



Duke Power
Catawba Nuclear Station
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Gary R. Peterson
Vice President

October 25, 2000

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

Subject: Duke Energy Corporation
Catawba Nuclear Station Units 1 and 2
Docket Nos. 50-413 and 50-414
Emergency Plan Implementing Procedures

Please find enclosed for NRC Staff use and review the following
Emergency Plan Implementing Procedure:

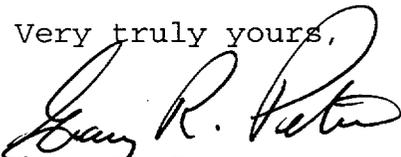
SH/O/B/2005/002, Protocol for the Field Monitoring Coordinator
During Emergency Conditions (Rev. 001)

This revision is being submitted in accordance with 10CFR
50.54(q) and does not decrease the effectiveness of the
Emergency Plan Implementing Procedures or the Emergency Plan.

By copy of this letter, two copies of the above documents are
being provided to the NRC, Region II.

If there are any questions, please call Tom Beadle at 803-831-
4027.

Very truly yours,



Gary R. Peterson

Attachments

A045

U.S. Nuclear Regulatory Commission
October 25, 2000
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xc (w/attachments):

L. A. Reyes
U.S. Nuclear Regulatory Commission
Regional Administrator, Region II
Atlanta Federal Center
61 Forsyth St., SW, Suite 23T85
Atlanta, GA 30303

(w/o attachments):

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U.S. Nuclear Regulatory Commission
Catawba Nuclear Site

DUKE POWER COMPANY
CATAWBA NUCLEAR STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURES INDEX

VOLUME I

PROCEDURE	TITLE
RP/0/A/5000/001	Classification of Emergency (Rev. 013)
RP/0/A/5000/002	Notification of Unusual Event (Rev. 035)
RP/0/A/5000/003	Alert (Rev. 037)
RP/0/A/5000/004	Site Area Emergency (Rev. 039)
RP/0/A/5000/005	General Emergency (Rev. 039)
RP/0/A/5000/06	Deleted
RP/0/A/5000/006 A	Notifications to States and Counties from the Control Room (Rev. 012)
RP/0/A/5000/006 B	Notifications to States and Counties from the Technical Support Center (Rev. 011)
RP/0/A/5000/006 C	Deleted
RP/0/A/5000/007	Natural Disaster and Earthquake (Rev. 019)
RP/0/A/5000/08	Deleted
RP/0/B/5000/008	Spill Response (Rev. 017)
RP/0/A/5000/009	Collision/Explosion (Rev. 005)
RP/0/A/5000/010	Conducting A Site Assembly or Preparing the Site for an Evacuation (Rev. 013)
RP/0/A/5000/11	Deleted
RP/0/B/5000/12	Deleted
RP/0/B/5000/013	NRC Notification Requirements (Rev. 025)
RP/0/B/5000/14	Deleted
RP/0/A/5000/015	Core Damage Assessment (Rev. 004)
RP/0/B/5000/016	Deleted
RP/0/B/5000/17	Deleted

October 9, 2000

DUKE POWER COMPANY
CATAWBA NUCLEAR STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURES INDEX

VOLUME I

PROCEDURE	TITLE
RP/0/A/5000/018	Emergency Worker Dose Extension (1/15/96)
RP/0/B/5000/019	Deleted
RP/0/A/5000/020	Technical Support Center (TSC) Activation Procedure (Rev. 013)
RP/0/A/5000/021	Deleted
RP/0/B/5000/022	Evacuation Coordinator Procedure (Rev. 003)
RP/0/B/5000/023	Deleted
RP/0/A/5000/024	OSC Activation Procedure (Rev. 007)
RP/0/B/5000/025	Recovery and Reentry Procedure (Rev. 002)
RP/0/B/5000/026	Response to Bomb Threat (Rev. 001)
RP/0/B/5000/028	Communications and Community Relations EnergyQuest Emergency Response Plan (Rev. 001)

