiological Monitoring Drill, 12.2.2, f. (annually)
- ☐ - Health Physics Drill, 12.2.2, g. (semi-annually)
- ☐ - Health Physics Drill, 12.2.2, h. (annually)
- ☐ - Site Assembly Drill, 12.2.2, i. (semi-annually)

2.0 Drill Instructor/Exercise Director \_\_\_\_\_

(Name)

Critique Director: \_\_\_\_\_

(Name)

3.0 Date/Time Exercise/Drill to be conducted: \_\_\_\_\_

(Date)

(Time)

4.0 Exercise/Drill Objectives: \_\_\_\_\_

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5.0 Plant system/area(s) affected: \_\_\_\_\_

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

6.0 Work groups to be involved: \_\_\_\_\_

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

7.0 Time sequence of postulated events: \_\_\_\_\_

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

8.0 Assigned Observers (Controllers/evaluators) and their stations: \_\_\_\_\_

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

9.0 Critique to be conducted at: \_\_\_\_\_ / \_\_\_\_\_ (Date) (Time) (Location)

10.0 Personnel to attend critique:

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

11.0 Critique Findings, Recommendations, Required Action(s), Etc.: \_\_\_\_\_

12.0 Corrective Actions taken: (List actions taken to ensure all findings in 11.0 above are identified and corrected): \_\_\_\_\_

NOTE: Include all Exercise/Drill data or other information provided as an attachment.

\_\_\_\_\_  
(Drill Instructor/Exercise Director)  
(Signature)

\_\_\_\_\_  
(Critique Director)  
(Signature)

cc: File 9.4.2  
Station Manager

1.0 Drill Classification: \_\_\_\_\_

2.0 Summary of Exercise/Drill: \_\_\_\_\_

3.0 Exercise/Drill initiated: \_\_\_\_\_/\_\_\_\_\_  
(Date) (Time)

4.0 Observation/Comments/Recommendations: \_\_\_\_\_

5.0 Exercise/Drill completed at: \_\_\_\_\_/\_\_\_\_\_  
(Date) (Time)

Controller/Evaluator  
(Signature)

cc: File 9.4.2  
Assigned Controller/Evaluator(s)

DUKE POWER COMPANY  
PROCEDURE PREPARATION  
PROCESS RECORD

(1) ID No: PT/O/A/4600/11  
Change(s) 0 to  
2 Incorporated

(2) STATION: McGuire Nuclear Station

(3) PROCEDURE TITLE: Function Check of Emergency Vehicle and Equipment

(4) PREPARED BY: Scott E. Greenawald DATE: 2-12-82

(5) REVIEWED BY: T. J. Kline DATE: 2-13-82

Cross-Disciplinary Review By: M.S. Gibson N/R: 2-16-82

(6) TEMPORARY APPROVAL (IF NECESSARY):

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

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

(7) APPROVED BY: Tony Z. McConnell Date: 2/16/82

(8) MISCELLANEOUS:

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

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

DUKE POWER COMPANY  
NUCLEAR SAFETY EVALUATION CHECKLIST

- (1) STATION: McGuire Nuclear Station UNIT: 1 N/A 2 N/A 3 N/A  
OTHER: \_\_\_\_\_  
(2) CHECK LIST APPLICABLE TO: PT/O/A/4600/11, Function Check of Emergency Vehicle  
and Equipment

## (3) SAFETY EVALUATION - PART A

The item to which this evaluation is applicable represents:

Yes \_\_\_\_\_ No ☒ A change to the station or procedures as described in the FSAR;  
or a test or experiment not described in the FSAR?

If the answer to the above is "Yes", attach a detailed description of the item being evaluated and an identification of the affected section(s) of the FSAR.

## (4) SAFETY EVALUATION - PART B

Yes \_\_\_\_\_ No ☒ Will this item require a change to the station Technical Specifications?

If the answer to the above is "Yes," identify the specification(s) affected and/or attach the applicable pages(s) with the change(s) indicated.

## (5) SAFETY EVALUATION - PART C

As a result of the item to which this evaluation is applicable:

- Yes \_\_\_\_\_ No ☒ Will the probability of an accident previously evaluated in the FSAR be increased?  
Yes \_\_\_\_\_ No ☒ Will the consequences of an accident previously evaluated in the FSAR be increased?  
Yes \_\_\_\_\_ No ☒ May the possibility of an accident which is different than any already evaluated in the FSAR be created?  
Yes \_\_\_\_\_ No ☒ Will the probability of a malfunction of equipment important to safety previously evaluated in the FSAR be increased?  
Yes \_\_\_\_\_ No ☒ Will the consequences of a malfunction of equipment important to safety previously evaluated in the FSAR be increased?  
Yes \_\_\_\_\_ No ☒ May the possibility of a malfunction of equipment important to the safety different than any already evaluated in the FSAR be created?  
Yes \_\_\_\_\_ No ☒ Will the margin of safety as defined in the bases to any Technical Specifications be reduced?

If the answer to any of the preceding is "Yes", an unreviewed safety question is involved. Justify the conclusion that an unreviewed safety question is or is not involved. Attach additional pages as necessary.

This procedure has been reviewed against applicable portions of the FSAR and does not affect the safety of the station.

(6) PREPARED BY: Scott E. Lorenson DATE: 2-12-82

(7) REVIEWED BY: [Signature] DATE: 2-13-82

DUKE POWER COMPANY  
McGUIRE NUCLEAR STATION  
FUNCTION CHECK OF EMERGENCY  
VEHICLE AND EQUIPMENT

1.0 Purpose

- 1.1 To ensure that Protective equipment and supplies are operational, and that communications capability exists with the various emergency personnel and emergency organizations at all times in the support of an emergency condition at the station.

2.0 References

- 2.1 NUREG-0654 (Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants).

3.0 Time Required

- 3.1 Sixteen (16) manhours.

4.0 Prerequisite Tests

N/A

5.0 Test Equipment

N/A

6.0 Precautions and Limitations

- 6.1 A minimum of two people shall be aboard the emergency boat when in use.
- 6.2 Emergency boat operators shall maintain radio communications with the McGuire Nuclear Station at all times and will verify this capability by performing a radio check every 30 minutes during the period the boat is being operated.
- 6.3 Personnel aboard the emergency boat shall wear floatation vests at all times and semi-dry suits when Condenser Circulating Water (RC) inlet temperature drops below 60°F., and outside air temperature is below 55°F.
- 6.4 Emergency boat fuel tank level shall be maintained at 1/2 full at all times.
- 6.5 Personnel using an emergency vehicle shall wear seat belts.
- 6.6 Personnel shall follow all FCC regulations during radio transmissions.

7.0 Required Station Status

N/A

8.0 Prerequisite System Conditions

N/A

9.0 Test Method

N/A



## 10.0 Data Required

- 10.1 Equipment Check-off List - Emergency Vehicles (Enclosure 13.1)
- 10.2 Equipment Check-off List - Emergency Boat (Enclosure 13.2)
- 10.3 Emergency Boat Maintenance History (Enclosure 13.3)
- 10.4 Protective Equipment and Supplies Locations (Enclosure 13.4)
- 10.5 Protective Equipment and Supplies Check-off List - Recovery Kits (Enclosure 13.5)
- 10.6 Protective Equipment and Supplies Check-off List - Environmental Survey Kits (Enclosure 13.6, 13.7, 13.8, 13.9)
- 10.7 Protective Equipment and Supplies Check-off List - Personnel Survey Kit - Construction Post #1 (Enclosure 13.10)
- 10.8 Protective Equipment and Supplies Check-off List - Personnel Survey Kit - Brass Shack (Enclosure 13.11)
- 10.9 Protective Equipment and Supplies Check-off List - Personnel Survey Kit - PAP Area (Enclosure 13.12)
- 10.10 Protective Equipment and Supplies Check-off List - Personnel Survey Kit - Evacuation Facility (Enclosure 13.13)
- 10.11 Technical Support Center Kit Check List (Enclosure 13.14)
- 10.12 Medical Decontamination Kit Check-off List (Enclosure 13.15)
- 10.13 Medical Decontamination Kit, Check-off List, Charlotte Memorial Hospital (Enclosure 13.16)
- 10.14 Operational Support Center Kit Check List (Enclosure 13.17)
- 10.15 Fuel Shipment Kit (Enclosure 13.18)
- 10.16 Verification of Emergency Communications (Enclosure 13.19)
- 10.17 National Weather Service Information (Enclosure 13.20)

## 11.0 Acceptance Criteria

N/A

## 12.0 Procedure

### 12.1 Emergency Vehicles

Date/Inspection  
Initials

- |   |                                    |  |
|---|------------------------------------|--|
| _____/_____<br><br>_____/_____<br><br>_____/_____ | 12.1.1<br><br>12.1.2<br><br>12.1.3 | Once during each month and after emergency use, the emergency vehicles shall be inventoried per Enclosure 13.1 (Equipment Check-off List - Emergency Vehicles).<br><br>With each inventory the check-off list shall be completed and a copy placed in the glove box of the applicable vehicle. (The original shall be filed with the completed procedure records.) Any discrepancies shall be noted on the check-off list and reported to the emergency plan group immediately.<br><br>Preventive maintenance shall be the responsibility of the Emergency Planning group of Health Physics and be performed by predesignated service areas. |
|---|------------------------------------|--|

Date/Inspection  
Initials

## 12.2 Emergency Boat

\_\_\_\_/\_\_\_\_ 12.2.1 Once during each month and after use, the emergency boat shall be inventoried per enclosure 13.2 (Equipment Check-off list - Emergency Boat).

NOTE: Run Time (Minimum 2 hours per month may be postponed up to, but not more than 3 months due to inclement weather.

\_\_\_\_/\_\_\_\_ 12.2.2 With each inventory the check-off list shall be completed and a copy placed in the boat. (The original shall be filed with the completed procedure records). Any discrepancies shall be noted on the check-off list and reported to the emergency plan group immediately.

\_\_\_\_/\_\_\_\_ 12.2.3 Every 100 hours of operation, the emergency boat shall be delivered to an authorized service representative for routine preventative maintenance as per the owner's-operators' manual.

\_\_\_\_/\_\_\_\_ 12.2.4 All maintenance shall be recorded in the emergency boat maintenance history (enclosure 13.3) upon its return.

## 12.3 Protective Equipment Kits

\_\_\_\_/\_\_\_\_ 12.3.1 Once during each month and after use, each emergency kit listed in enclosure 13.4 (Protective Equipment Kit Locations) shall be inventoried per applicable enclosure 13.5 - 13.18 (Protective Equipment Kit Check-off Lists).

\_\_\_\_/\_\_\_\_ 12.3.2 With each inventory the check-off list shall be completed and a copy placed in the applicable kit. (The original shall be filed with the completed procedure records). Any discrepancies shall be noted on the check-off list and reported to the emergency plan group immediately.

## 12.4 Telephone Communications

\_\_\_\_/\_\_\_\_ 12.4.1 Once per calendar quarter, all telephone numbers and pages utilized in emergency procedures EP/O/A/5000/05-08, and Station Directives 3.8.1, 3.8.2 shall be verified correct and in working order. All jack-in telephones in the Technical Support Center will be verified in working order.

Date/Inspection  
Initials

12.5 Radio Communications

- \_\_\_\_/\_\_\_\_ 12.5.1 Once during each month, McGuire emergency radio transmitter/receivers and telephones shall be operationally checked as follows:
- \_\_\_\_/\_\_\_\_ 12.5.1.1 McGuire Emergency Base Station - verify capable communications with the state and all county Emergency Operations Centers.
- \_\_\_\_/\_\_\_\_ 12.5.1.2 Emergency Environmental Survey Team Radios - verify capable communications with McGuire Emergency Base Station at a minimum distance of 10 miles.
- \_\_\_\_/\_\_\_\_ 12.5.1.3 Emergency Personnel Survey Team Radios - verify capable communications with McGuire Emergency Base Station from the Training and Technology Center or Cowans Ford Dam.
- \_\_\_\_/\_\_\_\_ 12.5.1.4 Once a month, a call will be made to the National Weather Service located at the Charlotte airport to obtain the wind direction. Wind speed and cloud cover.
- \_\_\_\_/\_\_\_\_ 12.5.2 Verification of capable emergency communications shall be documented per enclosure 13.19 (Verification of Emergency Communications) and maintained on file by the Emergency Plan Group.
- \_\_\_\_/\_\_\_\_ 12.5.3 A current verification letter of personnel authorized by Duke Power Company to report an emergency action level, to state and county agencies, will be used to authenticate the person or persons initiating the report. The verification letter will be updated every 6 months.

12.6 Emergency survey instruments and counting equipment shall be operationally checked quarterly per applicable Health Physics calibration procedures.

12.7 Emergency portable air samplers shall be operationally checked quarterly per Health Physics Manual, Section 15.2 Operation of Health Physics Air Samplers, utilizing their predesignated emergency vehicle and powerverter as the power source.

12.8 Emergency pocket dosimeters shall be operationally checked quarterly per HP/O/B/1005/19 (Dosimeter Leak and Calibration Check)

13.0 Enclosures

13.1 Equipment Check-off List - Emergency Vehicles

- 13.2 Equipment Check-off List - Emergency Boat
- 13.3 Emergency Boat Maintenance History
- 13.4 Protective Equipment and Supplies Locations
- 13.5 Protective Equipment and Supplies Check-off List - Recovery Kits
- 13.6 Protective Equipment and Supplies Check-off List - Environmental Survey Kits  
Health Physics Vehicle
- 13.7 Protective Equipment and Supplies Check-off List - Environmental Survey Kits  
Admin. Vehicle
- 13.8 Protective Equipment and Supplies Check-off List - Environmental Survey Kits  
Chemistry Vehicle
- 13.9 Protective Equipment and Supplies Check-off List - Environmental Survey Kits  
Maint. Pickup (Spare) Boat
- 13.10 Protective Equipment and Supplies Check-off List - Personnel Survey Kit -  
Construction Post #1
- 13.11 Protective Equipment and Supplies Check-off List - Personnel Survey Kit -  
Brass Shack
- 13.12 Protective Equipment and Supplies Check-off List - Personnel Survey Kit  
PAP area
- 13.13 Protective Equipment and Supplies Check-off List - Personnel Survey Kit -  
Evacuation Facility
- 13.14 Technical Support Center Kit Check List
- 13.15 Medical Decontamination Kit Check-off List
- 13.16 Medical Decontamination Kit, Check-off List, Charlotte Memorial Hospital
- 13.17 Operational Support Center Kit, Check-off List
- 13.18 Fuel Shipment Kits, Check-off List
- 13.19 Verification of Emergency Communications
- 13.20 National Weather Service Information

EQUIPMENT CHECK-OFF LIST  
EMERGENCY VEHICLES

Vehicle # (circle one)

7632 Health Physics Vehicle

4352 Chemistry Vehicle

8031 Maintenance Vehicle

7105 Administration Vehicle

<u>ITEM</u>	<u>AMOUNT</u>
Fire Extinguisher	1
First Aid Kit	1
Snake Bite Kit	1
Vehicle Accident Form	1
Keys (PAP)	1 set

Discrepancies:

\_\_\_\_\_  
Signature/Date

Signature/Date



## EMERGENCY BOAT MAINTENANCE HISTORY

[illegible]

PROTECTIVE EQUIPMENT AND SUPPLIES

<u>KITS</u>	<u>LOCATION</u>
Recovery Kits (4)	Control Room Station Manager's Office Training & Technology Center Cowans Ford Dam
Environmental Survey Kits (4)	Trailer #7
Personnel Survey Kits (4)	
Construction Post #1	Construction Post #1
Brass Shack	Construction Post #1
PAP Area	Security - PAP Area
Evacuation Facility	Cowans Ford Dam
Medical Decontamination Kit	Auxiliary Building First Aid Room Charlotte Memorial Hospital
Operational Support Center Kit	Operational Support Center
Technical Support Center Kit	Technical Support Center
Fuel Shipment Kits (2)	Trailer #7

RECOVERY KITS CHECK LIST

ITEM	AMOUNT
Xetex Mod 305A or B	1
High Range Dosimeters	2
Dosimeter Charger	1
Boundary Ribbon or Rope (50 yd. roll)	1
Masking Tape (roll)	1
Rain Suits (set)	2
Protective Clothing (set)	2
Poly Bags (various)	12
Caution Signs w/inserts	2
Legal Pads	1
H.P. Form #2 (Smear Survey Form)	5
Pens	2
Grease Pencil	1
Norton 7600 Respirators w/7500-83 Chemical Cartridges	2
First Aid Kit	1
Potassium Iodide Tablets	475 Bottles-Cowans Ford, 150 Bottles-Control Room, Station Manager's Office, Training & Technology Center
Smears (Box)	1
NuCon Smears	30
Soap (Bar)	6
Flashlight	1
Batteries	4
Pocket Knife	1
Discrepancies:	

\_\_\_\_\_  
Signature/Date

ENVIRONMENTAL SURVEY KIT CHECK LIST  
HEALTH PHYSICS VEHICLE

ITEM	AMOUNT
Xetex Mod 305A, or B Eberline E-520 w/ HP-270 probe or Victoreen 497	1
Sam-2 w/ RD-22 probe	1
Emergency Radio Transmitter/Receiver	1
Radeco H809V Air Sampler	1
Trippe PV1000FC Powerverter	1
High Range Pocket Dosimeter	2
Dosimeter Charger	1
Norton 7600 Respirator w/7500-83 Chemical Cartridges	2
Potassium Iodide Tablets (bottle)	1
Protective Clothing (full set)	3
Poly Bags (various Sizes)	6
Masking tape (roll)	1
Limnological Sampler	1
Cubitainers	6
Hand Gardening Spade	1
Stopwatch	1
Flashlight	1
Batteries	4
Silver Zeolite (CP100G or GY130) filter cartridges and particulate filters	30
Smears (box)	1
NuCon Smears	30
HP Form #2 (Smear Survey Form)	10
HP Form #6 (Air Survey Form)	10
Map of Ten Mile Zone Sectors	1
Legal Pad	1
Health Physics Manual, Section 18.2	1
Pen	2
Grease Pencil	1
Dime Roll	1
Pocket Knife	1
Discrepancies:	

