Duke Energy

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February 6, 2001

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

Subject: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287
Emergency Plan Implementing Procedures Manual
Volume B, Revision 2001-02

Please find attached for your use and review copies of the revision to the Oconee Nuclear Station Emergency Plan:

Volume B Revision 2001-02 February 2001

This revision is being submitted in accordance with 10 CFR 50-54(q) and does not decrease the effectiveness of the Emergency Plan or the Emergency Plan Implementing Procedures.

Any questions or concerns pertaining to this revision please call Mike Thorne, Emergency Planning Manager
at 864-885-3210.

By copy of this letter, two copies of this revision are being provided to the NRC, Region II, Atlanta, Georgia.

Very truly yours,

W. R. McCollum, Jr.
VP, Oconee Nuclear Site

xc: (w/2 copies of attachments)
Mr. Luis Reyes,
Regional Administrator, Region II
U. S. Nuclear Regulatory Commission
61 Forsyth St., SW, Suite 24T23
Atlanta, Georgia 30303

w/copy of attachments
Mr. Steven Baggett
Rockville, Maryland

(w/o Attachments, Oconee Nuclear Station)
NRC Resident Inspector
M. D. Thorne, Manager, Emergency Planning

A045

February 6, 2001

OCONEE NUCLEAR SITE

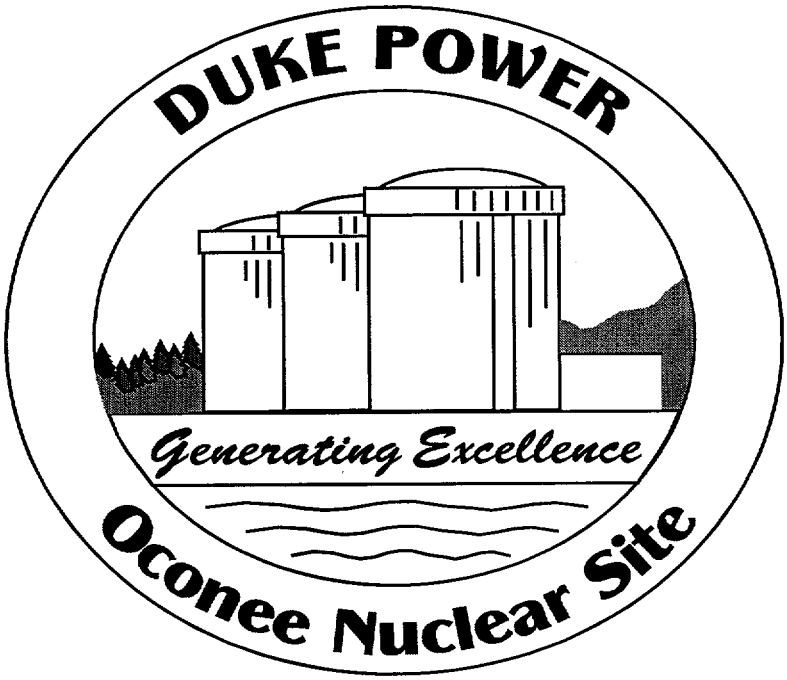
SUBJECT: Emergency Plan Implementing Procedures
Volume B, Revision 2001-02

Please make the following changes to the Emergency Plan, Volume B by following these instructions.

REMOVE	ADD
Cover Sheet Rev. 2001-01	Cover Sheet Rev. 2001-02
Table of Contents page 1	Table of Contents page 1
HP/0/B/1009/012 - 06/15/99	HP/0/B/1009/012 - 01/09/01

DUKE POWER

EMERGENCY PLAN
IMPLEMENTING PROCEDURES
VOLUME B



APPROVED:

W. W. Foster, Manager
Safety Assurance

02/06/2001
Date Approved

02/06/2001
Effective Date

VOLUME B
REVISION 2001-02
February, 2001

VOLUME B
TABLE OF CONTENTS

(R06-97)

INFORMATION ONLY

Duke Power Company

PROCEDURE PROCESS RECORD

(1) ID No HP/0/B/1009/012

Revision No 012

PREPARATION

(2) Station OCONEE NUCLEAR STATION

(3) Procedure Title Distribution Of Potassium Iodide Tablets In The Event Of A Radioiodine Release

(4) Prepared By Doug Berkshire Date 1/4/01

(5) Requires 10CFR50.59 evaluation?