DUKE POWER COMPANY
CATAWBA NUCLEAR STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURES INDEX

VOLUME II

PROCEDURE	TITLE
HP/0/B/1000/006	Emergency Equipment Functional Check and Inventory (Rev. 053)
HP/0/B/1009/001	Radiation Protection Recovery Plan (Rev. 007)
HP/0/B/1009/003	Radiation Protection Response Following a Primary to Secondary Leak (Rev. 008)
HP/0/B/1009/004	Environmental Monitoring for Emergency Conditions Within the Ten-Mile Radius of CNS (Rev. 027)
HP/0/B/1009/005	Personnel/Vehicle Monitoring for Emergency Conditions (Rev. 016)
HP/0/B/1009/006	Alternative Method for Determining Dose Rate Within the Reactor Building (Rev. 008)
HP/0/B/1009/007	In-Plant Particulate and Iodine Monitoring Under Accident Conditions (Rev. 018)
HP/0/B/1009/008	Contamination Control During Transportation of Contaminated Injured Individuals (Rev. 014)
HP/0/B/1009/009	Guidelines for Accident and Emergency Response (Rev. 038)
HP/0/B/1009/014	Radiation Protection Actions Following an Uncontrolled Release of Radioactive Material (Rev. 008)
HP/0/B/1009/016	Distribution of Potassium Iodide Tablets in the Event of a Radioiodine Release (Rev. 011)
HP/0/B/1009/017	Deleted
HP/1/B/1009/017	Post-Accident Containment Air Sampling System (Rev. 001)
HP/2/B/1009/017	Post-Accident Containment Air Sampling System (Rev. 000)
HP/0/B/1009/018	Deleted
HP/0/B/1009/019	Emergency Radio System Operation, Maintenance and Communication (Rev. 010)
HP/0/B/1009/024	Implementing Procedure for Estimating Food Chain Doses Under Post-Accident Conditions (Rev. 002)

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DUKE POWER COMPANY
CATAWBA NUCLEAR STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURES INDEX

VOLUME II

PROCEDURE	TITLE
HP/0/B/1009/025	Deleted
HP/0/B/1009/026	On-Shift Offsite Dose Projections (Rev. 002)
SH/0/B/2005/001	Emergency Response Offsite Dose Projections (Rev. 001)
SH/0/B/2005/002	Protocol for the Field Monitoring Coordinator During Emergency Conditions (Rev. 001)
OP/0/A/6200/021	Operating Procedure for Post Accident Liquid Sampling System II+ (Rev. 032)
SR/0/B/2000/001	Standard Procedure for Public Affairs Response to the Emergency Operations Facility (Rev. 002)
SR/0/B/2000/002	Standard Procedure for EOF Commodities and Facilities (Rev. 001)
SR/0/B/2000/003	Activation of the Emergency Operations Facility (Rev. 006)
SR/0/B/2000/004	Notification to States and Counties from the Emergency Operations Facility (Rev. 001)

October 9, 2000

Duke Power Company
PROCEDURE PROCESS RECORD
FOR STANDARD PROCEDURES

PREPARATION

(2) Procedure Title: Protocol for the Field Monitoring Coordinator

During Emergency Conditions

(3) Prepared By Dwalam Johnson Date 7-27-00

(4) Applicable To:	<input type="checkbox"/> ONS	<input checked="" type="checkbox"/> MNS	<input checked="" type="checkbox"/> CNS
(5) Technical Advisor		<u>GFTerrell</u>	<u>C/Heaf</u>
(6) Requires 10CFR50.59 Evaluation?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	YES = New procedure or revision with major changes at applicable site		NO = Revision with minor changes NO = To incorporate previously approved changes
(7) Review (QR)	By _____ Date _____	By <u>Jay C. Lovell</u> Date <u>8/10/00</u>	By <u>W. Baysinger</u> Date <u>9/11/00</u>
Cross-Disciplinary Review (QR)	By _____ NA _____ Date _____	By _____ NA <u>Jim</u> Date <u>8/10/00</u>	By <u>Gary L. M. Field</u> NA _____ Date <u>9/21/00</u>
Reactivity Mgmt. Review (QR)	By _____ NA _____ Date _____	By _____ NA <u>Jim</u> Date <u>8/10/00</u>	By <u>Gary L. M. Field</u> NA _____ Date <u>9/21/00</u>
(8) Additional Reviews	By _____ Date _____	By <u>J. J. M. ...</u> Date <u>10/02/2000</u>	By _____ Date _____
(9) Approved	By _____ Date _____	By <u>W. Baysinger</u> Date <u>8/14/00</u> <u>10/02/2000</u>	By <u>W. Baysinger</u> Date <u>9/25/00</u>
(10) Use Level	Reference Use		

PERFORMANCE (Compare with Control Copy every 14 calendar days while work is being performed.)

(11) Compared with Control Copy _____ Date _____

Compared with Control Copy _____ Date _____

Compared with Control Copy _____ Date _____

(12) Date(s) Performed _____

Work Order Number (WO#) _____

COMPLETION

(13) Procedure Completion Verification

Yes NA Check lists and/or blanks initialed, signed, dated, or filled in NA, as appropriate?