Signature/Date

ENVIRONMENTAL SURVEY KIT CHECK LIST  
ADMIN. VEHICLE

ITEM	AMOUNT
Xetex Mod 305A, or B Eberline E520 w/ HP270 probe or Victoreen 497	1
Sam-2 w/ RD-22 probe	1
Emergency Radio Transmitter/Receiver	1
Radeco H809V Air Sampler	1
Trippe FV1000FC Powerverter	1
High Range Pocket Dosimeter	2
Dosimeter Charger	1
Norton 7600 Respirator w/750083 Chemical Cartridges	2
Potassium Iodide Tablets (bottle)	1
Protective Clothing (full set)	3
Poly Bags (various Sizes)	6
Masking tape (roll)	1
Cubitainers	6
Hand Gardening Spade	1
Stopwatch	1
Flashlight	1
Batteries	4
Silver Zeolite (CP-100G or GY-130) filter cartridges and particulate filters	30
Smears (box)	1
NuCon Smears	30
HP Form #2 (Smear Survey Form)	10
HP Form #6 (Air Survey Form)	10
Map of Ten Mile Zone Sectors	1
Legal Pad	1
Health Physics Manual, Section 18.2	1
Pen	2
Grease Pencil	1
Dime Roll	1
Pocket Knife	1
Discrepancies:	

Signature/Date

ENVIRONMENTAL SURVEY KIT CHECK LIST  
CHEMISTRY VEHICLE

ITEM	AMOUNT
Xetax Mod 305A, or B Eberline E-520 w/ HP-270 probe or Victoreen 497	1
Sam-2 w/ RD-22 probe	1
Emergency Radio Transmitter/Receiver	1
Radeco H809V Air Sampler	1
Trippe PV1000FC Powerverter	1
High Range Pocket Dosimeter	2
Dosimeter Charger	1
Norton 7600 Respirator w/7500-83 Chemical Cartridges	2
Potassium Iodide Tablets (bottle)	1
Protective Clothing (full set)	3
Poly Bags (various Sizes)	6
Masking tape (roll)	1
Cubitainers	6
Hand Gardening Spade	1
Stopwatch	1
Flashlight	1
Batteries	4
Silver Zeolite (CP-100G or GY-130) filter cartridges and particulate filters	30
Smears (box)	1
NuCon Smears	30
HP Form #2 (Smear Survey Form)	10
HP Form #6 (Air Survey Form)	10
Map of Ten Mile Zone Sectors	1
Legal Pad	1
Health Physics Manual, Section 18.2	1
Pen	2
Grease Pencil	1
Dime Roll	1
Pocket Knife	1
Discrepancies:	

Signature/Date



ENVIRONMENTAL SURVEY KIT CHECK LIST  
MAINT. PICKUP (SPARE) BOAT

ITEM	AMOUNT
Xetex Mod 305A, or B Eberline E-520 w/ HP-270 prot or Victoreen 497	1
Sam-2 w/ RD-22 probe	1
Emergency Radio Transmitter/Receiver	1
Radeco H809V Air Sampler	1
Trippe PV1000FC Powerverter	1
High Range Pocket Dosimeter	2
Dosimeter Charger	1
Norton 7600 Respirator w/7500-83 Chemical Cartridges	2
Potassium Iodide Tablets (bottle)	1
Protective Clothing (full set)	3
Poly Bags (various Sizes)	6
Masking tape (roll)	1
Limnological Sampler	1
Cubitainers	6
Hand Gardening Spade	1
Stopwatch	1
Flashlight	1
Batteries	4
Silver Zeolite (CP-100G or GY-130) filter cartridges and particulate filters	30
Smears (box)	1
NuCon Smears	30
HP Form #2 (Smear Survey Form)	10
HP Form #6 (Air Survey Form)	10
Map of Ten Mile Zone Sectors	1
Legal Pad	1
Health Physics Manual, Section 18.2	1
Pen	2
Grease Pencil	1
Dime Roll	1
Pocket Knife	1
Discrepancies:	

Signature/Date

PERSONNEL SURVEY KIT  
CONSTRUCTION POST #1  
CHECK LIST

ITEM	AMOUNT
Eberline E-520 w/ HP-270 probe	1
Emergency Radio Transmitter/Receiver	1
High Range Dosimeters	1
Dosimeter Charger	1
Norton 7600 Respirator w/7500-83 Chemical Cartridges	1
Potassium Iodine Tablets (bottle)	1
Protective Clothing (full set)	6
Boundary Ribbon or Rope (50 yd. roll)	1
Caution Signs w/inserts	4
Masking Tape (roll)	1
Poly Bags (various)	6
Smears (box)	1
NuCon Smears	25
HP Form #2 (Smear Survey Form)	10
Pens	2
Grease Pencil	1
Health Physics Manual, Section 18.1	1
Legal Pad	1
Pocket Knife	1

Discrepancies:

\_\_\_\_\_  
Signature/Date

PERSONNEL SURVEY KIT  
BRASS SHACK  
CHECK LIST

ITEM	AMOUNT
Eberline E-520 w/ HP-270 probe	4
Emergency Radio Transmitter/Receiver, Provided by Security	1
High Range Dosimeters	2
Dosimeter Charger	1
Norton 7600 Respirator w/7500-83 Chemical Cartridges	2
Potassium Iodide Tablets (bottle)	1
Protective Clothing (full set)	6
Boundary Ribbon or Rope (50 yd. roll)	1
Caution Signs w/inserts	4
Masking Tape (roll)	1
Poly Bags (various)	6
Smears (box)	1
NuCon Smears	25
HP Form #2 (Smear Survey Form)	10
Pens	2
Grease Pen	2
Health Physics Manual, Section 18.1	1
Legal Pad	1
Pocket Knife	1
Discrepancies:	

\_\_\_\_\_  
Signature/Date

PERSONNEL SURVEY KIT  
PAP AREA  
CHECK LIST

ITEM	AMOUNT
Eberline E-520 w/HP-270 probe	2
Emergency Radio Transmitter/Receiver, Provided by Security	1
High Range Dosimeters	2
Dosimeter Charger	1
Norton 7600 Respirator w/7500-83 Chemical Cartridges	2
Potassium Iodide Tablets (bottle)	1
Protective Clothing (full set)	6
Boundary Ribbon or Rope (50 yd. roll)	1
Caution Signs w/inserts	4
Masking Tape (roll)	1
Poly Bags (various)	6
Smears (box)	1
NuCon Smears	25
HP Form #2 (Smear Survey Form)	10
Pens	2
Grease Pencil	2
Health Physics Manual, Section 18.1	1
Legal Pad	1
Pocket Knife	1

Discrepancies:

\_\_\_\_\_  
Signature/Date

PERSONNEL SURVEY KIT  
EVACUATION FACILITY  
CHECK LIST

ITEM	AMOUNT
Eberline E-520 w/ HP-270 probe	2
Emergency Radio Transmitter/Receiver, Provided by Security	1
High Range Dosimeters	4
Dosimeter Charger	1
Norton 7600 Respirator w/7500-83 Chemical Cartridges	4
Potassium Iodide Tablets (bottle)	2
Protective Clothing (full set)	6
Boundary Ribbon or Rope (50 yrd. roll)	2
Caution Signs w/inserts	6
Masking Tape (roll)	1
Poly Bags (various)	6
Smears (box)	1
NuCon Smears	25
HP Form #2 (Smear Survey Form)	10
Pens	2
Grease Pencil	2
Health Physics Manual, Section 18.1	1
Legal Pad	1
Pocket Knife	1

Discrepancies:

\_\_\_\_\_  
Signature/Date

TECHNICAL SUPPORT CENTER KIT  
CHECK LIST

ITEM	AMOUNT
Protective Clothing (set)	6
Northern 7600 Respirators w/7500-83 Chem. Ctgs.	6
Xetco Mod 305A or B	1
Radeco H809V Air Sampler	1
Silver Zeolite (cp-100G or GY-130 filter cartridges & particulate filters	25
SAM-2 w/RD-22 Probe	1
Potassium Iodide Tablets (bottle)	25
Caution signs w/inserts	3
Rad Tape	2
Smears	30
Plastic Bags	6
Masking Tape (roll)	1
Pen	2
Grease Pencil	1
Rad	1

Discrepancies:

\_\_\_\_\_  
Signature/Date



MEDICAL DECONTAMINATION KIT CHECK-OFF LIST

ITEM	AMOUNT
Eberline RM-14 w/HP-210 Probe	1
Decon Cleaner	3
Disposable Towels	10
Poly Bags 20" x 40"	2
Poly Bags 12' x 18"	4
Fingernail Clippers	1
Smears	25
NuCon Smears	25
Hand Brushes	2
Hand Soap	10
Protective Clothing (Full Set)	4
Disposable Rain Suits	2
Tape, Radioactive Material	1
Tape, Masking 2"	1
Tape, Duct 2"	1
H.P. Form #2	4
AP/O/A/5500/27	1
Swipes, Atomic (Kotex)	12
Citric Acid (1 lb.)	1

Discrepancies:

\_\_\_\_\_  
Signature/Date

MEDICAL LAMINATION KIT CHECK-OFF LIS  
CHARLOTTE MEMORIAL HOSPITAL

ITEM	AMOUNT
Eberline RM-14 w/HP-210 Probe	1
Decon Cleaner	3
Disposable Towels	10
Poly Bags 20" x 40"	2
Poly Bags 12" x 18"	4
F. ngernail Clippers	1
Smears	25
NuCon Smears	25
Hand Brushes	2
Hand Soap	10
Protective Clothing, Provided by hospital	4
Disposable Rain Suits	2
Tape, Radioactive Material	1
Tape, Masking 2"	6
Tape, Duct 2"	6
H.P. Form #2	4
AP/O/A/5500/27	1
Swipes, Atomic (Kotex)	36
Citric Acid (1 lb.)	1
Hair Clippers, Electric	1
Absorbent Paper	150
Caution signs w/inserts	5
Rad Rope	1
Pocket Dosimeters 0-200mR	25
Dosimeter Charger	1
Discrepancies:	

\_\_\_\_\_  
Signature/Date

OPERATIONAL SUPPORT CENTER KIT  
CHECKOFF LIST

ITEM	AMOUNT
Protective Clothing (set)	4
Norton 7600 Respirators w/7500-83 Chemical Cartridges	4
Flashlight	4
Batteries	8
Portable Radiac Instrument (PIC 6-A)	2
Camera (Polaroid)	1
Polaroid Film Paks	2
Masking Tape (roll)	2
Dosimeters (High Range)	4
Dosimeter Charger	1
Rain Suits	4
Poly Bags	12
Batteries (Camera)	1
Flashbulbs (Camera)	8
Emergency Radio TransmitterReceiver	1

Discrepancies:

\_\_\_\_\_  
Signature/Date

## FUEL SHIPMENT KIT

ITEM	AMOUNT
Air Purifying Respirator	2
Coveralls, Sack Type, Disposable	4
Rubber Shoe Covers (X large size), Pairs	6
Rubber Gloves, Pairs	6
Poly Bags 20 x 40"	12
Step Off Pads	3
50 Yd. Roll of Barricade Tape (Magenta & Yellow)	4
Roll of Duct Tape	2
Box of Small Kimwipes	2
TLD Badges (and one record card)	5
Personnel Dosimeters (0-500 mR) and (0-2000 mR/hr) each	5
Dosimeter Charger	1
Steno Pad with 2 Mechanical Lead Pencils	1
Nu Con Smears	100
Cotton Gloves, Bundle	1
Shoe Covers, Disposable, Pair	20
All Purpose Marker	2
Scotch Tape Roll and Dispenser	1
Masking Tape, 1 Roll 1" and 1 Roll 2"	2
Eberline E-520 w/HP-270 probe	1
Wet Suit, Disposable	2
Hood, Disposable	4
Weather-Proof Caution Signs with Inserts	4
Radioactive Waste Signs (4" x 6")	25
Caution; Radiation/Radioactive Material Tags	12
Binoculars	1
Coins for Telephone (roll of dimes)	1
Plastic Sample Bottles	12
Safety Glasses	5
Hard Hats	3
Contact Pyrometer	2
Tool Kit	1
Copy of NLI Drawings (prints)	1
Copy of Loading and Unloading Instructions	1
Flashlight and extra batteries	2
Portable Air Sampler (gasoline or vehicle setup for AC)	1
Silver Zeolite Cartridges	10
Rm 14 with DT 304 Probe	1
Trippe PV1000FC Powerverter	1

VERIFICATION OF EMERGENCY COMMUNICATIONS

This document shall serve as written verification that on the date below all telephone numbers and pages enclosed in emergency procedures EP/O/A/5000/05 thru EP/O/A/5000/08, Station Directive 3.8.1 and Station Directive 3.8.2 are correct and in working order, and that all jack-in telephones in the Technical Support Center are in working order. (To be done quarterly)

\_\_\_\_\_  
Signature/Date

Furthermore, this document shall serve as written verification that McGuire Nuclear Stations' emergency radio transmitter/receivers have been successfully checked for operation at the distances prescribed by this procedure.  
(To be done monthly)

\_\_\_\_\_  
Signature/Date

Discrepancies Note: \_\_\_\_\_

Corrective Actions Taken: \_\_\_\_\_

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

NATIONAL WEATHER SERVICE INFORMATION

Wind Direction \_\_\_\_\_

Wind Speed \_\_\_\_\_

Cloud Cover \_\_\_\_\_

Time \_\_\_\_\_

Discrepancies:

\_\_\_\_\_  
Signature/Date



DUKE POWER COMPANY  
PROCEDURE PREPARATION  
PROCESS RECORD

(1) ID No: EP/1/A/5000/03  
Change(s) 0 to  
0 Incorporated

(2) STATION: McGuire Nuclear

(3) PROCEDURE TITLE: Secondary Line Rupture

(4) PREPARED BY: Len Firebaugh DATE: 4-16-82

(5) REVIEWED BY: Terry Pedersen DATE: 4-21-82

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

(6) TEMPORARY APPROVAL (IF NECESSARY):

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

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

(7) APPROVED BY: Gwlog Date: 4-22-82

(8) MISCELLANEOUS:

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

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

DUKE POWER COMPANY  
NUCLEAR SAFETY EVALUATION CHECK LIST(1) STATION: McBride UNIT: 1 ☒ 2 ☐ 3 ☐  
OTHER: \_\_\_\_\_

(2) CHECK LIST APPLICABLE TO: \_\_\_\_\_

## (3) SAFETY EVALUATION - PART A

The item to which this evaluation is applicable represents:

Yes ☐ No ☒ A change to the station or procedures as described in the FSAR;  
or a test or experiment not described in the FSAR?If the answer to the above is "Yes", attach a detailed description of the item  
being evaluated and an identification of the affected section(s) of the FSAR.

## (4) SAFETY EVALUATION - PART B

Yes ☐ No ☒ Will this item require a change to the station Technical  
Specifications?If the answer to the above is "Yes," identify the specification(s) affected  
and/or attach the applicable pages(s) with the change(s) indicated.

## (5) SAFETY EVALUATION - PART C

As a result of the item to which this evaluation is applicable:

Yes ☐ No ☒ Will the probability of an accident previously evaluated  
in the FSAR be increased?Yes ☐ No ☒ Will the consequences of an accident previously evaluated  
in the FSAR be increased?Yes ☐ No ☒ May the possibility of an accident which is different  
than any already evaluated in the FSAR be created?Yes ☐ No ☒ Will the probability of a malfunction of equipment  
important to safety previously evaluated in the FSAR  
be increased?Yes ☐ No ☒ Will the consequences of a malfunction of equipment  
important to safety previously evaluated in the FSAR  
be increased?Yes ☐ No ☒ May the possibility of malfunction of equipment  
important to safety different than any already evaluated  
in the FSAR be created?Yes ☐ No ☒ Will the margin of safety as defined in the bases to any  
Technical Specification be reduced?If the answer to any of the preceding is "Yes", an unreviewed safety  
question is involved. Justify the conclusion that an unreviewed safety  
question is or is not involved. Attach additional pages as necessary.  
*Does not adversely affect safe operation of the unit.*(6) PREPARED BY: J. L. Fink DATE: 4-20-82(7) REVIEWED BY: Terry P. ... DATE: 4-21-82(8) Page 1 of 1

DUKE POWER COMPANY  
McGUIRE NUCLEAR STATION  
SECONDARY LINE RUPTURE

This procedure covers the steps necessary in the event of a secondary line rupture inside or outside containment.

1.0 Symptoms

- 1.1 Low Steamline Pressure (one or all Steamlines).
- 1.2 Containment Humidity and temperature increase.
- 1.3 Rapidly Changing NC System Tave
- 1.4 Steam Flow/Feedwater Flow Mismatch Alarm
- 1.5 High Containment Pressure Alarm.
- 1.6 Low S/G Water Level.
- 1.7 Containment Sump Level increase.
- 1.8 High Steam Flow (one or all Steamlines)
- 1.9 Ice Condenser Door Open Alarm.
- 1.10 Lo CF Disch. Pressure Alarm.
- 1.11 Low-Low NC System Tavg (553°F) alarm.

2.0 Immediate Actions

- 2.1 Proceed to Immediate Actions of EP/1/A/5000/01 (Immediate Actions and Diagnostics) if not already accomplished.

3.0 Subsequent Actions

Initial / N/A

- \_\_\_\_\_/\_\_\_\_\_ 3.1 All necessary Immediate Actions of EP/1/A/5000/01 (Immediate Actions and Diagnostics) have been performed.