- ☐ Yes (New procedure or revision with major changes)
- ☑ No (Revision with minor changes)
- ☐ No (To incorporate previously approved changes)

(6) Reviewed By _____ (QR) Date 1-4-01

Cross-Disciplinary Review By _____ (QR)NA SM Date 1-4-01

Reactivity Mgmt. Review By _____ (QR)NA SM Date 1-4-01

(7) Additional Reviews

Reviewed By _____ Date _____

Reviewed By _____ Date _____

(8) Temporary Approval *(if necessary)*

By _____ (SRO/QR) Date _____

By _____ (QR) Date _____

(9) Approved By _____ Date 1/9/01

PERFORMANCE *(Compare with control copy every 14 calendar days while work is being performed.)*

(10) Compared with Control Copy _____ Date _____

Compared with Control Copy _____ Date _____

Compared with Control Copy _____ Date _____

(11) Date(s) Performed _____

Work Order Number (WO#) _____

COMPLETION

(12) Procedure Completion Verification

- ☐ Yes ☐ NA Checklists 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 _____

(13) Procedure Completion Approved _____ Date _____

(14) Remarks *(Attach additional pages, if necessary)*

Duke Power Company Oconee Nuclear Station	Procedure No. HP/0/B/1009/012
Distribution Of Potassium Iodide Tablets In The Event Of A Radioiodine Release	Revision No. 012
Information Use	Electronic Reference No. OX002SD1

Distribution Of Potassium Iodide Tablets In The Event Of A Radioiodine Release

1. Purpose

1.1 This procedure provides information necessary to distribute Potassium Iodide (KI) tablets to in-plant personnel in the event of a release of radioiodine.

1.2 This procedure is an Emergency Plan Implementing Procedure (EPIP). It must be forwarded to the Emergency Planning Group within three working days of approval by the responsible group. {PIP 4-O-93-0701}

2. References

2.1 NCRP Report No. 55; Protection of the Thyroid Gland in the Event of Releases of Radioiodine 1977

2.2 NCRP Report No. 65; Management of Persons Accidentally Contaminated with Radioiodine 1980

2.3 SH/0/B/2001/001, Internal Dose Assessment

2.4 NUREG 0654

2.5 RP/0/B/1000/011, Planned Emergency Exposure

2.6 PIP 4-O-93-701, Distribution Of Emergency Plan Procedures

3. Limits And Precautions

3.1 Persons who are allergic to KI should **NOT** receive these tablets.

3.2 Nursing mothers who receive KI tablets must be advised to use nutrient substitutes (ex: milk or a formula) for children for the duration of the ten-day tablet use period.

3.3 Personnel shall be advised **NOT** to deviate from prescribed dosages and dosage rates.

3.4 Best results will be achieved when KI tablets are administered prior to the exposure but at least within 4 hours after an exposure.

3.5 Do **NOT** distribute discolored or disfigured tablets, or tablets that have exceeded their expiration date. Such tablets shall be discarded:

3.5.1 The expiration date listed on the bottle may have been extended by the manufacturer. Documentation of extension shall be kept with the supply of KI tablets.

3.6 Hands of personnel shall be free of contamination prior to taking KI tablets.

3.7 The RP Manager may approve the use of KI to block thyroid uptake of radioiodines during emergency situations. If the thyroid CDE is anticipated to exceed 25 REM (which is 1000 iodine DAC hours as calculated by Enclosure 5.1), the radiation risk is considered to be greater than the risk of side effects from the KI in most cases. Personnel to be considered for KI include:

3.7.1 Personnel suspected of having been in the affected area prior to detection and during a release;

3.7.2 Persons present in the affected area; and

3.7.3 Persons who will enter the area while a significant amount of radioiodine is present, as defined in Step 3.7.

3.8 Each new bottle of KI contains 14 tablets and will require removal of sufficient tablets to ensure only 10 tablets are issued to each affected person.

