



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

July 28, 1989

Memo to Curtiss 7/89

MEMORANDUM FOR: Commissioner Curtiss

FROM: James M. Taylor, Acting Executive Director for Operations

SUBJECT: NRC POSITION ON STOCKPILING POTASSIUM IODIDE: DIFFERING  
PROFESSIONAL OPINION

This is in response to your memorandum dated June 22, 1989 in which you requested the staff's views on the concerns regarding Potassium Iodide raised by Mr. Peter Crane.

The NRC staff position on the use of Potassium Iodide (KI) as a thyroid radioprotector was published in a Federal Register Notice dated July 14, 1985. The position was developed by FEMA with NRC, EPA and DOE participation and concurrence, and states:

"While valid arguments may be made for the use of KI, the preponderance of information indicates that a nationwide requirement for the predistribution or stockpiling for use by the general public would not be worthwhile. This is based on the ability to evacuate the general population and the cost effectiveness of a nationwide program which has been analyzed by the NRC and DOE National Laboratories (NUREG/CR-1433). While the use of KI can clearly provide additional protection in certain circumstances, the assessment of the effectiveness of KI and other protective actions and their implementation problems indicates that the decision to use KI (and/or other protective actions) should be made by the states and, if appropriate, local authorities on a site specific basis."

The Food and Drug Administration has found KI use as a thyroid blocker for radioiodine to be safe and effective, and the NRC and FEMA recommend that licensees and State authorities maintain a supply of KI for use by plant workers and institutionalized persons in the event of a nuclear accident (NUREG-0655). However, it should be observed that KI protects only the thyroid, and only if it is administered in appropriate doses, before or shortly after a release of radioiodine. Other protective measures such as sheltering and evacuation may be necessary to protect against uptake of other radionuclides and external radiations, and may provide more effective protection than use of KI.

The staff again considered the issue of stockpiling KI in NUREG-1251, "Implications of the Accident at Chernobyl for Safety Regulation of Commercial Nuclear Power Plants in the United States." The staff concluded that there were no new reasons to revise the agency's position as stated above. The staff now advises me that its analyses indicate the iodine releases in postulated accidents would be even lower than they were predicted to be at the time the FEMA/NRC position was established.

Mr. Crane's DPO which urges that NRC change its position has been assigned to the Office of Research for resolution according to established agency procedures (NRC Manual Chapter NRC-4125). The specific questions raised by Mr. Crane about the bases of the agency's position (e.g., the adequacy of NUREG/CR-1433) will be addressed during this process. Any additional information developed during this review, will be provided to the Commission upon completion of the DPO process.

Original Signed By

James M. Taylor

James M. Taylor  
Acting Executive Director  
for Operations

cc: Chairman Carr  
Commissioner Roberts  
Commissioner Rogers  
SECY  
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See next page for Distribution

\* See previous concurrences

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OCT 13 1989

MEMORANDUM FOR: Hugh L. Thompson, Jr., Deputy Executive Director  
for Nuclear Materials Safety, Safeguards, and  
Operations Support

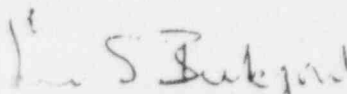
FROM: Eric S. Beckjord, Director  
Office of Nuclear Regulatory Research

SUBJECT: STATUS IN PROCESSING DIFFERING PROFESSIONAL  
OPINION (DPO) ON STOCKPILING POTASSIUM IODIDE

In response to your memo of October 11, 1989 to me on the above subject, I have reviewed the status of this DPO review. There have been delays primarily due to the need to obtain and evaluate additional information on the dose level needed to ablate the thyroid gland, the cost of thyroid nodule treatment, and the incidence of thyroid cancer after exposure to Iodine-131. Our desire to evaluate this information thoroughly in order to permit a resolution of the DPO at the lowest possible level has contributed to this delay.

We understand that Harold Denton has provided Mr. Crane with some information on the iodine release resulting from the Chernobyl accident. We would like to review this information for its relevance on this topic.

We plan to meet one more time with Mr. Crane to review this latest information and project completion of this DPO by the end of November, 1989.

  
Eric S. Beckjord, Director  
Office of Nuclear Regulatory Research

cc: J. Taylor

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