CAUTION

Inaccurate Pressurizer and S/G Level readings may occur during accident conditions involving breaks inside containment. (This is caused by depressurization and/or reference leg heatup). Refer to McGuire Data Book Table 2.6 for conversions for actual level. Use backup instrumentation (i.e.: CA Flow, SM Pressure, NC Pressure and Wide Range Th, Tc).

- \_\_\_\_\_/\_\_\_\_\_ 3.2 If the pressurizer PORV's open at any time during this transient, verify that the valves reclose when NCS pressure drops below 2315 psig.

Initial / N/A

\_\_\_\_\_/\_\_\_\_

3.2.1 If any PORV does not reclose, attempt to isolate it using the appropriate PORV isolation valve.

\_\_\_\_\_/\_\_\_\_

3.2.2 If the PORV's do not reclose and cannot be isolated, go to EP/1/A/5000/02 (Loss of Reactor Coolant).

\_\_\_\_\_/\_\_\_\_

3.3 Proceed to EP/0/A/5000/06 (Alert), EP/0/A/5000/07 (Site Emergency) and EP/0/A/5000/08 (General Emergency) as applicable and perform applicable steps concurrent with the steps in this procedure.

\_\_\_\_\_/\_\_\_\_

3.4 After ECCS pump operation has been verified and when the wide range NC pressure <1500 psig, trip all NC pumps.

\_\_\_\_\_/\_\_\_\_

3.4.1 Close the NV Pump miniflow isolation valves LNV-151A (NV Pumps Recirculation) and LNV-150B (NV Pumps Recirculation).

\_\_\_\_\_/\_\_\_\_

3.4.2 Should wide range NC System pressure subsequently rise to >2000 psig, open LNV-151A (NV Pumps Recirculation) and LNV-150B (NV Pumps Recirculation).

\_\_\_\_\_/\_\_\_\_

3.5 If KC or RN flow to the NC pumps is isolated on a containment pressure signal, all NC pumps shall be stopped within 5 minutes because of loss of motor and bearing cooling.

\_\_\_\_\_/\_\_\_\_

3.5.1 If the NC pumps are stopped, the seal injection flow of ~8 gpm per pump should be maintained.

\_\_\_\_\_/\_\_\_\_

3.6 Determine which S/G(s) is affected by observing each steamline pressure. A low steamline pressure compared to the other loops denotes a faulted loop(s); reset CA Mod. Valve Resets and terminate CA flow to that depressurized or depressurizing S/G(s).

\_\_\_\_\_/\_\_\_\_

3.6.1 If all S/G's are depressurized or depressurizing the CA flow must not be terminated to any S/G until the faulted loop(s) is identified.

\_\_\_\_\_/\_\_\_\_

3.6.2 If no loop has a low steamline pressure compared to the others and all steamlines have been isolated, determine if a break has occurred in the steamline, in the main feedline or in any piping system that connects with the secondary pressure boundary.

\_\_\_\_\_/\_\_\_\_

3.7 If no indication of a break in the secondary pressure boundary is found, go to Section 3.0 of EP/1/A/5000/01 (Immediate Actions and Diagnostics) and re-evaluate the accident.

\_\_\_\_\_/\_\_\_\_

3.8 If a leak from the secondary systems is found, proceed to step 3.9.

Initial / N/A

- \_\_\_\_\_/\_\_\_\_ 3.9 If the water level in the non-faulted S/G's is in the narrow range span, regulate the CA flow to those S/G's to maintain an indicated narrow range water level of  $\approx 25\%$ .
- \_\_\_\_\_/\_\_\_\_ 3.10 If water level increases in an unexplained manner in one S/G, go to EP/1/A/5000/04 (Steam Generator Tube Rupture).
- \_\_\_\_\_/\_\_\_\_ 3.11 Reset the Train "A" and Train "B" CA modulating valves resets, and TD CA Pump, in order to regulate flow to the steam generators.
- \_\_\_\_\_/\_\_\_\_ 3.12 If Phase B Isolation has occurred and containment pressure is less than 3 psig and there is reasonable assurance that containment pressure will not again increase above 3 psig, reset Phase B Isolation and stop NS pumps.
- \_\_\_\_\_/\_\_\_\_ 3.12.1 If a Phase B Isolation has occurred, establish KC flow to the Reactor Building as follows:
- \_\_\_\_\_/\_\_\_\_ 3.12.1.1 Open:
- 1KC-338B (NC Pump Supply Header Pent. Isol. Outside)
  - 1KC-424B (NC Pump Return Header Pen. Inside Isol.)
- \_\_\_\_\_/\_\_\_\_ 3.12.1.2 Open:
- 1KC-425A (NC Pump Return Header Pent. Outside Isol.)
  - 1KC-230A (Train 1A to RB Non-Ess. Supply Hdr. Auto Isol.)
- \_\_\_\_\_/\_\_\_\_ 3.12.1.3 Open:
- 1KC-228B (Train 1B to RN Non-Ess. Supply Hdr. Auto Isol.)
  - 1KC-18B (Reactor Bldg. Non-Ess. Return Auto Isol.)
- \_\_\_\_\_/\_\_\_\_ 3.12.2 If a Phase B Isolation has occurred, establish RN flow to the Reactor Building by opening:
- 1RN-40A (Non-Essential Header Supply 1A Isol.) (Cord. B-4)
  - 1RN-252B (Non-Essential Header Supply to RB Pent. Outside Isol.) (Cord. L-5)
  - 1RN-253A (Non-Essential Header Supply to RB Pent. Inside Isol.) (Cord. B-5)
  - 1RN-277B (Non-Essential Return from RB Pent. Outside Isol.) (Cord K-5)
  - 1RN-276A (Non-Essential Return from RB Pent. Inside Isol.) (Cord D-5).

Initial/ N/A

- \_\_\_\_\_/\_\_\_\_\_ 3.13 Monitor Refueling Water Storage Tank Level. If a low Refueling Water Storage Tank Level (150") is reached, proceed to Step 3.46.
- \_\_\_\_\_/\_\_\_\_\_ 3.14 Determine NCS temperature from one wide range Th, confirmed by one core exit thermocouple if available.
- \_\_\_\_\_/\_\_\_\_\_ 3.15 IF NCS TEMPERATURE IS <350°F, RESET SAFETY INJECTION BY PROCEEDING TO STEP 3.18, IF THE FOLLOWING CONDITIONS EXIST:
- \_\_\_\_\_/\_\_\_\_\_ 3.15.1 NC WIDE RANGE PRESSURE >700 PSIG, STABLE OR INCREASING.
- \_\_\_\_\_/\_\_\_\_\_ 3.15.2 PRESSURE LEVEL >20% AND RISING.
- \_\_\_\_\_/\_\_\_\_\_ 3.15.3 NCS SUBCOOLING >50°F.
- \_\_\_\_\_/\_\_\_\_\_ 3.15.4 CA FLOW IS ISOLATED TO DEPRESSURIZED S/G WITH >865 GPM BEING INJECTED INTO NON-FAULTED S/Gs OR AT LEAST ONE NON-FAULTED S/G NARROW RANGE LEVEL >25%.

CAUTION

If all wide range NC temperature indicators go above 350°F when attempting to satisfy the conditions of 3.15, initiate safety injection operation and continue operation until conditions of 3.16 or 3.17 (depending on containment indications) are satisfied.

CAUTION

If all S/G are depressurized or depressurizing, the safety injection flow must not be terminated until the faulted loop(s) is identified.

- \_\_\_\_\_/\_\_\_\_\_ 3.16 IF NCS TEMPERATURE IS >350°F AND THE BREAK IS OUTSIDE CONTAINMENT, RESET SAFETY INJECTION BY PROCEEDING TO STEP 3.18, IF THE FOLLOWING CONDITIONS EXIST:
- \_\_\_\_\_/\_\_\_\_\_ 3.16.1 CONTAINMENT PRESSURE, SUMP LEVEL AND RADIATION NORMAL.
- \_\_\_\_\_/\_\_\_\_\_ 3.16.2 NC SYSTEM PRESSURE >2000 PSIG.
- \_\_\_\_\_/\_\_\_\_\_ 3.16.3 PRESSURIZER LEVEL >20%.
- \_\_\_\_\_/\_\_\_\_\_ 3.16.4 NC SYSTEM SUBCOOLED >50°F.
- \_\_\_\_\_/\_\_\_\_\_ 3.16.5 CA FLOW IS ISOLATED TO DEPRESSURIZED S/G WITH >865 GPM INJECTED INTO NON-FAULTED S/G's OR AT LEAST ONE NON-FAULTED S/G NARROW RANGE LEVEL >25%.
- \_\_\_\_\_/\_\_\_\_\_ 3.17 IF NCS TEMPERATURE IS >350°F AND THE BREAK IS INSIDE CONTAINMENT RESET SAFETY INJECTION BY PROCEEDING TO STEP 3.18 IF THE FOLLOWING CONDITIONS EXIST:



Initial / N/A

\_\_\_\_\_/\_\_\_\_\_  
\_\_\_\_\_/\_\_\_\_\_  
\_\_\_\_\_/\_\_\_\_\_  
\_\_\_\_\_/\_\_\_\_\_  
\_\_\_\_\_/\_\_\_\_\_  
\_\_\_\_\_/\_\_\_\_\_

- 3.17.1 CONTAINMENT PRESSURE AND SUMP LEVEL NOT NORMAL.
- 3.17.2 CONTAINMENT RADIATION NOT IN ALARM.
- 3.17.3 NC SYSTEM PRESSURE  $\geq$  2000 PSIG.
- 3.17.4 PRESSURIZER LEVEL  $\geq$  50%.
- 3.17.5 NC SYSTEM SUBCOOLED  $> 50^{\circ}\text{F}$ .
- 3.17.6 CA FLOW IS ISOLATED TO DEPRESSURIZED S/G WITH  $> 865$  GPM  
INJECTED INTO NON-FAULTED S/G's, OR AT LEAST ONE NON-  
FAULTED S/G NARROW RANGE LEVEL  $\geq$  25%.

CAUTION

If containment pressure, or containment radiation or containment sump level exhibit either abnormally high or increasing readings when attempting to satisfy the conditions of 3.16, initiate safety injection pump operation and continue operation until the conditions of 3.17 are satisfied.

CAUTION

If all steam generators are depressurized or depressuring the safety injection flow must not be terminated until the faulted loops is identified.

\_\_\_\_\_/\_\_\_\_\_

- 3.18 Reset Safety Injection, D/G load Sequencers, Phase A Isolation, Phase B Isolation and Containment Spray.

\_\_\_\_\_/\_\_\_\_\_

- 3.19 The parameters for determination of re-initiation of safety injection should be monitored continuously throughout this procedure and shall be logged in Enclosure 4.1 each 15 minutes for the first 2 hours following termination.

\_\_\_\_\_/\_\_\_\_\_

- 3.20 Stop any ECCS Pumps not needed for normal charging and reactor coolant pump seal injection flow.

\_\_\_\_\_/\_\_\_\_\_

- 3.21 *Manually re-initiate safety injection and proceed to EP/1/A/5000/01 (Immediate Actions and Diagnostics) if any of the following conditions exist:*

\_\_\_\_\_/\_\_\_\_\_

- 3.20.1 NC Pressure decreases by 200 psig.

\_\_\_\_\_/\_\_\_\_\_

- 3.20.2 PZR level decreases by 10%.

\_\_\_\_\_/\_\_\_\_\_

- 3.20.3 NCS subcooling  $< 50^{\circ}\text{F}$ .

\_\_\_\_\_/\_\_\_\_\_

- 3.22 Safety injection may be terminated after the restart when NC pressure is being controlled to the nominal value which existed when safety injection was initially terminated ( $T_H < 350^{\circ}\text{F}$ ) or to

Initial / N/A

a value greater than or equal to 2000 psig ( $T_H > 350^\circ\text{F}$ ) and when the reactor coolant indicated subcooling is greater than  $65^\circ\text{F}$ .

- \_\_\_\_\_/\_\_\_\_\_ 3.23 If for any reason all NC pumps are tripped, ensure that core decay heat is being removed by natural circulation. Refer to AP/1/A/5500/09 (Plant Operation During Natural Circulation).
- \_\_\_\_\_/\_\_\_\_\_ 3.24 Reset the control permissive for recirculation mode LNI-184B and LNI-185A (RB Sump to ND and NS).
- \_\_\_\_\_/\_\_\_\_\_ 3.25 Throttle LNV-238 (Centrifugal Charging Pump Disch. Control) as necessary to supply ~8 gpm seal injection flow to each NC Pump.
- \_\_\_\_\_/\_\_\_\_\_ 3.26 Isolate the BIT by closing:  
LNI-4A (BIT Inlet Isolation)  
LNI-5B (BIT Inlet Isolation)  
LNI-9A (BIT Disch. Isol.)  
LNI-10B (BIT Disch. Isol.)
- \_\_\_\_\_/\_\_\_\_\_ 3.27 Establish VI to containment by opening:

CAUTION

After opening each valve listed, allow VI Header Pressure to stabilize before opening the next valve.

1VI-129B (A Ess Header Cont. Isol. OTSD)  
1VI-160B (B Ess Header Cont. Isol. OTSD)  
1VI-148B (Upp. Cont. Non-Ess Hdr. C/I OTSD)  
1VI-150B (Lwr. Cont. Non-Ess. Hdr. C/I OTSD)  
1VI-362A (VI to Annulus Vent. Cont. Isol.)

- \_\_\_\_\_/\_\_\_\_\_ 3.28 Establish KC to the Auxiliary Building Non-essential header as follows:
- \_\_\_\_\_/\_\_\_\_\_ 3.28.1 Open:  
LKC-1A (Trn. 1A to AB Non-Ess. Ret. Isol.)  
LKC-2B (Trn. 1B to AB Non-Ess. Ret. Isol.)
- \_\_\_\_\_/\_\_\_\_\_ 3.28.2 Close:  
LKC-56A (KC to A ND HX)  
LKC-81B (KC to B ND HX)
- \_\_\_\_\_/\_\_\_\_\_ 3.28.3 As flow decreases, open:  
LKC-50A (Trn. 1A to AB Non-Ess Supply Isol.)  
LKC-53B (Trn. 1B to AB Non-Ess Supply Isol.)
- \_\_\_\_\_/\_\_\_\_\_ 3.29 Establish RN to Auxiliary Building as follows:  
Open:  
LRN-42A (AB Non-Ess Supply Isol.) (Cord A-3)

Initial / N/A

LRN-42A (AB Non-Ess Supply Isol.) (Cord A-5)  
LRN-63B (AB Non-Ess Return Isol.) (Cord J-5)  
LRN-64A (AB Non-Ess Return Isol.) (Cord C-5)

- \_\_\_\_\_/\_\_\_\_ 3.30 Notify Chemistry to sample NCS Boron Concentration, and set VCT M/U Control System to equal NCS Boron Concentration.
- \_\_\_\_\_/\_\_\_\_ 3.31 Align the NV Pump to take a suction from the Volume Control Tank:  
Open: LNV-141A (VCT Outlet Isolation)  
LNV-142B (VCT Outlet Isolation)  
Close: LNV-221A (NV Pumps Suct. From FWST)  
LNV-222B (NV Pumps Suct. From FWST)
- \_\_\_\_\_/\_\_\_\_ 3.32 Establish Seal Water Return by opening:  
LNV-94A (NC Pumps Seal Ret. C/I Inside)  
LNV-95B (NC Pumps Seal Ret. C/I OTSD)
- \_\_\_\_\_/\_\_\_\_ 3.33 Close LNV-241 (Regen. HX Tube Side Inlet Cntrl.)
- \_\_\_\_\_/\_\_\_\_ 3.34 Open:  
LNV-244A (Charging Line Cont. Isol. OTSD)  
LNV-245B (Charging Line Cont. Isol. OTSD)
- \_\_\_\_\_/\_\_\_\_ 3.35 Establish the normal charging flow path by slowly throttling open LNV-241 (Regen. HX Tube Side Inlet Cntrl.).

NOTE

As LNV-241 is opened, adjust LNV-238 as necessary to maintain Seal Injection Flow.

- \_\_\_\_\_/\_\_\_\_ 3.36 Establish Letdown by opening in order as listed:  
LNV-1A (NC L/D Isol. to Regen. HX)  
LNV-2A (NC L/D Isol. to Regen. HX)  
LNV-7B (Letdown Cont. Isol. OTSD)  
LNV-459A (A L/D Orif. OTLT Cont. Isol.)  
To 13% open for ~5 minutes to prevent thermal shock to letdown line.
- \_\_\_\_\_/\_\_\_\_ 3.36.1 After letdown line is warmed up, open NV-458A (B L/D Orif. OTLT Cont. Isol.) and/or NV-457A (C L/D Orif. OTLT Cont. Isol.). Close LNV-459A (A L/D Orif. OTLT Cont. Isol.)
- \_\_\_\_\_/\_\_\_\_ 3.37 Verify LNV-124 (Letdown Press Control) is modulating to maintain letdown pressure at ~350 psig.

Initial / N/A

- \_\_\_\_\_/\_\_\_\_ 3.38 Energize pressurizer heaters to maintain steam bubble.
- \_\_\_\_\_/\_\_\_\_ 3.39 Reset the Containment Ventilation Isolation signals. Open LMISV 5580, 5581, 5582 and 5583 (EMF-38, 39 and 40 Cont. Isol.). Start air pump to re-establish containment radiation monitor sampling and verify Lo Flo Alarm clears.
- \_\_\_\_\_/\_\_\_\_ 3.40 Notify Chemistry for sample of NC System Boron Concentration from the unaffected loop. Perform a Reactivity Balance per OP/O/A/-6100/06 (Reactivity Balance Calculation) and verify shutdown margin equivalent to  $\geq 1.6\% \Delta K/K$  at 200°F. If necessary, borate the NCS per OP/1/A/6150/09 (Boron Concentration).
- \_\_\_\_\_/\_\_\_\_ 3.41 Monitor either the average temperature indication of core exit thermocouples (if available) or all wide range NC temperature  $T_H$  to verify that NC temperature is subcooled  $> 50^\circ\text{F}$ .
- \_\_\_\_\_/\_\_\_\_ 3.42 If NC System is subcooled  $> 50^\circ\text{F}$ , then attempt to establish  $50^\circ\text{F}$  subcooling by steam dump from the steam generators to the condenser or the atmosphere by proceeding to step 3.44.
- \_\_\_\_\_/\_\_\_\_ 3.43 If NC System is subcooled  $> 50^\circ\text{F}$ , proceed to step 3.45.