3.9 Replacement tablets should be ordered at least three months prior to the KI expiration date, to ensure an adequate supply of viable tablets.

3.10 KI tablets shall be stored under the following conditions:

3.10.1 temperature range of 68 degrees F to 77 degrees F;

3.10.2 low humidity; and

3.10.3 away from direct exposure to light.

4. Procedure

4.1 Calculate total iodine DAC-hours expected from task using Enclosure 5.1.

NOTE: If total iodine DAC-hours expected from task is less than **OR** equal to 1000, administration of KI is **NOT** required.

4.2 **IF** total iodine DAC-hours expected from task > 1000 (which is 25 REM), administer KI to affected personnel.

4.3 Secure tablets from emergency inventory:

4.3.1 Inspect bottles for evidence of tampering (example: seal broken etc.).

4.3.2 Ensure issue date or extension letter date has **NOT** expired.

4.4 Record data required on Enclosure 5.2 for personnel arriving at distribution site.

4.5 Issue one (1) tablet to each affected person for immediate consumption:

4.5.1 Remove sufficient tablets, if necessary, to ensure only nine (9) tablets remain in the bottle/vial.

4.5.2 Store tablets removed from new bottles of KI in a plastic vial or other similar container.

4.5.3 Record the expiration date of the bottle or extension letter and the name of the RP representative issuing the tablets on the vial.

4.6 Issue each affected person one (1) bottle/vial containing nine (9) KI tablets:

- Issue the accumulated vials of KI to avoid opening new bottles until necessary.

4.7 Issue each affected person the package insert for use of the tablets (refer to Enclosure 5.3 for example of the package insert).

4.8 Instruct each person receiving KI to take one (1) tablet per day for 10 days, as near as 24 hour schedule as possible, unless otherwise directed by the Radiation Protection Manager or designee.

NOTE: If the number of persons affected render it impractical to give all a BBA, the RP Shift General Supervisor or designee shall draw a sample of persons to receive a BBA.

4.9 Schedule personnel ingesting KI for a BBA.

4.10 Ensure proper disposition of Enclosures 5.1 and 5.2:

- Original to Master File, under appropriate (S)RWP.
- Copy to the Radiation Protection Manager.
- Copy to the RP Shift General Supervisor.

5. Enclosures

5.1 Example Calculation Of Iodine DAC-hours

5.2 Example Potassium Iodide Tablet Distribution Data Sheet

5.3 Example Package Insert For Thyro-Block™ Tablets And solution

Example
Calculation Of Iodine DAC-Hours

(S)RWP_____

[(I-131 uCi/ml = _____ / 2E-8uCi/ml per DAC) + (I-133 uCi/ml = _____ / 1E-7uCi/ml per DAC) + (I-135 uCi/ml = _____ / 7E-7uCi/ml per DAC)] X _____ time in hrs

= _____ # of iodine DAC-hours expected from task

Where:

I-131, I-133, and I-135 are the respective iodine isotope concentrations either actually in or potentially in the workplace during task.

NOTE: If another iodine isotope(s) is in or expected to be in the workplace, divide its concentration (in uCi/ml) by its DAC, as shown above and add to the other radioiodine DACs and multiply the sum by the time spent in the radioiodine atmosphere.

2E-8uCi/ml per DAC = the concentration of I-131 equivalent to one DAC

1E-7uCi/ml per DAC = the concentration of I-133 equivalent to one DAC

7E-7uCi/ml per DAC = the concentration of I-135 equivalent to one DAC

Time = the total time in hours that personnel are expected to be in the radioiodine atmosphere

Enclosure 5.2

Example
Potassium Iodide Tablet Distribution
Data Sheet

RP Badge Number	Name	Department	Date and Time Of Suspected Exposure	Date and Time Of Initial Issue

Disposition:

- Original to Master File
- Copy to:

  RP Manager
  RP Shift General Supervisor

Enclosure 5.3

Example
Package Insert For Thyro-Block™ Tablets And Solution

Patient Package Insert For

THYRO-BLOCK®
TABLETS
(POTASSIUM IODIDE TABLETS, USP)
(pronounced poe-TASS-e-um EYE-oh-dyed)
(abbreviated: KI)

IF YOU ARE TOLD TO TAKE THIS MEDICINE, TAKE IT ONE TIME EVERY 24 HOURS. DO NOT TAKE IT MORE OFTEN. MORE WILL NOT HELP YOU AND MAY INCREASE THE RISK OF SIDE EFFECTS. *DO NOT TAKE THIS DRUG IF YOU KNOW YOU ARE ALLERGIC TO IODIDE.* (SEE SIDE EFFECTS BELOW.)

