

I. PURPOSE

- A. The purpose of this procedure is to define under what emergency conditions Potassium Iodide (KI) should be administered to station personnel and who has the authority to determine when and at what dosages KI should be administered.

II. DISCUSSION

## A. Effectiveness.

1. KI is an effective means of blocking radioiodine from the thyroid gland. If possible, it should be administered approximately 1/2 hour to 1 day before exposure for maximum blockage. Final uptake is halved if KI is administered within 3 to 4 hours after exposure. Little benefit is gained if it is administered 10 to 12 hours after exposure.

## B. Dosage.

1. Once taken, and the concentration is verified or estimated by dose calculations, the tablets should be taken for 10 days post-exposure. Dosage is one (130 mg) tablet per day. Individuals suspected of inhalation of airborne contaminant should receive thyroid counts on a regular basis throughout the KI treatment period to verify effectiveness of treatment and to estimate dose commitment.

## C. Precautions/Side Effects.

1. Potassium Iodide should not be used by individuals allergic to iodine. Usually side effects occur when the dose is higher than that recommended for a long period of time. Possible side effects include skin rashes, swelling of the salivary gland, and iodism (metallic taste, burning mouth and throat, sore teeth and gums, symptoms of a head cold, and sometimes stomach upset and diarrhea). If the side effects are severe or if an allergic reaction is experienced, stop taking KI and contact a doctor for further instruction.

III. REFERENCE MATERIAL

- A. CNS Emergency Plan.  
 B. NUREG 0654, Revision 1.  
 C. NCRP 55, Protection Of The Thyroid Gland In The Event Of Release Of Radioiodine, National Council on Radiation Protection and Measurements, 1977.

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Revised By/Date	Reviewed By/Date	Approved By/Date	Rev	Procedure	Page 1 Of
R. Winfield 10/12/84	D. Whitman 10/26/84	<i>D. Whitman</i> 10-29-84	3	5.7.14	2 Pages

#### IV. PREREQUISITES

##### A. Potassium Iodide is to be administered:

1. Whenever a calculated radioiodine dose of 10 rem or greater to the thyroid is likely to be received.
2. If possible, prior to undertaking a life-saving operation where high levels of radioiodine are suspected and no current air analysis is available.

#### V. LIMITATIONS

- ##### A. Refer to Section II. for information on effectiveness and dosage.

#### VI. PRECAUTIONS

- ##### A. KI should not be administered to personnel allergic to iodine.
- ##### B. KI will be administered on a voluntary basis.

#### VII. PROCEDURE

##### A. Stable Iodine Thyroid Blocking (KI).

1. The Emergency Director, acting on the recommendations of the Radiological Manager, will determine when and to whom KI may be administered.
2. The Radiological Manager, or his designee, will:
  - a. Obtain bottle(s) of 130 mg KI tablets from the Control Room TSC, EOF, AEOF, Chemistry and Health Physics, Instrument and Control/Electrical, or Mechanical/Maintenance OSC.
  - b. Dispense one tablet to each individual that has an emergency team assignment and may potentially enter a high-level airborne radioiodine environment.
  - c. Ensure that records (Attachment "A") are maintained for those individuals who received KI tablets.
3. KI tablets may be provided to non-NPPD emergency response organizations (i.e. States, NRC, FEMA, etc.) for distribution to their emergency workers. Administration of KI to non-NPPD personnel will be the responsibility of the organizations to which these personnel belong.

#### VIII. ATTACHMENTS

- ##### A. Attachment "A", Potassium Iodide Distribution Record.





Nebraska Public Power District

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November 5, 1984

Mr. Robert D. Martin  
Regional Administrator  
U.S. Nuclear Regulatory Commission  
Region IV  
611 Ryan Plaza Drive  
Suite 1000  
Arlington, Texas 76011

Subject: Emergency Plan Implementing Procedures  
Cooper Nuclear Station  
NRC Docket No. 50-298, DPR-46

Dear Mr. Martin:

Pursuant to the requirements of 10 CFR 50 Appendix E, Section V, "Implementing Procedures", Nebraska Public Power District is submitting one copy of EPIP 5.7.14, Revision 3, "Stable Iodine Thyroid Blocking (KI)".

If you have any questions regarding this EPIP, please contact my office.

Sincerely,

J. M. Pilant  
Manager, Technical Staff  
Nuclear Power Group

/cmk  
Enclosure

cc: Document Control Desk w/2 enc.  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

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