CAUTION

Do not exceed a NC cooldown rate of more than  $50^\circ\text{F}/\text{Hr.}$ , while establishing  $> 50^\circ\text{F}$  subcooling.

- \_\_\_\_\_/\_\_\_\_ 3.44 Establish decay heat removal as follows:
- \_\_\_\_\_/\_\_\_\_ 3.44.1 IF BREAK IS UPSTREAM OF SM ISOLATION VALVES AND SM ISOLATION CAN BE RESET.
- \_\_\_\_\_/\_\_\_\_ 3.44.1.1 Verify the Condenser is available for steam dump (C-9). If not available proceed to step 3.44.2.
- \_\_\_\_\_/\_\_\_\_ 3.44.1.2 Reset SM isolation and the MSIV Bypass Valve Resets then slowly open SM bypass valves on unaffected S/G's.
- \_\_\_\_\_/\_\_\_\_ 3.44.1.3 When pressure is equalized across SM isolation valves, open unaffected S/G SM Isolation valves.
- \_\_\_\_\_/\_\_\_\_ 3.44.1.4 Transfer Steam Dump System to Steam Header Pressure Control, with a setpoint equal to unaffected S/G pressure.
- \_\_\_\_\_/\_\_\_\_ 3.44.2 IF BREAK IS DOWNSTREAM OF SM ISOLATION VALVES OR VALVES CANNOT BE REOPENED.

Initial / N/A

\_\_\_\_\_/\_\_\_\_

3.44.2.1 Reset SM Isolation and the SM PORV Resets. Go to fully closed on all SM PORV manual loaders and place PORV's in manual.

\_\_\_\_\_/\_\_\_\_

3.44.2.2 Adjust manual loaders on unaffected S/G's PORV for desired cooldown rate.

\_\_\_\_\_/\_\_\_\_

3.45 If 50°F indicated subcooling cannot be established or maintained, then MANUALLY REINITIATE SAFETY INJECTION. Go to section 3.0 of EP/1/A/5000/01 (Immediate Actions and Diagnostics) and re-evaluate the event.

\_\_\_\_\_/\_\_\_\_

3.46 If stopped, start the NC Pump in the unaffected "A" or "B" Loop per OP/1/A/6150/02 (NC Pump Operation) for cooldown purposes.

\_\_\_\_\_/\_\_\_\_

3.47 Begin cooldown and depressurization per OP/1/A/6100/02 (Controlling Procedure for Unit Shutdown), while keeping the affected S/G(s) isolated.

\_\_\_\_\_/\_\_\_\_

3.48 If D/G is not required, and been running for 1 hour, shutdown per OP/1/A/6350/02 (Diesel Generator).

\_\_\_\_\_/\_\_\_\_

3.49 Realign the following for normal operation when desired:

\_\_\_\_\_/\_\_\_\_

3.49.1 NI per OP/1/A/6200/06 (Safety Injection System).

\_\_\_\_\_/\_\_\_\_

3.49.2 VC per OP/0/A/6450/11 (Control Room Air Conditioning and Ventilation).

\_\_\_\_\_/\_\_\_\_

3.49.3 VJ per OP/0/B/6450/14 (Computer Room Ventilation System).

\_\_\_\_\_/\_\_\_\_

3.49.4 BB per OP/1/A/6250/08 (Steam Generator Blowdown System) for unaffected generators only.

\_\_\_\_\_/\_\_\_\_

3.49.5 NV per OP/1/A/6200/01 (Chemical and Volume Control System).

\_\_\_\_\_/\_\_\_\_

3.49.6 PRT per OP/1/A/6450/04 (Pressurizer Relief Tank).

\_\_\_\_\_/\_\_\_\_

3.49.7 NCDT per OP/0/A/6500/01 (Liquid Waste Recycle System).

\_\_\_\_\_/\_\_\_\_

3.49.8 KC per OP/1/A/6500/05 (Component Cooling Water System).

\_\_\_\_\_/\_\_\_\_

3.49.9 RN per OP/1/A/6400/06 (Nuclear Service Water System).

\_\_\_\_\_/\_\_\_\_

3.49.10 Containment Ventilation per OP/1/A/6450/01 (Containment Ventilation).

\_\_\_\_\_/\_\_\_\_

3.49.11 KF per OP/1/A/6200/05 (Spent Fuel Cooling System).

\_\_\_\_\_/\_\_\_\_

3.49.12 NF per OP/1/A/6200/18A (Ice Condenser Refrigeration System).

\_\_\_\_\_/\_\_\_\_

3.49.13 FW per OP/1/A/6200/14 (Refueling Water System).

\_\_\_\_\_/\_\_\_\_

3.49.14 VS to Containment: Open 1VS-12-B (Station Air to Unit #1 Containment Outside Isol.).

\_\_\_\_\_/\_\_\_\_

3.49.15 YM to Containment: Open 1YM-115B (Containment Outside Isol.).

Initial / N/A

\_\_\_\_/\_\_\_\_

3.49.16 NM per OP/1/A/6200/11 (Nuclear Monitoring and Sampling System).

\_\_\_\_/\_\_\_\_

3.49.17 Start three control rod drive ventilation fans.

\_\_\_\_/\_\_\_\_

3.50 Reset VA Filtered Exhaust Reset pushbuttons (1A and 1B) at local panels and return VA to normal operation per OP/0/A/6450/03.

\_\_\_\_/\_\_\_\_

3.51 Open NS5551A and NS5550B (NR Cont. Pressure Isolations) to restore NR Cont. pressure indication.

\_\_\_\_/\_\_\_\_

3.52 Reset the RN Train "A" and "B" modulating valve resets.

\_\_\_\_/\_\_\_\_

3.53 Reset to Auto VQ-6A and VQ-3B (Cont. Air Add. Outside/Inside Isol.)

\_\_\_\_/\_\_\_\_

3.54 Reset and close NI & NV EHT breakers at local 600V MCC.

\_\_\_\_/\_\_\_\_

3.55 If FWST level decreases to the low level alarm setpoint (150") establish cold leg recirculation per section 4.0 of EP/1/A/5000/02 (Loss of Reactor Coolant).

\_\_\_\_/\_\_\_\_

3.56 Proceed with normal cooldown per OP/1/A/6100/02 (Controlling Procedure for Unit Shutdown).

#### 4.0 Enclosures

##### 4.1 Safety Injection Reinitiation Criteria Checksheet.



EP/1/A/5000/03

Enclosure 4.1

Safety Injection Reinitiation Criteria Checksheet

Reinitiation criteria for safety injection:

Pressurizer level	-	<u>&gt;10% decrease</u>
Pressurizer pressure	-	<u>&gt;200 psig decrease</u>
NC subcooling	-	<u>&lt;50°F</u>

Initial pressurizer pressure \_\_\_\_\_

Initial pressurizer level \_\_\_\_\_

[illegible]

\*Independent verification of recorded data and comparison to reinitiation criteria must be by a SRO.



DUKE POWER COMPANY  
PROCEDURE PREPARATION  
PROCESS RECORD

(1) ID No: EP/1/A/5000/04  
Change(s) 0 to  
0 Incorporated

(2) STATION: McGuire Nuclear

(3) PROCEDURE TITLE: Steam Generator Tube Rupture

(4) PREPARED BY: Grady Pickler DATE: 3-11-82

(5) REVIEWED BY: AD Gilbert DATE: 3-12-82

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

(6) TEMPORARY APPROVAL (IF NECESSARY):

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

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

(7) APPROVED BY: AD Date: 3/12/82

(8) MISCELLANEOUS:

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

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

DUKE POWER COMPANY  
NUCLEAR SAFETY EVALUATION CHECK LIST

(1) STATION: McGuire Nuclear UNIT: 1 ☒ 2 ☐ 3 ☐  
OTHER: \_\_\_\_\_

(2) CHECK LIST APPLICABLE TO: EP/1A/5000/04

(3) SAFETY EVALUATION - PART A

The item to which this evaluation is applicable represents:

Yes ☐ No ☒ A change to the station or procedures as described in the FSAR;  
or a test or experiment not described in the FSAR?

If the answer to the above is "Yes", attach a detailed description of the item being evaluated and an identification of the affected section(s) of the FSAR.

(4) SAFETY EVALUATION - PART B

Yes ☐ No ☒ Will this item require a change to the station Technical Specifications?

If the answer to the above is "Yes," identify the specification(s) affected and/or attach the applicable pages(s) with the change(s) indicated.

(5) SAFETY EVALUATION - PART C

As a result of the item to which this evaluation is applicable:

Yes ☐ No ☒ Will the probability of an accident previously evaluated in the FSAR be increased?

Yes ☐ No ☒ Will the consequences of an accident previously evaluated in the FSAR be increased?

Yes ☐ No ☒ May the possibility of an accident which is different than any already evaluated in the FSAR be created?

Yes ☐ No ☒ Will the probability of a malfunction of equipment important to safety previously evaluated in the FSAR be increased?

Yes ☐ No ☒ Will the consequences of a malfunction of equipment important to safety previously evaluated in the FSAR be increased?

Yes ☐ No ☒ May the possibility of malfunction of equipment important to safety different than any already evaluated in the FSAR be created?

Yes ☐ No ☒ Will the margin of safety as defined in the bases to any Technical Specification be reduced?

If the answer to any of the preceding is "Yes", an unreviewed safety question is involved. Justify the conclusion that an unreviewed safety question is or is not involved. Attach additional pages as necessary.

(6) PREPARED BY: Shady Fickler DATE: 3-12-82

(7) REVIEWED BY: AD Hill DATE: 3-12-82

(8) Page 1 of 1

*this procedure does not adversely affect the safe operation of the plant*

DUKE POWER COMPANY  
McGUIRE NUCLEAR STATION  
STEAM GENERATOR TUBE RUPTURE

This procedure covers the actions necessary to take in event of a Steam Generator Tube Rupture.

1.0 Symptoms

- 1.1 EMF-33 "Air Ejector Radiation" Alarm.
- 1.2 EMF-34 "S/G Blowdown Radiation" Alarm.
- 1.3 Steam Flow/Feedwater Flow Mismatch Alarm (on one S/G).
- 1.4 Increasing S/G Water Level (on one S/G).
- 1.5 Rapid decrease in Pressurizer Pressure and Level.
- 1.6 EMF-24, 25, 26, or 27 "Steam Line High Rad" Alarm.

2.0 Immediate Actions

- 2.1 Perform the Immediate Actions of EP/1/A/5000/01 (Immediate Actions and Diagnostics) if not already accomplished.

3.0 Subsequent Actions

Initial / N/A

- \_\_\_\_\_/\_\_\_\_\_ 3.1 All necessary immediate actions of EP/1/A/5000/01 (Immediate Actions and Diagnostics) have been performed.
- \_\_\_\_\_/\_\_\_\_\_ 3.2 If for any reason all NC Pumps are tripped, ensure that core decay heat is being removed by natural circulation. Proceed to AP/1/A-5500/09 (Plant Operations During Natural Circulation) and perform applicable steps concurrent with subsequent steps in this procedure.
- \_\_\_\_\_/\_\_\_\_\_ 3.3 Announce occurrence over plant PA System.
- \_\_\_\_\_/\_\_\_\_\_ 3.4 Notify HP to sample containment atmosphere and S/Gs to identify presence of abnormal radioactivity.
- \_\_\_\_\_/\_\_\_\_\_ 3.5 While identifying and isolating the faulted S/G according to Steps 3.6-3.9, continue with subsequent Steps 3.10 through 3.18.
- \_\_\_\_\_/\_\_\_\_\_ 3.6 Identify the faulted S/G(s) by one or more of the following methods:
  - 3.6.1 An unexpected rise in the S/G water level with auxiliary feedwater flow reduced or stopped.
  - 3.6.2 High radiation from the S/G blowdown line radiation monitor via EMF-34.
  - 3.6.3 High radiation from any S/G, as determined by analysis or a sample.
  - 3.6.4 Steam Flow/CF Flow mismatch on affected S/G.

Initial / N/A  
\_\_\_\_\_/\_\_\_\_\_

3.7 Reset CA modulating valves and secure CA flow to faulted S/G.

3.7.1 Monitor CA Condensate Storage Tank level and Upper Surge Tank. Verify CA Suction auto-swap to RN at 2.0 psig suction pressure vis status lights.

If not swapped, open:

\*1CA-161 C (CA Assured Supply From RN)

\*1CA-162 C (CA Assured Supply From RN)

1CA-15A (A CA Pmp Sup Frm Trn A RN)

1CA-86A (TD CA Pmp Sup Frm Trn A RN)

1CA-116B (TD CA Pmp Sup Frm Trn B RN)

1CA-18B (B CA Pmp Sup Frm Trn B RN)

1CA-69A (CA Assured Sup Frm Trn A RN)

LRN-162B (CA Assured Sup Frm Trn B RN)

\*Controlled From

\_\_\_\_\_/\_\_\_\_\_  
\_\_\_\_\_/\_\_\_\_\_  
3.7.2 Reset Turbine Driven CA Pump.

3.8 Close the isolation valve in the steam line to the Turbine CA Pump associated with the faulted S/G. If the faulted S/G is "B", unlock and close 1SA-2 (Main Steam 1B to Aux. FDWPT No. 1 Maintenance Isolation). If the faulted S/G is "C", unlock and close 1SA-1 (Main Steam 1C to Aux. FDWPT No. 1 Maintenance Isolation).

\_\_\_\_\_/\_\_\_\_\_  
3.9 Verify the affected S/G SM PORV is closed by observing decrease in S/G Steam Flow and Status indication on MCB.

\_\_\_\_\_/\_\_\_\_\_  
3.10 Proceed to EP/0/A/5000/06 (Alert) and EP/0/A/5000/07 (Site Emergency) and perform applicable steps concurrent with the steps of this procedure.

\_\_\_\_\_/\_\_\_\_\_  
3.11 Verify that all pressurizer PORVs are closed via closed status on MCB and PRT pressure.

\_\_\_\_\_/\_\_\_\_\_  
3.12 Verify the open status and availability of power to all pressurizer PORV isolation valves.

\_\_\_\_\_/\_\_\_\_\_  
3.13 After NV Pump Operation has been verified and the wide range NC pressure  $\leq$  1500 psig, stop all NC Pumps.

\_\_\_\_\_/\_\_\_\_\_  
3.13.1 Close the NV Pump miniflow isolation valves 1NV-151A (NV Pumps Recirculation) and 1NV-150B (NV Pumps Recirculation).

\_\_\_\_\_/\_\_\_\_\_  
3.13.2 Should wide range pressure subsequently rise to greater than 2000 psig, reopen 1NV-151A (NV Pumps Recirculation) and 1NV-150B (NV Pumps Recirculation).

Initial / N/A

- \_\_\_\_\_/\_\_\_\_ 3.14 If NC Pumps are stopped, seal injection flow of  $\approx 8$  gpm per pump should be maintained.
- \_\_\_\_\_/\_\_\_\_ 3.15 Verify all ESF components have assumed their safeguards status. Manually align any that did not.
- \_\_\_\_\_/\_\_\_\_ 3.15.1 During Upper Head Injection Groups 3 and 4 (if spray actuated) completely lighted, Groups 1, 2, 5, 6 and 7 completely dark.
- \_\_\_\_\_/\_\_\_\_ 3.15.2 After Upper Head Injection Groups 3, 4 (if spray actuated) and 6 completely lighted, Groups 1, 2, 5 and 7 completely dark.
- \_\_\_\_\_/\_\_\_\_ 3.15.3 If either train of the BOP ESF Components monitor lights in Group 1 and Group 4 are out of sequence with the other lights in their respective group, the OAC must be interrogated to obtain a printout of misaligned BOP ESF Components.
- \_\_\_\_\_/\_\_\_\_ 3.15.4 If the Phase A Containment Isolation Monitor Lights are also out of sequence, manually initiate Phase A Containment Isolation.
- \_\_\_\_\_/\_\_\_\_ 3.15.5 If the OAC is inoperable, perform BOP ESF Components alignment checklist, Enclosure 4.1.
- \_\_\_\_\_/\_\_\_\_ 3.15.6 Perform Post Accident Checklist, Enclosure 4.2.
- \_\_\_\_\_/\_\_\_\_ 3.16 Open the SM Isolation Bypass, then close the SM Isolation Valve on the faulted S/G. Slowly close the SM Isolation Bypass on the faulted S/G. If the faulted S/G pressure increases to  $\approx 1150$  psig and the condenser is available, open the Isolation Bypass and dump steam to condenser to preclude S/G PORV actuation.
- \_\_\_\_\_/\_\_\_\_ 3.17 If the SM Isolation or SM Isolation Bypass on the faulted S/G cannot be closed, close the SM Isolation and SM Isolation Bypasses on the non-faulted S/Gs as described in Step 3.16.
- \_\_\_\_\_/\_\_\_\_ 3.18 Reset the Safety Injection, and Containment Phase A Isolation, Diesel Generator Load Sequencers and Main Steam Isolation Resets.
- \_\_\_\_\_/\_\_\_\_ 3.18.1 Automatic reinitiation of safety injection will not occur since the reactor trip breakers are not reset.