INDICATIONS
THYROID BLOCKING IN A RADIATION EMERGENCY ONLY.

DIRECTIONS FOR USE
Use only as directed by State or local public health authorities in the event of a radiation emergency.

DOSE

Tablets:	ADULTS AND CHILDREN 1 YEAR OF AGE OR OLDER: One (1) tablet once a day. Crush for small children. BABIES UNDER 1 YEAR OF AGE: One-half (1/2) tablet once a day. Crush first.

Take for 10 days unless directed otherwise by State or local public health authorities.

Store at controlled room temperature between 15° and 30°C (59° to 86°F). Keep container tightly closed and protect from light.

WARNING
Potassium iodide should not be used by people allergic to iodide. Keep out of the reach of children. In case of overdose or allergic reaction, contact a physician or the public health authority.

DESCRIPTION
Each white, round, scored, monogrammed THYRO-BLOCK® TABLET contains 130 mg of potassium iodide. Other ingredients: magnesium stearate, microcrystalline cellulose, silica gel, and sodium thiosulfate.

Enclosure 5.3

Example
Package Insert For Thyro-Block™ Tablets And Solution

HOW POTASSIUM IODIDE WORKS

Certain forms of iodine help your thyroid gland work right. Most people get the iodine they need from foods, like iodized salt or fish. The thyroid can "store" or hold only a certain amount of iodine.

In a radiation emergency, radioactive iodine may be released in the air. This material may be breathed or swallowed. It may enter the thyroid gland and damage it. The damage would probably not show itself for years. Children are most likely to have thyroid damage.

If you take potassium iodide, it will fill up your thyroid gland. This reduces the chance that harmful radioactive iodine will enter the thyroid gland.

WHO SHOULD NOT TAKE POTASSIUM IODIDE

The only people who should not take potassium iodide are people who know they are allergic to iodide. You may take potassium iodide even if you are taking medicines for a thyroid problem (for example, a thyroid hormone or antithyroid drug). Pregnant and nursing women and babies and children may also take this drug.

HOW AND WHEN TO TAKE POTASSIUM IODIDE

Potassium iodide should be taken as soon as possible after public health officials tell you. You should take one dose every 24 hours. More will not help you because the thyroid can "hold" only limited amounts of iodine. Larger doses will increase the risk of side effects. You will probably be told not to take the drug for more than 10 days.

SIDE EFFECTS

Usually, side effects of potassium iodide happen when people take higher doses for a long time. You should be careful not to take more than the recommended dose or take it for longer than you are told. Side effects are unlikely because of the low dose and the short time you will be taking the drug.

Possible side effects include skin rashes, swelling of the salivary glands, and "iodism" (metallic taste, burning mouth and throat, sore teeth and gums, symptoms of a head cold, and sometimes stomach upset and diarrhea).

A few people have an allergic reaction with more serious symptoms. These could be fever and joint pains, or swelling of parts of the face and body and at times severe shortness of breath requiring immediate medical attention.

Taking iodide may rarely cause overactivity of the thyroid gland, underactivity of the thyroid gland, or enlargement of the thyroid gland (goiter).

WHAT TO DO IF SIDE EFFECTS OCCUR

If the side effects are severe or if you have an allergic reaction, stop taking potassium iodide. Then, if possible, call a doctor or public health authority for instructions.

HOW SUPPLIED

THYRO-BLOCK® TABLETS (Potassium Iodide Tablets, USP) are white, round tablets, one side scored, other side debossed 472 WALLACE, each containing 130 mg potassium iodide. Available in bottles of 14 tablets (NDC 0037-0472-20).

WALLACE LABORATORIES
Division of
CARTER-WALLACE, INC.
Cranbury, New Jersey 08512