Yes NA Listed enclosures attached?

Yes NA Data sheets attached, completed, dated, and signed?

Yes NA Charts, graphs, etc. attached, dated, identified, and marked?

Yes NA Procedure requirements met?

Verified By _____ Date _____

(14) Procedure Completion Approved _____ Date _____

(15) Remarks (Attach additional pages, if necessary.)

Duke Power Company
Standard Procedure for Catawba and McGuire
Nuclear Stations

**Protocol for the Field Monitoring Coordinator
During Emergency Conditions**

Reference Use

Procedure No.

SH/0/B/2005/002

Revision No.

001

Electronic Reference No.

MP0070R4

Protocol for the Field Monitoring Coordinator During Emergency Conditions

1. Purpose

To describe a systematic field monitoring method for sampling and identifying airborne plumes or liquid effluents in order to obtain field data indicative of the radiation exposure to the general public following an unplanned release of radioactive material.

2. References

2.1 Site specific procedures for emergency environmental monitoring:

CNS - HP/0/B/1009/004, Environmental Monitoring for Emergency Conditions Within Ten Mile Radius of CNS

MNS - HP/0/B/1009/023, Environmental Monitoring for Emergency Conditions

2.2 EPA 400-R-92-001, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents

2.3 Site specific emergency phone directories:

CNS - CNS Emergency Phone Directory

MNS - RP/0/A/5700/014, Emergency Telephone Directory

3. Limits and Precautions

3.1 Field Monitoring Team environmental sampling performed during emergency conditions does not replace or substitute for normally required environmental monitoring.

3.2 During any drill or emergency, personnel safety and safe operation of the vehicle is of primary concern.

3.3 Potassium Iodide (KI) tablets used for reducing radioiodine thyroid uptake are most effective if taken approximately two hours before an exposure is likely to occur. **IF** any member or members is likely to receive in excess of 25 rem thyroid dose (such as being in a 10 rem/hour iodine dose rate for 2.5 hours without a GMRI respirator) the Radiation Protection Manager (RPM) may direct field monitoring team personnel to ingest one KI tablet. This should concur with notification of Duke Power medical authority that KI is prescribed for emergency response individuals.

4. Procedure

4.1 Field Monitoring Team (FMT) Activation

- 4.1.1 Establish the number of survey teams that will be available for field monitoring.
- Contact the TSC to determine the status and availability of field teams.
- 4.1.2 IF the site has not activated field teams, discuss with the Dose Assessors the need for team activation.

NOTE: The Field monitoring Coordinator (FMC) may request additional survey vehicles if emergency conditions warrant. Designations for these vehicles are displayed in Enclosure 5.1.

- 4.1.3 IF emergency conditions dictate, notify personnel at an alternate station for additional field monitoring support.
- 4.1.4 IF possible, ensure that at least one Field Monitoring Team (FMT) member from the affected station is on each FMT.
- 4.1.5 Obtain an Emergency Planning map for the affected station.

4.2 Field Monitoring Team (FMT) Communications

- 4.2.1 Ensure the EOF Base Radio is set as follows:
- For MNS, Black Box Selector Switch to "A" AND Radio Line Selector to Position "1".
 - For CNS, Black Box Selector Switch to "D" AND Radio Line Selector to Position "2".
- 4.2.2 Establish radio communications with each available field team.
- 4.2.3 Maintain open radio communications with each FMT.
- 4.2.4 IF radio communications become inoperable, utilize telephone communications as a back-up.
- Telephone numbers are displayed in Enclosure 5.2.

NOTE: Care should be taken not to provide detailed plant information.

- 4.2.5 Provide only pertinent, general information when using the radio.
- 4.2.6 Communicate over the radio during a drill or exercise by beginning each transmission with "THIS IS A DRILL, THIS IS A DRILL".
- 4.2.7 Transmit information using the phonetic alphabet.
 - The phonetic alphabet is displayed on Enclosure 5.5.
- 4.2.8 Follow Federal Communications Commission (FCC) guidelines at all times when using the radio for communication with the FMTs.

4.3 Locating and Tracking the Plume

- 4.3.1 Form field monitoring teams to perform environmental plume surveys.
- 4.3.2 Dispatch FMTs after vehicles and equipment have been confirmed operational.
- 4.3.3 Estimate which meteorological sector or sectors may appear to be affected by the plume according to predominant wind direction **AND** wind speed.