Initial / N/A

\_\_\_\_\_/\_\_\_\_ 3.19 Subsequent to this Step, should loss of offsite power occur, manual action (e.g., manual safety injection initiation) will be required to load the safeguards equipment onto the diesel powered emergency busses.

\_\_\_\_\_/\_\_\_\_ 3.20 Align Instrument Air to Containment by opening:

1VI-129B (A ESS Header Cont. Isol. OTSD)

1VI-160B (B ESS Header Cont. Isol. OTSD)

1VI-362A (VI to Annulus Vent Cont. Isol.)

1VI-150B (Lwr. Cont. Non Ess Hdr. C/I OTSD)

1VI-148B (Upp. Cont. Non Ess Hdr. C/I OTSD)

\_\_\_\_\_/\_\_\_\_ 3.21 After the faulted S/G has been identified and isolated, begin a rapid cooldown of the NC System to 507°F by use of the steam dump by proceeding to Step 3.21.1 or 3.21.2.

CAUTION

If all NC Pumps are stopped, monitor Upper Vessel head thermocouple to assure subcooling in head area is not lost.

\_\_\_\_\_/\_\_\_\_ 3.21.1 If offsite power and the condenser (C-9) are available and the faulted S/G is isolated, dump steam to the main condenser from the non-faulted S/Gs by manual control of the steam header pressure controller.

\_\_\_\_\_/\_\_\_\_ 3.21.2 If offsite power is not available or the main condenser is not available or faulted S/G cannot be isolated, dump steam from the non-faulted S/Gs through the S/Gs PORVS.

\_\_\_\_\_/\_\_\_\_ 3.22 After the NC System temperature has been reduced to 507°F, begin a depressurization of the NC System to <1100 psig while maintaining >50°F subcooling by proceeding to Step 3.24.

\_\_\_\_\_/\_\_\_\_ 3.22.1 Start all CRDM fans to aid in cooling Reactor Head.

\_\_\_\_\_/\_\_\_\_ 3.23 Re-establish the use of the pressurizer heaters to prevent thermal shock during refilling of the pressurizer.

\_\_\_\_\_/\_\_\_\_ 3.24 When P-11 pressure is illuminated, ≈1900 psig, block Low Steam Line Pressure Safety Injection and isolate all UHI Discharge Valves.

\_\_\_\_\_/\_\_\_\_ 3.25 During subsequent controlled NC System depressurization, the NC System pressure criterion for tripping the NC Pumps established in Step 3.13 DOES NOT APPLY.

\_\_\_\_\_/\_\_\_\_ 3.26 If NC Pumps are running, use pressurizer spray valves for depressurization.

Initial / N/A  
\_\_\_\_\_/\_\_\_\_\_

- 3.27 If NC Pumps are not running, pressurizer PORVs may be used for depressurization.

NOTE

Minimize the number of cycles of the PORV(s) during depressurization to prevent failure of the PORV(s).

- \_\_\_\_\_/\_\_\_\_\_ 3.28 If neither Step 3.25 or 3.27 are available for depressurization, pressurizer Auxiliary spray, via LNV-21A, may be utilized, but auxiliary spray valve cycling must be minimized to prevent thermal shock of pressurizer spray nozzle.

NOTE

Pressurizer temperature shall be limited to a maximum spray water temperature differential of 320°F.

- \_\_\_\_\_/\_\_\_\_\_ 3.29 Monitor containment indications to verify that a loss of reactor coolant other than the S/G tube rupture is not in progress. If containment sump level or a containment sample (if available at this time) are not in the normal pre-event range, further accident recovery must be directed according to EP/1/A/5000/02 (Loss of Reactor Coolant).

- \_\_\_\_\_/\_\_\_\_\_ 3.30 After the depressurization operating has been terminated, continue to monitor and maintain the NC System pressure at ~1100 psig and the pressurizer water level >20%.

- \_\_\_\_\_/\_\_\_\_\_ 3.31 If the pressurizer water level continues to rise or remains nearly constant concurrent with a NC System pressure decrease, suspect leakage from the pressurizer steam space.

- \_\_\_\_\_/\_\_\_\_\_ 3.32 Monitor the pressurizer relief tank (PRT) pressure, temperature and level to identify continuously increasing conditions.

- \_\_\_\_\_/\_\_\_\_\_ 3.32.1 Close the PORV isolation valves if a NC leak to the PRT is identified

- \_\_\_\_\_/\_\_\_\_\_ 3.32.2 Monitor PRT conditions to verify PRT integrity.

- \_\_\_\_\_/\_\_\_\_\_ 3.33 If pressurizer relief tank integrity is lost, abnormal containment conditions could exist and may not be true indications of a continued loss of reactor coolant. If these conditions persist after closing the pressurizer PORV isolation valves, further recovery must be directed according to EP/1/A/5000/02 (Loss of Reactor Coolant).

- \_\_\_\_\_/\_\_\_\_\_ 3.34 The conditions of Step 3.35 must be satisfied before proceeding to Step 3.36.



Initial / N/A

- 1NI-10B (BIT Disch. Isol.)

Initial / N/A  
\_\_\_\_\_/\_\_\_\_\_

3.42 Align the NV Pump to take a suction from the VCT:

Open: LNV-141A (VCT Outlet Isolation)  
LNV-142B (VCT Outlet Isolation)  
Close: LNV-221A (NV Pumps Suct. from FWST)  
LNV-222B (NV Pumps Suct. from FWST)

\_\_\_\_\_/\_\_\_\_\_ 3.43 Establish normal charging as follows:

Close LNV-241 (Regen. HX Tube Side Inlet Cntrl.)  
Open: LNV-244A (Charging Line Cont. Isol. OTSD)  
LNV-245B (Charging Line Cont. Isol. OTSD)

\_\_\_\_\_/\_\_\_\_\_ 3.44 Slowly throttle open LNV-241 (Regen. HX Tube Side Inlet Cntrl.; as it is opened adjust LNV-238 (Charging Line Flow Control) as necessary to maintain seal injection flow.

\_\_\_\_\_/\_\_\_\_\_ 3.45 Re-establish KC flow to the Auxiliary Building Non-Essential Header as follows:

Open: LKC-1A (Trn. 1A to AB Non Ess Ret Isol.)  
LKC-2B (Trn 1B to AB Non Ess Ret Isol.)  
NOTE: Verify both ND Pumps are secured prior to closing  
LKC-56A and LKC-81B.

Close: LKC-56A (KC to A ND HX)  
LKC-81B (KC to B ND HX)

As flow decreases, open:

LKC-50A (Trn 1A to AB Non Ess Sys Isol.)  
LKC-53B (Trn 1B to AB Non Ess Sys Isol.)

\_\_\_\_\_/\_\_\_\_\_ 3.46 Establish Seal Water Return by opening:

LNV-94A (NC Pumps Seal Ret C/I Inside)  
LNV-95B (NC Pumps Seal Ret C/I OTSD)

\_\_\_\_\_/\_\_\_\_\_ 3.47 Establish letdown as follows:

\_\_\_\_\_/\_\_\_\_\_ 3.47.1 Open:

LNV-1A (NC L/D Isol. to Regen HX)  
LNV-2A (NC L/D Isol. to Regen HX)  
LNV-7B (Letdown Cont. Isol. Outside)

\_\_\_\_\_/\_\_\_\_\_ 3.47.2 Close: LNV-459A if not already closed.

\_\_\_\_\_/\_\_\_\_\_ 3.47.3 Slowly throttle open LNV-459A (A L/D Orif. OTLT Cont. Isol.) to 13% open for 5 minutes to prevent thermal shock to letdown line.

\_\_\_\_\_/\_\_\_\_\_ 3.47.4 After the letdown line is warmed, open LNV-458A (B L/D Orif. OTLT Cont. Isol.) and/or LNV-457A (C L/D Orif. OTLT Cont. Isol.), then close LNV-459A.

- \_\_\_\_\_/\_\_\_\_ 3.48 Verify LNV-124 (Letdown Press. Control) is modulating to maintain letdown pressure at ~350 psig.
- \_\_\_\_\_/\_\_\_\_ 3.49 Secure all NC Pumps except B or A in order to begin cooldown. If no NC Pumps are running, start B or A (if in non-faulted loop) per OP/1/A/6150/02 (NC Pump Operation).
- \_\_\_\_\_/\_\_\_\_ 3.50 Perform a shutdown margin calculation to verify NC Boron Concentration is adequate to maintain 1.6%  $\Delta k/k$  at 200°F prior to proceeding to Step 3.51 or 3.52.
- \_\_\_\_\_/\_\_\_\_ 3.51 If offsite power is available, begin a controlled cooldown of the NC System at a rate of about 50°F/hr by use of the steam dump to the main condensers from the non-faulted S/Gs. Control the water levels in the S/Gs to maintain S/G water level in the narrow range >0%.
- \_\_\_\_\_/\_\_\_\_ 3.52 If offsite power is not available, dump steam from the non-faulted S/G through the S/Gs PORVs to provide a controlled cooldown of the NC System at a rate of about 50°F/hr.
- \_\_\_\_\_/\_\_\_\_ 3.53 Simultaneous with the cooldown using the non-faulted S/Gs, slowly decrease the faulted S/G pressure by opening the bypass valve to the condenser (if available), or using the steam generator power operated relief valve.
- \_\_\_\_\_/\_\_\_\_ 3.54 As pressure is reduced in the faulted S/G, control the NC Pressure at a value approximately equal to the steam pressure in the faulted S/G to minimize the leakage flow. NC Pressure control should be accomplished by use of the pressurizer heaters and action of one of the following:
- \_\_\_\_\_/\_\_\_\_ 3.54.1 Normal pressurizer spray (if an NCP is in service), or
- \_\_\_\_\_/\_\_\_\_ 3.54.2 Use of pressurizer auxiliary spray NV-21A (NV Spray to Pzr. Isol.) (if spray is heated by letdown through the regenerative heat exchanger), or
- \_\_\_\_\_/\_\_\_\_ 3.54.3 Brief intermittent opening of one pressurizer PORV.
- \_\_\_\_\_/\_\_\_\_ 3.55 Maintain NC System temperature and pressure within the limits of the cooldown curve 1.6 in the Data Book.

Initial / N/A

- \_\_\_\_\_/\_\_\_\_\_ 3.56 If an uncontrolled NC System depressurization or an uncontrolled drop in pressurizer water level occurs during the cooldown process, manually initiate safety injection and refer to EP/1/A/5000/01 (Immediate Action and Diagnostics).
- \_\_\_\_\_/\_\_\_\_\_ 3.57 If NC Pressure control is accomplished by use of the pressurizer PORV, continuously monitor the PRT pressure, temperature and water level and take appropriate actions to verify and maintain PRT integrity. Verify pressurizer PORV closure using the PORV stem-mounted position indicators and PRT conditions. If a NC leak to the PRT is identified, close the PORV isolation valves.
- \_\_\_\_\_/\_\_\_\_\_ 3.58 When the NC System pressure is ~500 psig, close the Cold Leg accumulator isolation valves.
- \_\_\_\_\_/\_\_\_\_\_ 3.59 Start three upper and lower containment ventilation units.
- \_\_\_\_\_/\_\_\_\_\_ 3.60 Reset the control permissive for recirculation mode LNI-184B and LNI-185A (RB Sump to ND and NS).
- \_\_\_\_\_/\_\_\_\_\_ 3.61 Notify Health Physics to determine activity released from the air ejectors and/or steam relief actuation.
- \_\_\_\_\_/\_\_\_\_\_ 3.62 Notify Chemistry to determine the extent of contamination to the secondary system. Refer to Technical Specifications (3.7.1.4).
- \_\_\_\_\_/\_\_\_\_\_ 3.63 Notify Chemistry to periodically sample NC System boron concentration to ensure that dilution does not occur due to S/G draining into NC System.
- \_\_\_\_\_/\_\_\_\_\_ 3.64 Continue to cooldown and depressurize the NC System and faulted S/G until the NC hot leg temperatures are below 350°F in the non-faulted loops and the NC wide range pressure is less than 385 psig (do not collapse the pressurizer steam bubble).
- \_\_\_\_\_/\_\_\_\_\_ 3.65 Throughout this cooldown procedure, maintain a steam bubble in the pressurizer. Solid water pressure control may not be effective.
- \_\_\_\_\_/\_\_\_\_\_ 3.66 Reset the Containment Ventilation Isolation signals. Open LMISV 5580, 5581, 5582 and 5583 (EMF-38, 39, 40 Cont. Isol.). Start air pump to re-establish containment radiation monitor sampling and verify Lo Flo Alarm clears.
- \_\_\_\_\_/\_\_\_\_\_ 3.67 Open NS 5551A and NS 5550B (NR Cont. Pressure Isolations) to restore NR Cont. pressure indication.
- \_\_\_\_\_/\_\_\_\_\_ 3.68 Reset to Auto LVQ-6A and LVQ-5B (Cont. Air Add. Outside/Inside Isol.).

Initial/ N/A

- \_\_\_\_\_/\_\_\_\_ 3.69 Reset the RN Train "A" and "B" Modulating valve resets.
- \_\_\_\_\_/\_\_\_\_ 3.70 Reset and close NI and NV EHT breakers at local 600V MCC.
- \_\_\_\_\_/\_\_\_\_ 3.71 Return VC/YC to normal operation per OP/0/A/6450/11 when desired.
- \_\_\_\_\_/\_\_\_\_ 3.72 Reset VA Filtered Exhaust Reset pushbuttons (A and B) at local panels and return VA to normal operation per OP/0/A/6450/03 when desired.
- \_\_\_\_\_/\_\_\_\_ 3.73 Realign power supplies for containment ventilation systems and return to normal operation per OP/1/A/6450/01.
- \_\_\_\_\_/\_\_\_\_ 3.74 Place the ND System in operation using OP/1/A/6200/04 (Residual Heat Removal System).
- \_\_\_\_\_/\_\_\_\_ 3.75 Continue the plant cooldown in a normal mode except that after the NCP operation has been terminated, continue to simultaneously control the faulted S/G steam pressure and NC pressure to minimize the leakage flow.
- \_\_\_\_\_/\_\_\_\_ 3.76 When the NC System hot leg temperatures are reduced below 200°F, the pressure in the pressurizer may be reduced by using auxiliary spray until NC System pressure and the faulted S/G pressure equilibrate.

#### 4.0 Enclosures

- 4.1 BOP ESF Components Checklist.
- 4.2 Post Accident Valve Checklist
- 4.3 Safety Injection Reinitiation Criteria Checksheet.



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EF/1/4/5000/04  
STEAM GENERATOR TUBE RUPTURE  
SOP EST COMPONENTS  
ENCLOSURE 4.1  
ALIGNMENT CHECKLIST

VALVE NO.	VALVE NAME	POSITION	INITIAL
	LMC-2		
LSM-7AB	A S/G SM ISOL.	*CLOSED	
LSM-5AB	B S/G SM ISOL.	*CLOSED	
LSM-3AB	C S/G SM ISOL.	*CLOSED	
LSM-1AB	D S/G SM ISOL.	*CLOSED	
LSM-12AB	A SM ISOL. BYPASS	*CLOSED	
LSM-11AB	B SM ISOL. BYPASS	*CLOSED	
LSM-10AB	C SM ISOL. BYPASS	*CLOSED	
LSM-9AB	D SM ISOL. BYPASS	*CLOSED	
1BB-5A	A S/G BLOWDN. CONT. ISOL.	CLOSED	
1BB-6A	B S/G BLOWDN. CONT. ISOL.	CLOSED	
1BB-7A	C S/G BLOWDN. CONT. ISOL.	CLOSED	
1BB-8A	D S/G BLOWDN. CONT. ISOL.	CLOSED	
1BB-140A	A S/G BLOWDN. CONT. ISOL.	CLOSED	
1BB-141A	B S/G BLOWDN. CONT. ISOL.	CLOSED	
1BB-142A	C S/G BLOWDN. CONT. ISOL.	CLOSED	
1BB-143A	D S/G BLOWDN. CONT. ISOL.	CLOSED	
1CF-104AB	A S/G CF CNTRL. VLV. BYP.	CLOSED	
1CF-105AB	B S/G CF CNTRL. VLV. BYP.	CLOSED	
1CF-106AB	C S/G CF CNTRL. VLV. BYP.	CLOSED	
1CF-107AB	D S/G CF CNTRL. VLV. BYP.	CLOSED	
1CF-35AB	A S/G CF CONT. ISOL.	CLOSED	
1CF-30AB	B S/G CF CONT. ISOL.	CLOSED	
1CF-28AB	C S/G CF CONT. ISOL.	CLOSED	
1CF-25AB	D S/G CF CONT. ISOL.	CLOSED	

\*PHASE B ISOLATION

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STEAM GENERATOR TUBE RUPTURE  
BOP ISV COMPONENTS  
ENCLOSURE 4.1  
ALIGNMENT CHECKLIST

