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Arkansas Nuclear One - Administrative Services
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Document Update Notification

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ADDRESS:	**DOC CNTRL DESK MAIL STOP P1-37 WASHINGTON DC 20555**
DOCUMENT NO:	**OP-1903.035**
TITLE:	**ADM POTASSIUM IODIDE**
REVISION NO:	**06-00-00**
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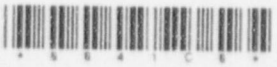

ENTERGY OPERATIONS INCORPORATED
ARKANSAS NUCLEAR ONE

TITLE: ADMINISTRATION OF POTASSIUM IODIDE	PROC/WORK PLAN NO. 1903.035	REV. 6
	EXP. DATE N/A	SAFETY-RELATED ☒YES ☐NO
CONTROLLED COPY # 103	PAGE 1 OF 1	IPTE ☐YES ☒NO

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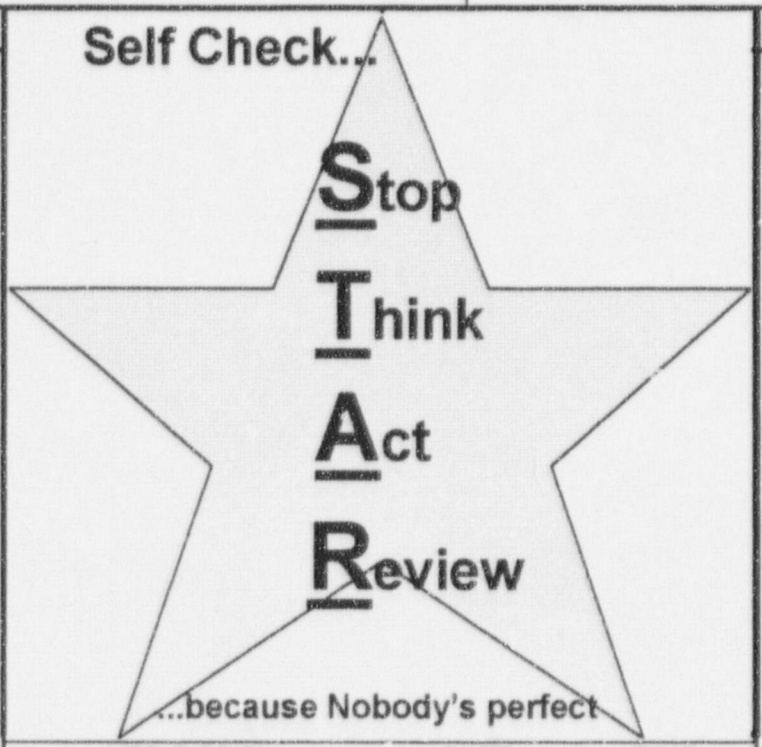

VERIFIED BY	DATE	TIME

FORM TITLE: LIST OF AFFECTED PAGES	FORM NO. 1000.006A	REV. 45

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1.0 PURPOSE

To provide guidance for the administration of Potassium Iodide (KI) to minimize uptake of radioiodines in the thyroid gland.

2.0 SCOPE

This procedure applies to all ANO and contractor employees prior to a planned exposure to radioiodine and after an accidental exposure.

3.0 REFERENCES

3.1 REFERENCES USED IN PROCEDURE PREPARATION:

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

3.1.2 Patient Package Insert for Commercial Packaged Potassium Iodide

3.1.3 ANO Emergency Plan

3.2 REFERENCES USED IN CONJUNCTION WITH THIS PROCEDURE:

3.2.1 1903.033, "Protective Action Guidelines for Rescue/Repair and Damage Control Teams"

3.2.2 1903.065, "Emergency Response Facility - Technical Support Center (TSC)

3.2.3 1903.067, "Emergency Response Facility - Emergency Operations Facility (EOF)

3.3 RELATED ANO PROCEDURES:

1903.060, "Emergency Supplies and Equipment"

3.4 REGULATORY CORRESPONDENCE CONTAINING NRC COMMITMENTS WHICH ARE IMPLEMENTED IN THIS PROCEDURE:

None

4.0 DEFINITIONS

None

5.0 RESPONSIBILITY AND AUTHORITY

5.1 The Radiation Protection and Radwaste (RP&RW) Manager is responsible for the implementation of this procedure for on-site emergency response personnel.