NOTE: Major roadways delineate major territories surrounding the plant. Either all or a portion of the sections would be expected to be affected to some degree by radioactivity released from the plant. Major roadways are therefore utilized to provide access to suspected regions (outer edges, leading edge(s), centerline) of the plume as necessary.

- Major roadways on the EPZ map are identified by numerical designations and responsibility level (federal, state, county, or city) designations.
- Selected roadways on the EPZ map are identified by a specific name, rather than a numerical responsibility designation.
- Predetermined sampling locations are denoted by a red text oval on the EPZ map. The sampling point designator indicates the protective action zone the point is in and the mileage from the plant. For example, locations are designated in the format.

S - 10 - 2

Where:

S = Evacuation Zone

10 = Mile Radius

2 = Sample Point #2

- 4.3.4 Direct the FMTs to traverse the appropriate meteorological sector or sectors nearest the station, utilizing major roadways, selected roadways, or predetermined sampling locations, as appropriate.
- 4.3.5 Advise the survey teams to remain aware of terrain during air sampling or surveying (i.e. wind breaks formed by landscape or vegetation) which could inhibit acquiring a representative sample.
- 4.3.6 Advise the survey vehicles to report all dose rates above background.
- 4.3.7 Periodically ask the field team members to report their accumulated dose.
- 4.3.8 Direct each FMT to pre-determined sample locations, as appropriate.
- Utilize local landmarks and street names to indicate desired sampling location when a pre-determined location is not available or suitable.
- 4.3.9 Advise the FMTs that when possible they should park vehicles completely off the road when sampling **AND** to use emergency flashers and the strobe if available while stopped.
- 4.3.10 Record each field vehicle's sampling history on Enclosure 5.3, **OR** in the Field Monitoring Coordinator ERO Facility Log.

- 4.3.11 Direct the field monitoring teams to systematically survey areas by obtaining air samples and/or beta/gamma measurements.
- 4.3.12 Request survey teams to report the maximum radiation level and location of the boundaries while enroute AND while at sampling locations.
- 4.3.13 Request FMT's report the location of plume edges based on instrument readings.
- 4.3.14 Direct the FMT to take an Iodine sample WHEN, but not limited to:
- Fuel rod gap activity release has occurred.
 - Waste gas decay tank rupture has occurred.
 - Any suspected iodine release has occurred.
 - The source of release is unknown AND the FMT is in the presence of measurable activity.
- 4.3.15 Notify FMTs, as appropriate, of changing plant and meteorological conditions that may have an effect on environmental measurements.
- Record meteorological plant status information communicated to FMTs on Enclosure 5.4.
- 4.3.16 Notify FMTs of plant status as reported on the most recent Emergency Notification Form.

4.4 Special Sampling

NOTE: Sample locations and sample collection methodologies are described in Reference 2.1.

- 4.4.1 WHEN plant conditions are considered to be stabilized, direct the field monitoring team to perform special sampling. Special sample may include, but are not limited to:
- Smears of surrounding areas (stationary, horizontal surfaces). Do NOT take smear samples on automobiles.
 - Vegetation
 - Sediment
 - Water

- Milk
- Integrated dose over time using TLDs

NOTE: WHEN collecting any special sample, care shall be exercised to keep cross contamination between samples from occurring.

4.4.2 Direct the FMT to include (at minimum) the following information on the each sample container:

- Sample location.
- Sample reference date and time.
- Sample collected by.

4.5 Sample Analysis

4.5.1 Direct the field monitoring teams to retain the samples for analysis.

4.5.2 Consult with the RPM as to the best sample drop off and storage location.

NOTE: Normally, the samples will be analyzed at the ENRAD Laboratory. However, other laboratories may be used, including MNS, CNS, ONS, or other, as appropriate.

4.5.3 Work with the RPM and Laboratory Management to make appropriate arrangements for sample transport for analysis.

4.6 FMT Dose Tracking

4.6.1 **IF** conditions are such that any FMT member may receive 500 mrem or greater during the drill or emergency, use Field Monitoring Team Radiation Exposure Record (Enclosure 5.6) to track the FMT's exposure.

4.6.2 Use Enclosure 5.7 as guidance for dose to workers providing emergency services.

4.7 FMT Turnover

4.7.1 Coordinate FMT shift relief with the TSC as appropriate.

4.7.2 Direct the FMTs to submit all data sheets to Emergency Planning Coordinator.

- 4.7.3 Direct the FMT members to report to a designated counting facility for a post-job whole body count, as appropriate.