VALVE NO.	VALVE NAME	POSITION	INITIAL
ICF-32AB	A S/G CF CNTRL. VLV.	CLOSED	
ICF-23AB	B S/G CF CNTRL. VLV.	CLOSED	
ICF-20AB	C S/G CF CNTRL. VLV.	CLOSED	
ICF-17AB	D S/G CF CNTRL. VLV.	CLOSED	
ICF-151A	CF TEMPER TO A S/G CA NOZZLE	CLOSED	
ICF-153A	CF TEMPER TO B S/G CA NOZZLE	CLOSED	
ICF-155B	CF TEMPER TO C S/G CA NOZZLE	CLOSED	
ICF-157B	CF TEMPER TO D S/G CA NOZZLE	CLOSED	
ICF-126B	A S/G CF TO CA NOZZLE ISOL.	CLOSED	
ICF-127B	B S/G CF TO CA NOZZLE ISOL.	CLOSED	
ICF-128B	C S/G CF TO CA NOZZLE ISOL.	CLOSED	
ICF-129B	D S/G CF TO CA NOZZLE ISOL.	CLOSED	
1BB-1B	A S/G BLOWDN. CONT. ISOL.	CLOSED	
1BB-2B	B S/G BLOWDN. CONT. ISOL.	CLOSED	
1BB-3B	C S/G BLOWDN. CONT. ISOL.	CLOSED	
1BB-4B	D S/G BLOWDN. CONT. ISOL.	CLOSED	
ICF-134A	A S/G CF CONT. ISOL. BYPASS	CLOSED	
ICF-135A	B S/G CF CONT. ISOL. BYPASS	CLOSED	
ICF-136A	C S/G CF CONT. ISOL. BYPASS	CLOSED	
ICF-137A	D S/G CF CONT. ISOL. BYPASS	CLOSED	
	MC-10		
1NV-94A	NC PUMP SEAL RET C/I INSIDE	CLOSED	
1NC-196A	NC PUMP MTR. OIL FILL ISOL.	CLOSED	
1NV-95B	NC PUMP SEAL RET. C/I OTSD	CLOSED	
1NC-195B	NC PUMP MTR. OIL FILL ISOL.	CLOSED	



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EP/1/A/5000/04  
STEAM GENERATOR TUBE RUPTURE  
SOP ESY COMPONENTS  
ENCLOSURE 4.1  
ALIGNMENT CHECKLIST

VALVE NO.	VALVE NAME	POSITION	INITIAL
INV-457A	C L/D ORIF. OTLT CONT. ISOL.	CLOSED	
INV-458A	B L/D ORIF. OTLT CONT. ISOL.	CLOSED	
INV-459A	A L/D ORIF. OTLT CONT. ISOL.	CLOSED	
INV-244A	CHARGING LINE CONT. ISOL. OTSD	CLOSED	
LKC-315B	EXCESS L/D HX RET HDR C/I OTSD	CLOSED	
INV-245B	CHARGING LINE CONT. ISOL. OTSD	CLOSED	
INV-7B	LETDOWN CONT. ISOL. OUTSIDE	CLOSED	
INB-260B	REACTOR M/U WATER CONT. ISOL. OTSD	CLOSED	
	MC-5		
INV-849AC	STDBYM/U PMP CONT. ISOL. OTSD	CLOSED	
INV-842AC	STANDBY M/U PMP INLET ISOL.	CLOSED	
	IMC-11 (ND PANEL)		
1FW-1A	REFUELING WATER LOOP ISOL.	CLOSED	
1FW-33A	FWST TO RECIRC PUMPS	CLOSED	
1FW-32B	REFUELING WATER LOOP ISOL.	CLOSED	
1FW-49B	FWST TO RECIRC. PUMPS	CLOSED	
LND-14	B ND HX OUTLET	OPEN	
LND-29	A ND HX OUTLET	OPEN	
LKC-56A	KC TO A ND HX	OPEN	
LKC-81B	KC TO B ND HX	OPEN	

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STEAM GENERATOR TUBE RUPTURE  
BOP TEST COMPONENTS  
ENCLOSURE 4.1  
ALIGNMENT CHECKLIST

VALVE NO.	VALVE NAME	POSITION	INITIAL
NI PANEL			
LNI-358A	TRAIN 1A NI MAKEUP TO UHI	CLOSED	
LNI-258A	UHI CHECK VALVES TEST ISOL.	CLOSED	
LNI-267A	UHI CHK. TEST HDR C/I INSIDE	CLOSED	
LNI-95A	NI CHK TEST HDR C/I INSIDE	CLOSED	
LNI-266A	UHI CHK TEST HDR C/I INSIDE	CLOSED	
LNI-47A	RX BLDG N <sub>2</sub> SUPPLY ISOL.	CLOSED	
LNI-120B	CL ACC. FILL FROM NI PUMPS	CLOSED	
LNI-122B	NI TO HL CHK NI-124, 128 T/I	CLOSED	
LNI-255B	UHI CHECK VALVES TEST ISOL.	CLOSED	
LNI-264B	UHI CHK TEST HDR C/I OUTSIDE	CLOSED	
LNI-96B	NI CHK TEST HDR C/I OUTSIDE	CLOSED	
LMC-11 (KC PANEL)			
LKC-430A	RX BLDG. DRAIN HDR OUTSIDE ISOL.	CLOSED	
LKC-3A	RX BLDG NON-ESS RETURN ISOL.	*CLOSED	
LKC-230A	TRN. 1A TO RB NON-ESS SUP ISOL.	*CLOSED	
LKC-425A	NC PUMPS RET. HDR. OUTSIDE ISOL.	*CLOSED	
LKC-305B	EXCESS LETDOWN RX SUP OTSD ISOL.	CLOSED	
LKC-50A	TRN. 1A TO AB NON-ESS SUP ISOL.	CLOSED	
LKC-1A	TRN. 1A TO AB NON-ESS RET. ISOL.	CLOSED	
LKC-429B	RX BLDG DRAIN HDR INSIDE ISOL.	CLOSED	
LKC-18B	RX BLDG. NON-ESS RETURN ISOL.	*CLOSED	
LKC-228B	TRN. 1B TO RB NON-ESS SUP ISOL.	*CLOSED	
LKC-424B	NC PUMP RET. HDR. INSIDE ISOL.	*CLOSED	

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EP/1/A/5000/04  
 STEAM GENERATOR TUBE RUPTURE  
 BOP EST COMPONENTS  
 ENCLOSURE 4.1  
 ALIGNMENT CHECKLIST

VALVE NO.	VALVE NAME	POSITION	INITIAL
1KC-338B	MC PUMP SUP HDR OUTSIDE ISOL.	*CLOSED	
1KC-53B	TRN. 1B TO AB NON-ESS SUP. ISOL.	CLOSED	
1KC-2B	TRN. 1B TO AB NON-ESS RET. ISOL.	CLOSED	
	IMC-11 (RM PANEL)		
1RN-14A	TRAIN 1A SUCT. X-CONNECT (CORD A-3)	CLOSED	
1RN-150A	TRAIN 1A DISCH. X-CONNECT (CORD A-4)	CLOSED	
1RN-42A	AB NON-ESS SUPPLY ISOL. (CORD. A-5)	CLOSED	
1RN-7A	TRAIN 1A SWSWP SUPPLY (CORD B-1)	CLOSED	
1RN-149A	TRAIN 1A DISCH. TO SWSWP (CORD B-2)	CLOSED	
1RN-40A	TRAIN 1A TO NON-ESS HDR. ISOL. (CORD B-4)	*CLOSED	
1RN-253A	RN NON-ESS SUP INSIDE ISOL. (CORD B-5)	*CLOSED	
1RN-12A	TRAIN 1A LLI SUPPLY (CORD B-7)	OPEN	
1RN-13A	TRAIN 1A LLI SUPPLY (CORD C-1)	OPEN	
1RN-147A	TRAIN 1A DISCH. TO RC (CORD C-2)	OPEN	
1RN-16A	A RN PMP SUCTION ISOL. (CORD C-3)	OPEN	
1RN-296A	TRAIN 1A ESS HDR. RETURN ISOL. (CORD C-4)	OPEN	
1RN-64A	AB NON-ESS RETURN ISOL. (CORD C-5)	CLOSED	
1RN-103A	A NV PUMP CLR. SUPPLY ISOL. (CORD. C-7)	OPEN	
1RN-3A	TRAIN 1A RC SUPPLY (CORD D-1)	CLOSED	
1RN-283A	TRAIN 1B DISCH. TO RC (CORD D-2)	CLOSED	
1RN-276A	RB NON-ESS RET. INSIDE ISOL. (CORD D-5)	*CLOSED	
1RN-114A	A NI PUMP CLR SUPPLY ISOL. (CORD D-6)	OPEN	
1RN-140A	A XT PUMP ESS AHU SUPPLY ISOL. (CORD D-7)	OPEN	
1RN-4A	TRAIN 1B RC SUPPLY (CORD E-3)	CLOSED	

\*PHASE B ISOLATION

DUKE POWER COMPANY  
 WACHUCA NUCLEAR STATION  
 UNIT # 1

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EP/1/A/5000/04  
 STEAM GENERATOR TUBE RUPTURE  
 BOP ESS COMPONENTS  
 ENCLOSURE 4.1  
 ALIGNMENT CHECKLIST

VALVE NO.	VALVE NAME	POSITION	INITIAL
1RN-301A	RV SUPPLY FROM LLI (CORD E-4)	*CLOSED	
1RN-126A	A NS PUMP ESS AHU SUPPLY ISOL. (CORD E-8)	OPEN	
1RN-130A	A ND PUMP ESS AHU SUPPLY ISOL. (CORD E-9)	OPEN	
1RN-43A	TRAIN 1B TO NON-ESS HDR. ISOL. (CORD F-2)	CLOSED	
1RN-148A	TRAIN 1A DISCH. TO RC (CORD F-3)	OPEN	
1RN-10A	TRAIN 1B LLI SUPPLY (CORD F-4)	CLOSED	
1RN-299A	AB VENT SYS. RETURN ISOL. (CORD F-5)	CLOSED	
1RN-86A	1A KC HX SUPPLY ISOL. (CORD F-8)	OPEN	
1RN-70A	A D/G HX SUPPLY ISOL. (CORD F-9)	OPEN	
1RN-2B	TRAIN 1A RC SUPPLY (CORD I-2)	CLOSED	
1RN-15B	TRAIN 1B SUCT. X-CONNECT (CORD I-3)	CLOSED	
1RN-151B	TRAIN 1B DISCH. X-CONNECT (CORD I-4)	CLOSED	
1RN-9B	TRAIN 1B SNSWP SUPPLY (CORD J-1)	OPEN	
1RN-152B	TRAIN 1B DISCH. TO SNSWP (CORD J-2)	OPEN	
1RN-41B	TRAIN 1B TO NON-ESS HDR. ISOL. (CORD J-4)	CLOSED	
1RN-63B	AB NON-ESS RETURN ISOL. (CORD J-5)	CLOSED	
1RN-11B	TRAIN 1B LLI SUPPLY (CORD K-1)	CLOSED	
1RN-18B	BRN PMP SUCTION ISOL. (CORD K-3)	OPEN	
1RN-297B	TRAIN 1B ESS HDR. RETURN ISOL. (CORD K-4)	OPEN	
1RN-277B	BN NON-ESS RETURN OUTSIDE ISOL. (CORD K-5)	*CLOSED	
1RN-204B	B NV PUMP CLR SUPPLY ISOL. (CORD K-7)	OPEN	
1RN-5B	TRAIN 1B RC SUPPLY (CORD L-1)	CLOSED	
1RN-284B	TRAIN 1B DISCH. TO RC (CORD L-2)	CLOSED	
1RN-252B	AB NON-ESS SUP. OUTSIDE ISOL. (CORD L-5)	CLOSED	
1RN-215B	B NI PUMP COOLER SUP ISOL. (CORD L-6)	OPEN	

\*PHASE B ISOLATION

DUKE POWER COMPANY  
McGOWAN NUCLEAR STATION  
UNIT # 1

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EF/L/A/3000/04  
STEAM GENERATOR TUBE RUPTURE  
SOP ESF COMPONENTS  
ENCLOSURE 4.1  
ALIGNMENT CHECKLIST

VALVE NO.	VALVE NAME	POSITION	INITIAL
LRN-240B	B KF PUMP ESS AHU SUP ISOL. (CORD L-7)	OPEN	
LRN-227B	B NS PUMP ESS AHU SUP ISOL. (CORD L-9)	OPEN	
LRN-302B	RV SUPPLY FROM LLI (CORD M-4)	*CLOSED	
LRN-231B	B ND PUMP ESS AHU SUP ISOL. (CORD M-9)	OPEN	
LRN-279B	AB VENT SYS. RETURN ISOL. (CORD M-5)	CLOSED	
LRN-187B	1B KC HX SUPPLY ISOL. (CORD N-8)	OPEN	
LRN-171B	B D/G HX SUPPLY ISOL. (CORD N-9)	OPEN	
	LMC-11 (WASTE DISPOSAL)		
1WL-2A	NCDT PUMPS DISCH. INSID ISOL.	CLOSED	
1WL-39A	NCDT VENT INSIDE ISOL.	CLOSED	
1WL-321A	CONT. VENT UNIT DRN INSD ISOL.	CLOSED	
1KC-320A	NCDT HX SUP HDR OUTSIDE ISOL.	CLOSED	
1KC-333A	NCDT HX RET. HDR. OUTSIDE ISOL.	CLOSED	
1WL-64A	RE SUMP PUMP DISCH. INSD ISOL.	CLOSED	
1WL-322B	CONT. VENT UNIT DRN OTSD ISOL.	CLOSED	
1WL-1B	NCDT PUMPS DISCH OTSD ISOL.	CLOSED	
1WL-41B	NCDT VENT OUTSIDE ISOL.	CLOSED	
1YM-115B	YM TO RX BLDG. OUTSIDE ISOL.	CLOSED	
1KC-332B	NCDT HX RET HDR. INSIDE ISOL.	CLOSED	
1WL-65B	RE SUMP PUMP DISCH. OTSD ISOL.	CLOSED	
	LMC-11 (RV)		
LRV-32A	VL SUPPLY CONT. ISOL. OTSD	*CLOSED	
LRV-76A	VL DISCH. CONT. ISOL. INSD	*CLOSED	

\*PHASE B ISOLATION



Duke Power Company  
McGuire Nuclear Station  
Unit # 1

EP/L/A/5000/04  
STEAM GENERATOR TUBE RUPTURE  
BOP ESF COMPONENTS  
ENCLOSURE 4.1

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ALIGNMENT CHECKLIST

VALVE NO.	VALVE NAME	POSITION	INITIAL
LRV-79A	VL SUPPLY CONT. ISOL. OTSD	*CLOSED	
LRV-101A	VU DISCH. CONT. ISOL. INSD	*CLOSED	
LRV-33B	VL SUPPLY CONT. ISOL. INSD	*CLOSED	
LRV-77B	VL DISCH. CONT. ISOL. OTSD	*CLOSED	
LRV-80B	VU SUPPLY CONT. ISOL. INSD	*CLOSED	
LRV-102B	VU DISCH. CONT. ISOL. OTSD	*CLOSED	
IVQ-1A	CONT. AIR REL INSIDE ISOL.	CLOSED	
IVQ-6A	CONT. AIR ADD INSIDE ISOL.	CLOSED	
IVQ-2B	CONT. AIR REL OUTSIDE ISOL.	CLOSED	
IVQ-5B	CONT. AIR ADD OUTSIDE ISOL.	CLOSED	
LMC-11 (ICE CONDENSER)			
LN7-228A	RB GLYCOL SUPPLY C/I OTSD	CLOSED	
LN7-234A	RB GLYCOL RETURN C/I OTSD	CLOSED	
LN7-233B	RB GLYCOL RETURN C/I INSD	CLOSED	
LMC-8			
LMISV-5580A	EMF 38, 39, 40 SMP SUP. C/I OTSD	CLOSED	
LMISV-5582A	EMF 38, 39, 40 SMP SUP. C/I INSD	CLOSED	
LMISV-5581B	EMF 38, 39, 40 SMP RET. C/I OTSD	CLOSED	
LMISV-5583B	EMF 38, 39, 40 SMP RET. C/I INSD	CLOSED	
LN4-3A	PZR LEO SPACE SMPL C/I INSIDE	CLOSED	
LN4-6A	PZR STM. SPACE SMPL C/I INSIDE	CLOSED	
LN4-22A	LA NC LOOP SMPL C/I INSIDE	CLOSED	
LN4-25A	LD NC LOOP SMPL C/I INSIDE	CLOSED	

\*PHASE B ISOLATION

DUNE POINT  
McGUIRE STATION  
UNIT #

EP/L/A/3000/04  
STEAM GENERATOR TUBE RUPTURE  
BOP EST COMPONENTS  
ENCLOSURE 4.1

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ALIGNMENT CHECKLIST

VALVE NO.	VALVE NAME	POSITION	INITIAL
LNM-82	ACCUM SMPL C/I OUTSIDE	CLOSED	
LNM-18	G UPP SHL SMPL C/I INSIDE	CLOSED	
LNM-19	G BLOWDN SMPL C/I INSIDE	CLOSED	
LNM-20	G SMPL CONT. ISOL. OTSD	CLOSED	
LNM-20	G UPP SHL SMPL C/I INSIDE	CLOSED	
LNM-21	G BLOWDN SMPL C/I INSIDE	CLOSED	
LNM-22	G SAMPLE CONT. ISOL. OTSD	CLOSED	
LNM-7B	SAMPLE CONT. ISOL. OTSD	CLOSED	
LNM-26	SAMPLE CONT. ISOL. OTSD	CLOSED	
LNM-7Z	L ACCUM. SMPL C/I INSIDE	CLOSED	
LNM-75	L ACCUM. SMPL C/I INSIDE	CLOSED	
LNM-7E	L ACCUM. SMPL C/I INSIDE	CLOSED	
LNM-81	L ACCUM. SMPL C/I INSIDE	CLOSED	
LNM-15	G SMPL CONT. ISOL. OTSD	CLOSED	
LNM-15	G UPR SHL SMPL C/I INSIDE	CLOSED	
LNM-20	G BLOWN SMPL C/I INSIDE	CLOSED	
LNM-25	G SAMPLE CONT. ISOL INSIDE	CLOSED	
LNM-25	G UPR SHL SMPL C/I INSIDE	CLOSED	
LNM-22	G BLOWN SMPL C/I INSIDE	CLOSED	
LMC-8			
1VI-12	ESS HDR. CONT. ISOL. OTSD	* CLOSED	
1VI-16	ESS HDR. CONT. ISOL. OTSD	* CLOSED	
1VI-36	TO ANNULUS VENT CONT. ISOL.	CLOSED	
1VS-1	IZATION AIR CONT. ISOL. OTSD	CLOSED	