5.2 The Radiological Environmental Assessment Manager (REAM) is responsible for the implementation of this procedure for off-site emergency response personnel.

5.3 The TSC Director is responsible for authorizing the administration of KI for on-site emergency response personnel.

5.4 The EOF Director is responsible for authorizing the administration of KI for offsite emergency response personnel.

6.0 INSTRUCTIONS

6.1 INITIATING CONDITIONS

This procedure shall be initiated whenever a dose commitment of 10 rem CDE or greater for the thyroid is likely to be received by an individual.

6.2 ASSESSING THE NEED TO ISSUE KI

6.2.1 Obtain a copy of Attachment 1, Thyroid Committed Dose Equivalent Graph, and estimate the dose commitment for the thyroid.

6.2.2 Verify the calculations/measurements/estimates and record the results on Form 1903.035A, Potassium Iodide Administration Form.

6.2.3 Report the results to the TSC Director/EOF Director and advise them as to the need to issue KI in accordance with this procedure.

6.3 KI ISSUANCE REQUIREMENTS

6.3.1 When thyroid CDE is estimated to be 10 rem or greater.

6.3.2 The TSC Director/EOF Director shall designate the individuals who will receive KI and the individuals to administer KI.

6.3.3 The individual(s) to receive KI shall voluntarily elect to take KI.

6.3.4 The individual to receive KI shall read Attachment 2, Potassium Iodide Precaution Leaflet, and complete the appropriate sections of Form 1903.035A, Potassium Iodide Administration Form, and Form 1903.035C, ANO Medical Questionnaire: Iodine Sensitivity.

6.4 DISTRIBUTION OF KI

NOTE

KI is stored in the following locations:

A. TSC Emergency Kit
B. Onsite Radiological Monitoring Kit (located in the OSC)
C. EOF Emergency Kit
D. Field Monitoring Kits (located in the EOF)

6.4.1 Assemble the individuals who were designated to receive KI and the individuals to administer the KI.

6.4.2 Provide the individuals designated to receive KI with copies of:

A. Form 1903.035A, Potassium Iodide Administration Form

B. Attachment 2, Potassium Iodide Precaution Leaflet

C. Form 1903.035C, ANO Medical Questionnaire: Iodine Sensitivity

6.4.3 The individuals designated to administer KI should obtain copies of Form 1903.035B, KI Issue Record.

6.4.4 Ensure personnel read and/or complete the appropriate sections of the Forms and Attachments provided in Step 6.4.2.

6.5 GUIDELINES FOR THE ADMINISTRATION OF KI

NOTE

The TSC Director/EOF Director can authorize the administration of KI in the field after the Field Monitoring Team members have complied with the guidelines of this procedure. Completion of the KI documentation may be accomplished later at the convenience of the TSC Director/EOF Director.

6.5.1 If possible, KI should be administered approximately one-half hour before exposure for maximum blockage.

6.5.2 Final uptake is halved if KI is administered within 3-4 hours after exposure.

6.5.3 Little benefit is gained with KI administration 10-12 hours after exposure.

6.5.4 Once the KI is taken and the Iodine concentration is verified or the calculated dose determined, the tablets should be issued for a minimum of six (6) to a maximum of ten (10) consecutive days. One tablet is issued each day.

6.5.5 In all cases where airborne contamination is anticipated, the use of proper respiratory equipment shall be considered.

6.5.6 Verify that each individual receiving KI has completed and signed Forms 1903.035A and 1903.035C.

6.5.7 Verify that there are no "YES" blocks checked on Form 1903.035C, ANO Medical Questionnaire: Iodine Sensitivity.

6.5.8 Individuals who have answered "YES" to any question on Attachment 7.5, ANO Medical Questionnaire: Iodine Sensitivity, will initially be considered to be iodine sensitive and must be treated as follows:

A. The individuals will be relocated or replaced to eliminate or minimize the uptake of radioiodine in the thyroid gland, or

B. The individuals WILL NOT receive KI without the RP&RW Manager's/REAM's authorization (after evaluation of the "YES" answer and the TSC Director's/EOF Director's concurrence).

6.5.9 Issue each individual designated to receive KI one (1) 130 mg KI tablet.

6.5.10 Record the issuance on Form 1903.035B, KI Issue Record.

6.5.11 Forward all completed paperwork to the RP&RW Manager/REAM.

6.5.12 Individuals listed on Form 1903.035B, KI Issue Record, should have a whole body count and/or bioassay analysis at the earliest opportunity.