5. Enclosures

- 5.1 Field Monitoring Vehicle Designations
- 5.2 Telephone Numbers
- 5.3 Field Monitoring Survey Data Sheet
- 5.4 Meteorological Update for Field Monitoring Teams
- 5.5 Phonetic Alphabet
- 5.6 Field Monitoring Team Radiation Exposure Record
- 5.7 Guidance on Dose Limits for Workers Performing Emergency Services

Field Monitoring Vehicle Designations

Team Call Signs	No. of Members	Transportation
Sample Van 1	2	Emergency Van
Sample Van 2	2	Emergency Van
Alpha	2	Station Vehicle
Bravo	2	Station Vehicle
Charlie	2	Land Vehicle
Delta	2	Land Vehicle

- **IF** teams from both sites are being used, the team's call sign shall be designated with the station name (e.g. McGuire Sample Van 1, Catawba Sample Van 2, etc.)
- Form additional teams as necessary.

Enclosure 5.2
Telephone Numbers

Field Vehicle / Location	Telephone Extension
Catawba Sample Van 1	803-372-9021
Catawba Sample Van 2	803-372-9022
Catawba Alpha Station Vehicle	803-372-9023
Catawba Bravo Station Vehicle	803-372-9024
McGuire Sample Van 1	704-534-1563
McGuire Sample Van 2	704-534-1564
Catawba RP Support	8-831-5882
Catawba TSC Dose Assessment	8-831-5881 or 831-8042
FMC at EOF (General Office)	704-382-0736
RP Support (Radio) Catawba TSC	8-831-8182
McGuire TSC Dose Assessment	8-875-4976
Dose Assessment Bridge Line	8-875-4980

- Catawba Emergency Phone Numbers are found in the "CNS Emergency Phone Directory".
- McGuire Emergency Phone Numbers are found in RP/O/A/5700/014, Emergency Telephone Directory.

Enclosure 5.4
Meteorological Update for Field
Monitoring Teams

Date: _____ Time: _____
Classification: _____
Wind Speed: _____ mph
Wind Direction from: _____ °
Zones Affected: _____
Information From Emergency Notification Form # _____
Other: _____

Date: _____ Time: _____
Classification: _____
Wind Speed: _____ mph
Wind Direction from: _____ °
Zones Affected: _____
Information From Emergency Notification Form # _____
Other: _____

Date: _____ Time: _____
Classification: _____
Wind Speed: _____ mph
Wind Direction from: _____ °
Zones Affected: _____
Information From Emergency Notification Form # _____
Other: _____

Enclosure 5.5
Phonetic Alphabet

SH/0/B/2005/002
Page 1 of 1

A - Alpha
B - Bravo
C - Charlie
D - Delta
E - Echo
F - Foxtrot
G - Golf
H - Hotel
I - India
J - Juliett
K - Kilo
L - Lima
M - Mike
N - November
O - Oscar
P - Papa
Q - Quebec
R - Romeo
S - Sierra
T - Tango
U - Uniform
V - Victor
W - Whiskey
X - X-ray
Y - Yankee
Z - Zulu

Field Monitoring Team Radiation Exposure Record

TEAM NAME	Sample Van 1		Sample Van 2		Alpha FMT		Bravo FMT		Other FMTs	
Individual's Name										
TLD #										
Time _____ Current Deep Dose Equivalent (SRD or ED Reading)										
Time _____ Subsequent Deep Dose Equivalent (SRD or ED Reading)										
Cumulative Deep Dose at Time _____										
Time _____ Subsequent Deep Dose Equivalent (SRD or ED Reading)										
Cumulative Deep Dose at Time _____										
Total Deep Dose Equivalent For FMT Member										
(Total Deep Dose Equivalent) X (Committed Dose Equivalent SRD Correction Factor) ^a = Total Effective Dose Equivalent										

^a SRD Correction Factor is obtained from the Raddose Printout.

**Guidance on Dose Limits for Workers
Performing Emergency Services**

Dose Limit ^a (rem)	Activity	Condition
5	all	
10	protecting valuable property	lower dose not practicable
25	life saving or protection of large populations	lower dose not practicable
>25	life saving or protection of large populations	only on a voluntary basis to persons fully aware of the risks involved (see Tables 2-3 and 2-4)

^a Sum of external effective dose equivalent and committed effective dose equivalent to nonpregnant adults from exposure and intake during an emergency situation. Workers performing services during emergencies should limit dose to the lens of the eye to three times the listed value and doses to any other organ (including skin and body extremities) to ten times the listed value. These limits apply to all doses from an incident, except those received in unrestricted areas as members of the public.

Source: EPA 400-R-92-001