\*PHASE B ISOLATION



DUKE POWER COMPANY  
McGUIRE NUCLEAR STATION  
UNIT # 1

EF/1/A/5000/04  
STEAM GENERATOR TUBE RUPTURE  
SOP ESF COMPONENTS  
ENCLOSURE 4.1

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ALIGNMENT CHECKLIST

VALVE NO.	VALVE NAME	POSITION	INITIAL
1VB-49B	BREATHING AIR CONT. ISOL.	CLOSED	
1VI-150B	LWR CONT. NON-ESS HDR. C/I OTSD	+CLOSED	
1VI-148B	UPP CONT. NON-ESS HDR. C/I OTSD	CLOSED	
	LMC-14		
1RF-821A	UNIT 1 RF CONT. ISOL. OTSD	CLOSED	
	HVAC PANEL		
1VE-6B	CONT. H <sub>2</sub> PURGE TO ANNULUS ISOL.	* CLOSED	
1VP-1B	VP CONT. OUTSIDE ISOL. VLV.	*CLOSED	
1VP-3B	VP CONT. OUTSIDE ISOL. VLV.	*CLOSED	
1VP-6B	VP CONT. OUTSIDE ISOL. VLV.	*CLOSED	
1VP-8B	VP CONT. OUTSIDE ISOL. VLV.	* CLOSED	
1VP-11B	VP CONT. OUTSIDE ISOL. VLV.	* CLOSED	
1VP-13B	VP CONT. OUTSIDE ISOL. VLV.	* CLOSED	
1VP-16B	VP CONT. OUTSIDE ISOL. VLV.	* CLOSED	
1VP-18B	INCORE INST. PURGE ISOL. INSD	CLOSED	
1VP-20B	INCORE INST. PURGE ISOL. INSD	CLOSED	
1VE3A	CONT. H <sub>2</sub> PURGE TO ANNULUS CONT. ISOL.	+CLOSED	
1VE8A	CONT. H <sub>2</sub> PURGE BLOWER INLET ISOL.	+CLOSED	
1VE10A	CONT. H <sub>2</sub> PURGE BLOWER OUTLET CONT ISOL	+CLOSED	
1VP2A	VP CONT. INSIDE ISOL. VLV.	* CLOSED	
1VP4A	VP CONT. INSIDE ISOL. VLV.	* CLOSED	
1VP7A	VP CONT. INSIDE ISOL. VLV.	* CLOSED	

\* INDICATION ONLY  
+ PHASE B ISOLATION

DUKE POWER COMPANY  
McGUIRE NUCLEAR STATION  
UNIT # 1

EP/1/A/5000/04  
STEAM GENERATOR TUBE RUPTURE  
BOP LSF COMPONENTS  
ENCLOSURE 4.1

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## ALIGNMENT CHECKLIST

[illegible]

AGE                                           

[illegible]

Enclosure 4.3

## Reinitiation criteria for safety injection:

Pressurizer pressure - Uncontrolled depressurization

NC subcooling       $\leq 50^{\circ}\text{F}$

[illegible]

\*Independent verification of recorded data and comparison to reinitiation criteria must be by a SRO.

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

DATE:

4/14/82

(5) REVIEWED BY: AD Gilbert

DATE:

4-16-82

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

N/R: AD

(6) TEMPORARY APPROVAL (IF NECESSARY):

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

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

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

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

(7) APPROVED BY: Gulley

Date:

4-21-82

(8) MISCELLANEOUS:

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

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

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

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

DUKE POWER COMPANY  
NUCLEAR SAFETY EVALUATION CHECK LIST

- (1) STATION: McGuire Nuclear Station UNIT: 1 X 2 X 3       
OTHER:       
(2) CHECK LIST APPLICABLE TO: EP/O/A/5000/05 Notification of Unusual Event  
(3) SAFETY EVALUATION - PART A

The item to which this evaluation is applicable represents:

Yes      No ✓ A change to the station or procedures as described in the FSAR;  
or a test or experiment not described in the FSAR?

If the answer to the above is "Yes", attach a detailed description of the item being evaluated and an identification of the affected section(s) of the FSAR.

(4) SAFETY EVALUATION - PART B

Yes      No ✓ Will this item require a change to the station Technical Specifications?

If the answer to the above is "Yes," identify the specification(s) affected and/or attach the applicable pages(s) with the change(s) indicated.

(5) SAFETY EVALUATION.- PART C

As a result of the item to which this evaluation is applicable:

- Yes      No ✓ Will the probability of an accident previously evaluated in the FSAR be increased?  
Yes      No ✓ Will the consequences of an accident previously evaluated in the FSAR be increased?  
Yes      No ✓ May the possibility of an accident which is different than any already evaluated in the FSAR be created?  
Yes      No ✓ Will the probability of a malfunction of equipment important to safety previously evaluated in the FSAR be increased?  
Yes      No ✓ Will the consequences of a malfunction of equipment important to safety previously evaluated in the FSAR be increased?  
Yes      No ✓ May the possibility of malfunction of equipment important to safety different than any already evaluated in the FSAR be created?  
Yes      No ✓ Will the margin of safety as defined in the bases to any Technical Specification be reduced?

This Procedure does not affect the Safety Analysis of the Plant.  
If the answer to any of the preceding is "Yes", an unreviewed safety question is involved. Justify the conclusion that an unreviewed safety question is or is not involved. Attach additional pages as necessary.

- (6) PREPARED BY: M.S. Gown DATE: 4/14/82  
(7) REVIEWED BY: ATD Hilbert DATE: 4-16-82



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 assure that the appropriate emergency condition is declared by comparing the Emergency Action Level(s) and Initiating Condition(s) listed in Enclosure 4.1 to those of the actual plant condition.

/

3.2 The Shift Supervisor shall assure 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.

/

3.3 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 4.2 for the appropriate Initiating Condition/Emergency Procedure listed in Enclosure 4.1.

NOTE 1.

See Enclosure 4.3, Telephone Listing, for notification, telephone numbers/radio codes/pager codes.

NOTE 2.

See Enclosure 4.4, Notification of Emergency Conditions, for information to be provided to State/County Warning Points.

NOTE 3.

See Enclosure 4.5, Notification of Emergency Conditions for information to be provided to Steam Production Duty Engineer/Corporate Communications Department.

- /
- 3.5 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 4.3 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).
- 3.5.1 Whole body <1, thyroid <5, NO protective action is required. Monitor environmental radiation levels to verify.
- 3.5.2 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.
- 3.5.3 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 4.3, Telephone Listing for notification.

- /         3.6 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.
- /         3.7 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.
- /         3.8 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 List of Initiating Conditions, Emergency Action Levels, and Associated Emergency Procedure/Document.
- 4.2 Notification Chart
- 4.3 Telephone Listing
- 4.4 Notification of Emergency Conditions.
- 4.5 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/O/B/1009/09, HP/O/B/1009/10, AP/O/A/5500/28
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)</p> <p style="text-align: center;">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.	<p>Figure 2.11 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)</p>	AP/1/A/5500/05

Initiating Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.1.5 Exceeding either primary/secondary leak rate Tech Specs or primary leak rate Technical Specifications	>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
4.1.6 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 blackout 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, or 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 or 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 or fire detection alarm with confirming observation of a fire lasting more than 10 minutes.	Station Directive 2.11

Initiating Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
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
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.	(<.08gII, <.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	



Initiating Conditions	Emergency Action Level (EAL)	Emergency Procedure/Document
4.1.14 d. Near site or onsite toxic or flammable gas release. e. Turbine rotating component failure causing rapid plant shutdown (Loss of Condenser Heat Sink).	As observed  Turbine trip and observation of a turbine malfunction or failure.	AP/O/A/5500/31  AP/O/A/5500/23, AP/O/A/5500/32, AP/O/A/5500/02
4.1.15 Other plant conditions exist that in the judgement 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/O/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/5500/06

NOTIFICATION CHART  
NOTIFICATION OF UNUSUAL EVENT

EP/O/A/5000/05  
Enclosure 4.2  
Page 1 of 1

INITIATING CONDITIONS (from ENCLOSURE 4.1)

TO BE NOTIFIED	4.1.1	4.1.2	4.1.3	4.1.4	4.1.5	4.1.6	4.1.7	4.1.8	4.1.9	4.1.10	4.1.11	4.1.12	4.1.13	4.1.14	4.1.15	4.1.16	4.1.17	INITIAL
Shift Supervisor	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
GPS. Duty Engineer	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Station Manager	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Supt. of Operations	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Supt. of Tech. Services	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Project/Licen. Engineer	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Steam Production Duty Man	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Corporate Communications	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
N.C. State Warning Point	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Hecklenburg Warning Pt.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Catawba Co. Warning Pt.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Lincoln Co. Warning Pt.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Canton Co. Warning Pt.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Iredell Co. Warning Pt.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Cabarrus Co. Warning Pt.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
NRC Via EMS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
NRC (Station Rep.)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Construction Proj. Mgr.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Station Health Physicist	NO	X	X	NO	X	X*	NO	X	NO	X*	X	NO	X*	X*	X*	X	X	NO
Station Safety Supervisor	NO	NO	NO	NO	NO	NO	NO	NO	X	X	NO	NO	X	X	NO	X	NO	
Supt. of Maintenance	NO	NO	NO	NO	NO	X	X	NO	X	X	X	NO	X	X	X	NO	NO	
Supt. of Administration	NO	NO	NO	NO	NO	NO	NO	NO	NO	X	NO	X	NO	NO	NO	NO	NO	

\* - Whenever radiological hazards may be involved

X - To be notified

TELEPHONE LIST

- 4.3.1 Operations Duty Engineer (PA System)  
P&T Pager -
- 4.3.2 Station Manager  
Home - - System Speed - 12  
Home - - System Speed - 11
- 4.3.3 Superintendent of Operations  
Home - - System Speed - 13
- 4.3.4 Superintendent of Technical Services -  
Home - System Speed - 14
- 4.3.5 Projects & Licensing Engineer -  
Home - - System Speed - 32
- 4.3.6 Steam Production Duty Engineer - - System Speed - 51  
- System Speed - 56
- 4.3.7 Duke Power Corporate Communications Staff - System Speed - 52  
(24 hour Answering Service, ask for Mary Cartwright,  
Ira Kaplan or Mary Boyd)
- 4.3.8 NC State Warning Point, Raleigh - - System Speed - 41
- 4.3.9 Mecklenburg County Warning Point - Primary: Ring Down Phone  
Back-up: - System Speed - 42  
Back-up: Emergency Radio, Code: \_ \_
- 4.3.10 Lincoln County Warning Point - Primary: Ring Down Phone  
Back-up: - System Speed - 43  
Back-up: Emergency Radio, Code: \_
- 4.3.11 Catawba County Warning Point - Primary: Ring Down Phone  
Back-up: - System Speed - 44  
Back-up: Emergency Radio, Code: \_ \_
- 4.3.12 Iredell County Warning Point - Primary: Ring Down Phone  
Back-up: - System Speed - 45  
Back-up: Emergency Radio, Code: \_ \_
- 4.3.13 Gaston County Warning Point - Primary: Ring Down Phone  
Back-up: - System Speed - 46  
Back-up: Emergency Radio, Code: \_ \_
- 4.3.14 Cabarrus County Warning Point - Primary: Ring Down Phone  
Back-up: - System Speed - 47  
Back-up: Emergency Radio, Code: \_ \_

NOTE

Radio Code will activate  
all county radio units.

- 4.3.15 N.R.C. Operation Center, Emergency Notification System (ENS phone)
- 4.3.16 N.R.C. Senior Station Representative  
Office -  
- Home - System Speed - 57  
Wife work - System Speed - 58  
P&T Pager
- 4.3.17 Construction Project Manager: Construction  
Home - System Speed 17 or  
- System Speed 18
- 4.3.18 Station Health Physicist  
Home - System Speed - 31  
P&T Pager
- 4.3.19 Station Safety Supervisor -  
Home - System Speed - 38
- 4.3.20 Superintendent of Maintenance -  
Home - System Speed - 15
- 4.3.21 Superintendent of Administration -  
Home - System Speed - 16
- 4.3.22 Radiation Protection Section Department of Human Resources  
- System Speed - 48

MCGUIRE NUCLEAR STATION  
NOTIFICATION OF EMERGENCY CONDITIONS

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

NOTE 1: See Enclosure 4.3, Telephone Listing.

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)
(7)	_____	_____	_____
	(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.

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: MS. Glover DATE: 4/14/82

(5) REVIEWED BY: AD Filbert DATE: 4-16-82

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

(6) TEMPORARY APPROVAL (IF NECESSARY):

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

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

(7) APPROVED BY: Swartz Date: 4-21-82

(8) MISCELLANEOUS:

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

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

DUKE POWER COMPANY  
NUCLEAR SAFETY EVALUATION CHECK LIST

- (1) STATION: McGuire Nuclear Station UNIT: 1 X 2 X 3 \_\_\_\_\_  
OTHER: \_\_\_\_\_  
(2) CHECK LIST APPLICABLE TO: EP/O/A/5000/06 Alert

## (3) SAFETY EVALUATION - PART A

The item to which this evaluation is applicable represents:

Yes \_\_\_\_\_ No ☒ A change to the station or procedures as described in the FSAR;  
or a test or experiment not described in the FSAR?

If the answer to the above is "Yes", attach a detailed description of the item being evaluated and an identification of the affected section(s) of the FSAR.

## (4) SAFETY EVALUATION - PART B

Yes \_\_\_\_\_ No ☒ Will this item require a change to the station Technical Specifications?

If the answer to the above is "Yes," identify the specification(s) affected and/or attach the applicable pages(s) with the change(s) indicated.

## (5) SAFETY EVALUATION - PART C

As a result of the item to which this evaluation is applicable:

- Yes \_\_\_\_\_ No ☒ Will the probability of an accident previously evaluated in the FSAR be increased?  
Yes \_\_\_\_\_ No ☒ Will the consequences of an accident previously evaluated in the FSAR be increased?  
Yes \_\_\_\_\_ No ☒ May the possibility of an accident which is different than any already evaluated in the FSAR be created?  
Yes \_\_\_\_\_ No ☒ Will the probability of a malfunction of equipment important to safety previously evaluated in the FSAR be increased?  
Yes \_\_\_\_\_ No ☒ Will the consequences of a malfunction of equipment important to safety previously evaluated in the FSAR be increased?  
Yes \_\_\_\_\_ No ☒ May the possibility of malfunction of equipment important to safety different than any already evaluated in the FSAR be created?  
Yes \_\_\_\_\_ No ☒ Will the margin of safety as defined in the bases to any Technical Specification be reduced?

This Procedure does not affect the Safety Analysis of the Plant.  
If the answer to any of the preceding is "Yes", an unreviewed safety question is involved. Justify the conclusion that an unreviewed safety question is or is not involved. Attach additional pages as necessary.

- (6) PREPARED BY: M.S. Glown DATE: 4/14/82  
(7) REVIEWED BY: AD Hilbert DATE: 4-16-82



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 is declared by comparing the Emergency Action Level(s) and Initiating Conditions (s) listed in Enclosure 4.1 to those of the actual plant condition.

/

- 3.2 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.

/

- 3.3 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 4.2 for the appropriate Initiating Condition/Emergency Procedure listed in Enclosure 4.1.

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 4.5.

NOTE 2

See Enclosure 4.3, Telephone Listing, for notification, telephone numbers/radio codes/pager codes.

NOTE 3

See Enclosure 4.4, 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 on-site 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.

/ 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 the state Radiological Protection Section, Department of Human Resources (See Enclosure 4.3, 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 4.3 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 List of Initiating Conditions, Emergency Action Levels, and Associated Emergency Procedure/Document.
- 4.2 Notification Chart.
- 4.3 Telephone Listing.
- 4.4 Notification of Emergency Conditions.
- 4.5 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 $\mu$ Cl/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 <u>7KV</u> 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.	<p>Greater than 10gpm, rapidly decreasing reactor coolant Tavg, pressurizer pressure and level and,</p> <ol style="list-style-type: none"> <li>1. Steam line differential pressure safety injection signal and increased containment building pressure/ if break is in containment.</li> <li>2. High steam flow and Lo Lo Tavg or Low steam pressure safety injection signal for rupture downstream of MSIV's.</li> </ol>	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/0/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/0/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 EMF48.	AP/1/A/5500/04, AP/1/A/5500/08, OP/0/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, <u>and</u> 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 1mR at the site boundary under average meteorological conditions or whenever effluent monitors or radiological monitoring detect these levels).	For EMF35 - Low Range offscale High Range $1 \times 10^4$ cpm For EMF36 - Low Range $2 \times 10^6$ cpm High Range $5 \times 10^2$ 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/0/A/5500/30, AP/0/A/5500/29

- |    |   |   |
|----|---|---|
| a. | Earthquake greater than Operational Basis Earthquake Levels                     | >0.08gH, >.053gV, Annunciator Alarm, (AD-13).                   |
| b. | Flood, low water, hurricane surge, selche 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/0/A/5500/32, AP/0/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
<p>4.1.19 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 precautionary activation of the Technical Support Center and near site Crisis Management Center.</p>	<p>As determined by Shift Supervisor/ Emergency Coordinator.</p>	<p>As dictated by Plant Conditions.</p>
<p>4.1.20 Evacuation of control room anticipated or required with control of shutdown systems established from local station.</p>	<p>As determined by Shift Supervisor/ Emergency Coordinator.</p>	<p>AP/1/A/5500/17, OP/1/A/6100/04</p>

NOTIFICATION/ACTIVATION  
 ALERT

Notify/Activate the following personnel/or Emergency Centers for all Initiating Conditions listed in Enclosure 4.1. (See Enclosure 4.3 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	
Activate T.S.C. (Station Directive 3.8.2)	
Activate O.S.C. (Station Directive 3.8.2)	
Activate C.M.C. (Enclosure 4.3, Enclosure 4.5)	

TELEPHONE LISTING

- 4.3.1 Operations Duty Engineer (PA System)  
P&T Pager -
- 4.3.2 Station Manager  
Home - - System Speed - 12  
Home - - System Speed - 11
- 4.3.3 Superintendent of Operations -  
Home - - System Speed - 13
- 4.3.4 Superintendent of Technical Services -  
Home - - System Speed - 14
- 4.3.5 Projects and Licensing Engineer -  
Home - - System Speed - 32
- 4.3.6 Station Health Physicist -  
Home - - System Speed - 31  
P&T Pager
- 4.3.7 NC State Warning Point, Raleigh - - System Speed - 41
- 4.3.8 Mecklenburg County Warning Point - Primary: Ring Down Phone  
Back-up: - System Speed - 42  
Back-up: Emergency Radio, Code: -
- 4.3.9 Lincoln County Warning Point - Primary: Ring Down Phone  
Back-up: - System Speed - 43  
Back-up: Emergency Radio, Code: -
- 4.3.10 Catawba County Warning Point - Primary: Ring Down Phone  
Back-up: - System Speed - 44  
Back-up: Emergency Radio, Code: -
- 4.3.11 Iredell County Warning Point - Primary: Ring Down Phone  
Back-up: - System Speed - 45  
Back-up: Emergency Radio, Code: -
- 4.3.12 Gaston County Warning Point - Primary: Ring Down Phone  
Back-up: - System Speed - 46  
Back-up: Emergency Radio, Code: -
- 4.3.13 Cabarrus County Warning Point - Primary: Ring Down Phone  
Back-up: - System Speed - 47  
Back-up: Emergency Radio, Code: -

NOTE

Radio Code - will activate  
all county radio units.