6.5.13 Where possible, whole body counts and/or bioassay analysis should be given on a regular basis throughout the KI issue period to verify the effectiveness of the KI and to estimate dose commitment.

6.6 FINAL CONDITIONS

6.6.1 Each individual whose estimated exposure to radioiodine exceeded 10 rem has been identified and administered KI, as appropriate.

6.6.2 All necessary forms are completed and reviewed by the RP&RW Manager/REAM and the TSC Director/EOF Director.

6.6.3 Completed documentation collected and assembled by the RP&RW Manager and/or REAM for post-event assessments and records.

6.6.4 Each individual who was exposed has been scheduled for bioassay analysis.

7.0 ATTACHMENTS AND FORMS

7.1 ATTACHMENTS

7.1.1 Attachment 1 - Thyroid Committed Dose Equivalent Graph

7.1.2 Attachment 2 - Potassium Iodide Precaution Leaflet

7.2 FORMS

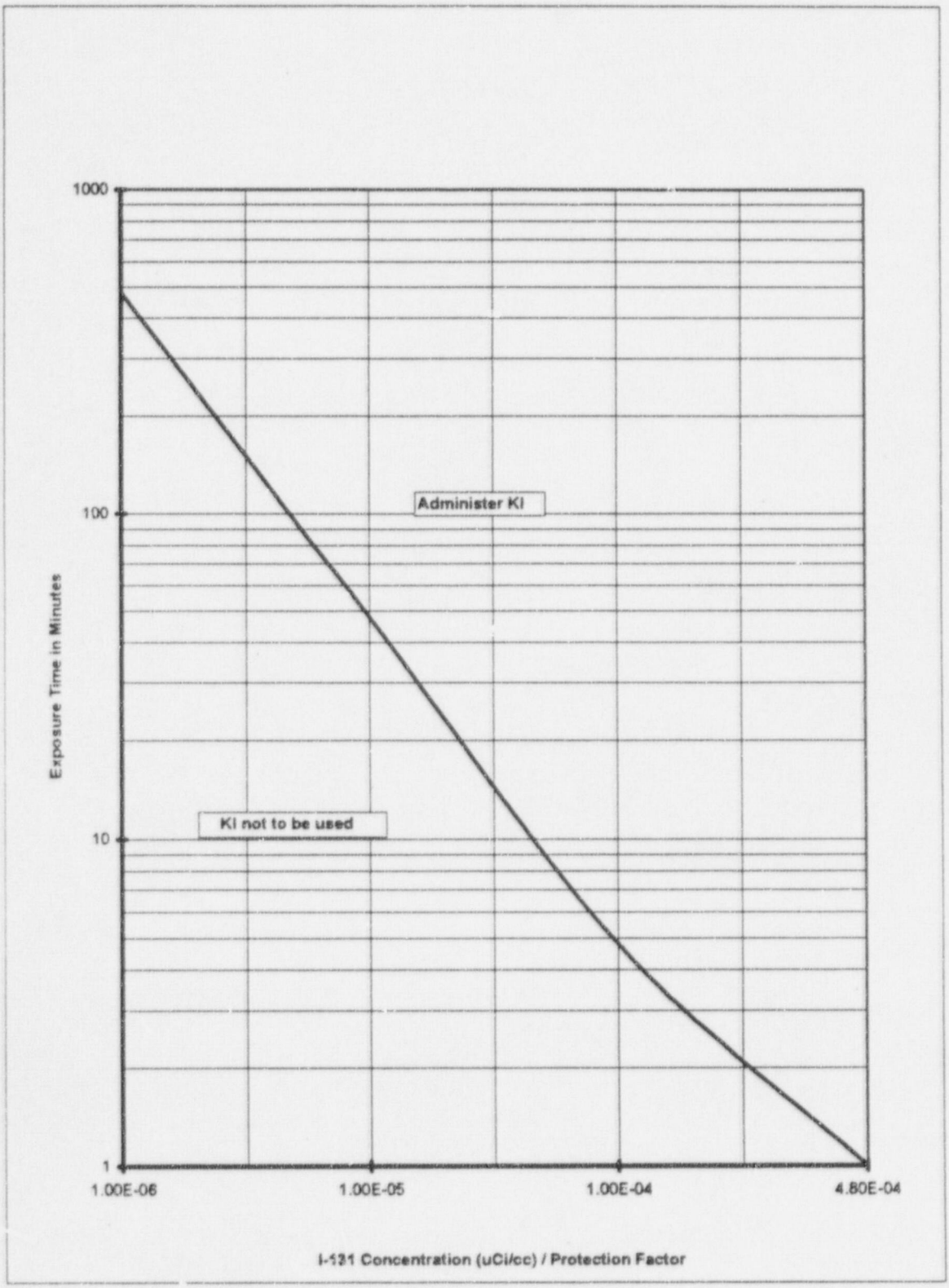
7.2.1 Form 1903.035A - Potassium Iodide Administration