TELEPHONE LIST

- 4.3.14 N.R.C. Operation Center, Emergency Notification System (ENS Phone)
- 4.3.15 N.R.C. Station Representative  
Office -  
Home - System Speed - 57  
Wife work - - System Speed - 58  
P&T Pager
- 4.3.16 Construction Project Manager Construction  
Home : - System Speed - 17 or  
System Speed - 18
- 4.3.17 CRISIS MANAGEMENT CENTER ACTIVATION
- Hal B. Tucker Office:  
or Home: - System Speed - 53
- William O. Parker Office:  
or Home: - System Speed - 54
- Robert M. Koehler Office:  
or Home: - System Speed - 55
- Steam Production Duty Man -  
- System Speed - 51  
- System Speed - 56
- 4.3.18 Radiation Protection Section, Department of Human Resources-  
- System Speed - 48

MCGUIRE NUCLEAR STATION  
NOTIFICATION OF EMERGENCY CONDITIONS

4.4.1

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

NOTE 1: See Enclosure 4.3, Telephone Listing.

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:

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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)
(7)	_____	_____
	(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)

DUKE POWER COMPANY  
PROCEDURE PREPARATION  
PROCESS RECORD

(1) ID No: EP/0/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. Glover

DATE: 4/14/82

(5) REVIEWED BY: GD Gilbert

DATE: 4-16-82

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

N/R: GDG

(6) TEMPORARY APPROVAL (IF NECESSARY):

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

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

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

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

(7) APPROVED BY: Gwlog

Date: 4-2-82

(8) MISCELLANEOUS:

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

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

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

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



DUKE POWER COMPANY  
NUCLEAR SAFETY EVALUATION CHECK LIST(1) STATION: McGuire Nuclear Station UNIT: 1 X 2 X 3 \_\_\_\_\_  
OTHER: \_\_\_\_\_(2) CHECK LIST APPLICABLE TO: EP/O/A/5000/07 Site Area Emergency

## (3) SAFETY EVALUATION - PART A

The item to which this evaluation is applicable represents:

Yes \_\_\_\_\_ No ☒ A change to the station or procedures as described in the FSAR;  
or a test or experiment not described in the FSAR?If the answer to the above is "Yes", attach a detailed description of the item  
being evaluated and an identification of the affected section(s) of the FSAR.

## (4) SAFETY EVALUATION - PART B

Yes \_\_\_\_\_ No ☒ Will this item require a change to the station Technical  
Specifications?If the answer to the above is "Yes," identify the specification(s) affected  
and/or attach the applicable pages(s) with the change(s) indicated.

## (5) SAFETY EVALUATION - PART C

As a result of the item to which this evaluation is applicable:

Yes \_\_\_\_\_ No ☒ Will the probability of an accident previously evaluated  
in the FSAR be increased?

Yes \_\_\_\_\_ No ☒ Will the consequences of an accident previously evaluated  
in the FSAR be increased?

Yes \_\_\_\_\_ No ☒ May the possibility of an accident which is different  
than any already evaluated in the FSAR be created?

Yes \_\_\_\_\_ No ☒ Will the probability of a malfunction of equipment  
important to safety previously evaluated in the FSAR  
be increased?

Yes \_\_\_\_\_ No ☒ Will the consequences of a malfunction of equipment  
important to safety previously evaluated in the FSAR  
be increased?

Yes \_\_\_\_\_ No ☒ May the possibility of malfunction of equipment  
important to safety different than any already evaluated  
in the FSAR be created?

Yes \_\_\_\_\_ No ☒ Will the margin of safety as defined in the bases to any  
Technical Specification be reduced?

This Procedure does not affect the Safety Analysis of the Plant.  
If the answer to any of the preceding is "Yes", an unreviewed safety  
question is involved. Justify the conclusion that an unreviewed safety  
question is or is not involved. Attach additional pages as necessary.

(6) PREPARED BY: M.S. Blum DATE: 4/14/82(7) REVIEWED BY: AD Hulbert DATE: 4-16-82(8) Page 1 of 1

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 is declared by comparing the Emergency Action Level(s) and Initiating Condition(s) listed in Enclosure 4.1 to those of the actual plant condition.

/

- 3.2 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.

/

- 3.3 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 4.2 for the appropriate Initiating Condition/Emergency Procedure listed in Enclosure 4.1.

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 4.5.

NOTE 2

See Enclosure 4.3, Telephone Listing, for notification, telephone numbers/radio codes/pager codes.

NOTE 3

See Enclosure 4.4, 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 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.
- /
- 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 4.3, 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 4.3, 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 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.

- / 3.9 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 List of Initiating Conditions, Emergency Action Levels, and Associated Emergency Procedure/Document.  
4.2 Notification Chart.  
4.3 Telephone Listing.  
4.4 Notification of Emergency Conditions.  
4.5 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 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
4.1.2 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 and $\Delta T$ 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, 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



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 (INSP5040, 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/O/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 EMF16, 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 or greater than 500 mr/hr W.B. for two minutes (or five times these levels to the thyroid) at the site boundary for adverse meteorology (See Note 2).	For EMF35 Low Range, offscale, High Range $8 \times 10^3$ cpm. (See Note 1)	AP/O/A/5500/28, HP/O/B/1009/09
	For EMF36 Low Range $3 \times 10^5$ cpm High Range $7 \times 10$ cpm (See Note 1)	
	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).

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.
4.1.14	Severe natural phenomena being experienced or projected with plant not in cold shutdown.	Station Security Plan
4.1.14.1	Earthquake greater than SSE (Safe Shutdown Earthquake) levels.	AP/O/A/5500/29, AP/O/A/5500/30
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.	( $>.15gH$ , $>.1gV$ ) as determined by monitoring seismic instrumentation and recording devices. (SMP-1)
4.1.14.3	Sustained winds or tornadoes in excess of design levels.	As determined by Shift Supervisor/ Emergency Coordinator.
4.1.15	Other hazards being experienced or projected with plant not in cold shutdown.	( $>95\text{mph}$ ) as observed or documented by the National Weather Service Information.
		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 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.

## Initiating Conditions

## Emergency Action Level (EAL)

## Emergency Procedure/Document

4.1.17 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  
 SITE AREA EMERGENCY

Notify/Activate the following personnel/or Emergency Centers for all Initiating Conditions listed in Enclosure 4.1. (See Enclosure 4.3 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	
Activate T.S.C. (Station Directive 3.8.2)	
Activate O.S.C. (Station Directive 3.8.2)	
Activate C.M.C. (Enclosure 4.3, Enclosure 4.5)	

TELEPHONE LISTING

4.3.1	Operations Duty Engineer (PA System) P&T Pager -	
4.3.2	Station Manager	
	Home -	- System Speed - 12
	Home -	- System Speed - 11
4.3.3	Superintendent of Operations -	
	Home -	- System Speed - 13
4.3.4	Superintendent of Technical Services -	
	Home -	- System Speed - 14
4.3.5	Projects and Licensing Engineer -	
	Home -	- System Speed - 32
4.3.6	Station Health Physicist -	
	Home -	- System Speed - 31
	P&T Pager	
4.3.7	NC State Warning Point, Raleigh -	- System Speed - 41
4.3.8	Mecklenburg County Warning Point -	Primary: Ring Down Phone
		Back-up: - System Speed - 42
		Back-up: Emergency Radio, Code: -
4.3.9	Lincoln County Warning Point -	Primary: Ring Down Phone
		Back-up: - System Speed - 43
		Back-up: Emergency Radio, Code: -
4.3.10	Catawba County Warning Point -	Primary: Ring Down Phone
		Back-up: - System Speed - 44
		Back-up: Emergency Radio, Code: -
4.3.11	Iredell County Warning Point -	Primary: Ring Down Phone
		Back-up: - System Speed - 45
		Back-up: Emergency Radio, Code: -
4.3.12	Gaston County Warning Point -	Primary: Ring Down Phone
		Back-up: - System Speed - 46
		Back-up: Emergency Radio, Code: -
4.3.13	Cabarrus County Warning Point -	Primary: Ring Down Phone
		Back-up: - System Speed - 47
		Back-up: Emergency Radio, Code: -

NOTE

Radio Code will activate  
all county radio units.



TELEPHONE LIST

- 4.3.14 N.R.C. Operation Center, Emergency Notification System (ENS Phone)
- 4.3.15 N.R.C. Station Representative  
Office -  
Home - System Speed - 57  
Wife work - System Speed - 58  
P&T Pager
- 4.3.16 Construction Project Manager Construction  
Home : - System Speed - 17 or  
- System Speed - 18
- 4.3.17 CRISIS MANAGEMENT CENTER ACTIVATION
- Hal B. Tucker Office:  
or Home: - System Speed - 53
- William O. Parker Office:  
or Home: - System Speed - 54
- Robert M. Koehler Office:  
or Home: - System Speed - 55
- Steam Production Duty Man -  
- System Speed - 51  
- System Speed - 56
- 4.3.18 Radiation Protection Section, Department of Human Resources-  
- System Speed - 48

MCGUIRE NUCLEAR STATION  
NOTIFICATION OF EMERGENCY CONDITIONS

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

NOTE 1: See Enclosure 4.3, Telephone Listing

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:

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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)
(7)	_____	_____
	(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)

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: 4/14/82

(5) REVIEWED BY: J.D. Hilbert DATE: 4-16-82

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

(6) TEMPORARY APPROVAL (IF NECESSARY):

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

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

(7) APPROVED BY: G. W. Lay Date: 4-21-82

(8) MISCELLANEOUS:

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

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

DUKE POWER COMPANY  
NUCLEAR SAFETY EVALUATION CHECK LIST

- (1) STATION: McGuire Nuclear Station UNIT: 1 X 2 X 3 \_\_\_\_\_  
OTHER: \_\_\_\_\_  
(2) CHECK LIST APPLICABLE TO: EP/O/A/5000/08 General Emergency  
(3) SAFETY EVALUATION - PART A

The item to which this evaluation is applicable represents:

Yes \_\_\_\_\_ No ☒ A change to the station or procedures as described in the FSAR;  
or a test or experiment not described in the FSAR?

If the answer to the above is "Yes", attach a detailed description of the item being evaluated and an identification of the affected section(s) of the FSAR.

- (4) SAFETY EVALUATION - PART B

Yes \_\_\_\_\_ No ☒ Will this item require a change to the station Technical Specifications?

If the answer to the above is "Yes," identify the specification(s) affected and/or attach the applicable pages(s) with the change(s) indicated.

- (5) SAFETY EVALUATION - PART C

As a result of the item to which this evaluation is applicable:

- Yes \_\_\_\_\_ No ☒ Will the probability of an accident previously evaluated in the FSAR be increased?  
Yes \_\_\_\_\_ No ☒ Will the consequences of an accident previously evaluated in the FSAR be increased?  
Yes \_\_\_\_\_ No ☒ May the possibility of an accident which is different than any already evaluated in the FSAR be created?  
Yes \_\_\_\_\_ No ☒ Will the probability of a malfunction of equipment important to safety previously evaluated in the FSAR be increased?  
Yes \_\_\_\_\_ No ☒ Will the consequences of a malfunction of equipment important to safety previously evaluated in the FSAR be increased?  
Yes \_\_\_\_\_ No ☒ May the possibility of malfunction of equipment important to safety different than any already evaluated in the FSAR be created?  
Yes \_\_\_\_\_ No ☒ Will the margin of safety as defined in the bases to any Technical Specification be reduced?

This Procedure does not affect the Safety Analysis of the Plant.  
If the answer to any of the preceding is "Yes", an unreviewed safety question is involved. Justify the conclusion that an unreviewed safety question is or is not involved. Attach additional pages as necessary.

- (6) PREPARED BY: M.S. Shover DATE: 4/14/82  
(7) REVIEWED BY: JD Gilbert DATE: 4-16-82

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 is declared by comparing the Emergency Action Level(s) and Initiating Condition(s) listed in Enclosure 4.1 to those of the actual plant condition.

      /       3.2 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.

      /       3.3 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 4.2 for the appropriate Initiating Condition/Emergency Procedure listed in Enclosure 4.1.

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 4.5.

NOTE 2

See Enclosure 4.3, Telephone Listing, for notification, telephone numbers/radio codes/pager codes.

NOTE 3

See Enclosure 4.4, 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.

/ 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 4.3, 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 4.3 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 List of Initiating Conditions, Emergency Action Levels, and Associated Emergency Procedure/Document.
- 4.2 Notification Chart.
- 4.3 Telephone listing.
- 4.4 Notification of Emergency Conditions.
- 4.5 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><u>NOTE 1:</u> 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><u>NOTE 2:</u> 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, and incomplete containment isolation.</li> <li>2. Loss of coolant accident as identified in Site Area Emergency 4.1.1, and Containment Monitor alarms (EMP51A and/or B) greater than 104R/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>NOTE: 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 judgment 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 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



Initiating 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 RHIR flow indicators show "0" flow after shift to RHIR is attempted and for greater than 2 hours (NDP5190, 5191, 5180, 5181) and RCS T <sup>0</sup> is rising, and containment air handling system fail to function.	EP/1/A/5000/02, AP/1/A/5500/05
NOTE: For melt sequences or for failure of containment isolation systems, the likely failure mode is melt through with release of gases.		
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.	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 4.1. (See Enclosure 4.3 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	
Activate T.S.C. (Station Directive 3.8.2)	
Activate O.S.C. (Station Directive 3.8.2)	
Activate C.M.C. (Enclosure 4.3, Enclosure 4.5)	

## TELEPHONE LISTING

4.3.1 Operations Duty Engineer (PA System)  
P&T Pager -

4.3.2 Station Manager -  
Home - - System Speed - 12  
Home - - System Speed - 11

4.3.3 Superintendent of Operations -  
Home - - System Speed - 13

4.3.4 Superintendent of Technical Services -  
Home - - System Speed - 14

4.3.5 Projects and Licensing Engineer -  
Home - - System Speed - 32

4.3.6 Station Health Physicist -  
Home - - System Speed - 31  
P&T Pager

4.3.7 NC State Warning Point, Raleigh - - System Speed - 41

4.3.8 Mecklenburg County Warning Point - Primary: Ring Down Phone  
Back-up: - System Speed - 42  
Back-up: Emergency Radio, Code: -

4.3.9 Lincoln County Warning Point - Primary: Ring Down Phone  
Back-up: - System Speed - 43  
Back-up: Emergency Radio, Code: -

4.3.10 Catawba County Warning Point - Primary: Ring Down Phone  
Back-up: - System Speed - 44  
Back-up: Emergency Radio, Code: -

4.3.11 Iredell County Warning Point - Primary: Ring Down Phone  
Back-up: - System Speed - 45  
Back-up: Emergency Radio, Code: -

4.3.12 Gaston County Warning Point - Primary: Ring Down Phone  
Back-up: - System Speed - 46  
Back-up: Emergency Radio, Code: -

4.3.13 Cabarrus County Warning Point - Primary: Ring Down Phone  
Back-up: - System Speed - 47  
Back-up: Emergency Radio, Code: -

NOTE

Radio Code will activate  
all county radio units.

TELEPHONE LIST

- 4.3.14 N.R.C. Operation Center, Emergency Notification System (ENS Phone)
- 4.3.15 N.R.C. Station Representative  
Office  
Home - - System Speed - 57  
Wife work - System Speed - 58  
P&T Pager
- 4.3.16 Construction Project Manager Construction  
Home : - System Speed - 17 or  
- System Speed - 18
- 4.3.17 CRISIS MANAGEMENT CENTER ACTIVATION
- Hal B. Tucker Office:  
or Home: - System Speed - 53
- William O. Parker Office:  
or Home: - System Speed - 54
- Robert M. Koehler Office:  
or Home: - System Speed - 55
- Steam Production Duty Man - System Speed - 51  
System Speed - 56
- 4.3.18 Radiation Protection Section, Department of Human Resources-  
- System Speed - 48

MCGUIRE NUCLEAR STATION  
NOTIFICATION OF EMERGENCY CONDITIONS

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

NOTE 1: See Enclosure 4.3, Telephone Listing.

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)	
(7)	(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)