7.2.2 Form 1903.035B - KI Issue Record

7.2.3 Form 1903.035C - ANO Medical Questionnaire: Iodine Sensitivity

ATTACHMENT 1

THYROID COMMITTED DOSE EQUIVALENT GRAPH



ATTACHMENT 2

POTASSIUM IODIDE PRECAUTION LEAFLET

THYROID BLOCKING AGENT INSTRUCTION SHEET

THYRO-BLOCK
TABLETS
(POTASSIUM IODIDE TABLETS, USP)

(pronounced poe-TASS-e-um EYE-oh-dyed)
(abbreviated: KI)

TAKE POTASSIUM IODIDE ONLY WHEN AUTHORIZED. IN A RADIATION EMERGENCY, RADIOACTIVE IODINE COULD BE RELEASED INTO THE AIR. POTASSIUM IODIDE (A FORM OF IODINE) CAN HELP PROTECT YOU.

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 in the event of a radiation emergency.

DOSE

Tablets: One (1) tablet once a day.

Take for 10 days unless directed otherwise by the Emergency Director or Offsite Emergency Coordinator.

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.

DESCRIPTION

Each THYRO-BLOCK TABLET contains 130 mg of potassium iodide. Other ingredients: magnesium stearate, microcrystalline cellulose, silica gel, sodium thiosulfate.

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.

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 may also take this drug.

HOW AND WHEN TO TAKE POTASSIUM IODIDE

Potassium iodide should be taken as soon as possible after authorization. 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 ten 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) bottles of 14 tablets (NDC 0037-0472-20). Each white, round, scored tablet contains 130 mg potassium iodide.

Potassium Iodide (KI) Administration Form

Name of Exposed Individual: _____, _____, _____
Last First Middle

Social Security Number: _____ Badge Number: _____

Duration of Exposure: _____ I-131 Concentration: _____
Minutes µCi/cc in air

Estimated Thyroid Dose Commitment: (Check One) ☐ <10 Rem ☐ ≥ 10 Rem

Date of Exposure: _____

Respiratory Protection Worn During Exposure: (Check One) ☐ Yes ☐ No

Respirator Protection Factor: _____

Known Iodide Allergy/Previous Allergic Reaction: (Check One) ☐ Yes ☐ No

CAUTION
If the above box is checked yes, then do not administer KI.

I Verify that I have read and understand the precaution leaflet and I understand that taking thyroid blocking agent (KI) is strictly voluntary.

I (Check One) ☐ Do ☐ Do Not choose to take KI.

_____ _____
Signature of Exposed Individual Date

Approved: _____ _____
EOF Director/TSC Director Date

KI Tablets Issued By: _____ _____
Signature Date

Notes: _____

_____

_____

_____

KI ISSUE RECORD

	KI ADMINISTRATION									
	1	2	3	4	5	6	7	8	9	10
	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date
	Int.	Int.	Int.	Int.	Int.	Int.	Int.	Int.	Int.	Int.
Name:										
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MEDICAL QUESTIONAIRE: IODINE SENSITIVITY

Name: _____, _____, _____ SS No: _____
LAST FIRST MIDDLE

Badge Number: _____ Company: _____ Dept: _____

Please answer the below listed questions and mark the appropriate box.

NO.	QUESTION	YES	NO
1.	Have you any known allergies? If so, please describe major severity of allergy and medications taken, if any.		
2.	When eating seafood or shellfish, do you suffer from symptoms of stomach or bowel upset or skin eruption? If so , explain.		
3.	Has any physician told you that you have a sensitivity to iodine?		
4.	Have you ever had a gallbladder dye test, kidney x-ray requiring dye injection, thyroid isotope scan? If so, any reactions?		

Please explain any yes answers: _____

_____

_____

_____

_____

Signature: _____ Date: _____