UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555
October 21, 1991

MEMORANDUM FOR: James M. Taylor
Executive Director
for Operations

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

SUBJECT: DIFFERING PROFESSIONAL OPINION ON STOCKPILING POTASSIUM IODIDE

As you know, the staff has had under review a differing professional opinion (DPO) filed by Peter Crane, formerly of the Office of the General Counsel. The original DPO had two basic points: (1) that the cost-benefit analysis in NUREG/CR 1433 concerning the stockpiling of potassium iodide contained flaws and omissions, and (2) that misleading information was provided to the public and the Commission on the significance of radiation-caused thyroid abnormalities during a public Commission meeting in November of 1983. In correspondence from Mr. Crane subsequent to the DPO, he also brought up a third point -- that the staff knowingly misled the Commission at the November, 1983 Commission meeting.

The DPO suggested prompt withdrawal of NUREG/CR-1433, "Examination of the Use of Potassium Iodide (KI) as an Emergency Protective Measure for Nuclear Reactor Accidents;" notification of States, localities, and other federal agencies, and the public of the flaws and omissions in the cost-benefit analysis; and that affirmative steps be taken to ensure potassium iodide is stockpiled for possible emergencies.

This memo provides an update on the disposition of the DPO.

Disposition of the DPO with respect to point 1 -- that the cost benefit analysis in NUREG/CR 1433 contained flaws and omissions:

With respect to point 1, the DPO review panel, which issued its report in December, 1989, agreed with Mr. Crane that the analysis in NUREG/CR-1433 was flawed, but concluded that the revised analysis did not warrant any change in the Federal policy. However, Mr. Crane believed that the panel failed to address two qualitative factors in their reassessment of the cost-benefit analysis. As a result of the DPO panel report, review of the report by the D[illegible]cor, RES, and subsequent direction from you, the following actions have been taken to resolve point 1:

- On September 28, 1990, a Federal Register Notice was published informing the public that the cost-benefit ratio supporting the current federal policy may have narrowed, announcing the planned revision of NUREG/CR-1433, and noting our participation in the Federal Radiological Preparedness Coordination Committee's (FRPCC's) reevaluation of the Federal position on stockpiling KI[1].

- On December 24, 1990, RES issued the attached Task Action Plan (TAP) for policy re-evaluation regarding potassium iodide use during a nuclear plant accident. The TAP addresses the qualitative factors raised by Mr. Crane and updates the quantitative factors, including the correction of previously identified flaws. The planned RES activities are also explained in the recent Commission Paper (SECY 91-321).

Upon completion of the TAP, I expect point 1 of the DPO to be resolved.

Disposition of the DPO with respect to point 2 -- that misleading information was provided to the public and the Commission:

The second point of the DPO was that misleading information was provided to the public and the Commission on the significance of radiation-caused thyroid abnormalities during a public Commission meeting on November 22, 1983. The cost of treating cancerous thyroid nodules (about 40% of the total nodules) and the fact that an estimated 2.4% of all nodules prove fatal was omitted from the discussion. In addition, other statements made by the staff at the briefing could have left the Commission with a mistaken impression concerning the gravity of radiation-induced thyroid illness. Although a discussion of the cancerous nodules and estimated fatalities was included in the supporting material provided to the Commission in SECY-83-362, this information was never brought out at the Commission meeting.

Subsequent to the Commission meeting, Mr. Crane discovered the aforementioned differences between the oral discussion recorded in the transcript of the Commission meeting and the written materials that had been provided to the Commission in advance of the briefing. This was pointed out to the Commission in a letter from the General Counsel, and the Commission was later provided with additional information by the EDO, OGC, and the Office of Policy Evaluation concerning this point. Thus the Commission was fully informed before reaching its policy decision in May, 1985.

---

[1] The FRPCC's reevaluation of the Federal KI policy was prompted by a September, 1989 letter to the Chairman of the FRPCC from the American Thyroid Association (ATA). A meeting of the FRPCC was held on July 24,1990 attended by representatives from the American Thyroid Association (ATA), FEMA, FDA, NIH, NRC, and the state of Tennessee to discuss the KI issue. It was decided that the existing store of KI should be inventoried and that a working group should be established to further address the issue of stockpiling and to make recommendations regarding the Federal policy.

However, Mr. Crane argues that the States and the public were not informed of the misinformation.

Mr. Crane believes that the facts concerning the gravity of thyroid illness and the intangible benefits of preventing this illness, taken together with the narrowing of the differences between costs and benefits of stockpiling KI, could enter into the public's and States' evaluation of stockpiling. He therefore believes that the NRC has an obligation to correct the record on the gravity of radiation-caused thyroid illnesses as portrayed by the staff during the November, 1983 Commission meeting, whether or not its bottom line position on the cost-effectiveness of KI has changed.

The DPO panel did not directly address the issue of correcting the public record; however, the RES action plan does address this issue. The planned NUREG will correct the analysis and address both the quantitative and qualitative issues raised by Mr. Crane. Through the FRPCC working group, the States will be invited to review the draft NUREG. In addition, the staff will distribute SECY 91-231 to the appropriate state and local government agencies to assure that these groups have full knowledge of the planned KI policy reevaluation and the points raised in the DPO concerning the staff's oral presentation to the Commission. I believe that these actions are responsive to point 2 of the DPO.

Disposition of the DPO with respect to point 3 -- that the staff knowingly misled the Commission:

The third point concerns the assertion that the staff knowingly misled the Commission on the gravity of thyroid illness by omitting certain information from the briefing and understating the gravity of thyroid illness. Mr. Crane's allegation on this matter was referred to the Inspector General for review on December 21, 1990; however the IG declined to pursue it, deferring the matter to us for resolution.

After reviewing the full transcript of the 1983 Commission briefing, as well as letters from Peter Crane dated 11/9/90 and 3/2/91 and the attached letter from Robert Bernero dated 2/26/91, I have concluded that although the staff were persuasive in presenting their position that the stockpiling or predistribution of KI was not worthwhile, they did not intentionally mislead the Commission. The general atmosphere of the briefing was one of careful examination and questioning of the staff's position, particularly by Chairman Palladino and Commissioner Bernthal, including a fair amount of discussion on the subject of individual risks versus the costs of KI. In view of the probing questions and discussion of the cost-benefit issue during the briefing, it seems unlikely that the Commission was substantively misled by the omission of the specific facts cited by Mr. Crane. It should also be noted that the written material that had been provided to the Commission was reasonably complete on the issue in question, and the Commission was subsequently provided with several differing views on the issue by the General Counsel, the NRC Office of Policy Evaluation, and the EDO prior to making its

policy decision a year and a half later in May of 1985. Mr. Crane was listed as the staff contact on a Commission paper from the General Counsel dated April 17, 1984 which directly addressed the omission of fatalities from the staff's analysis.

I do not believe that any further action on this point is warranted. I have discussed the proposed work with the RES staff who are carrying out the revised analysis, and I am convinced that they are approaching this task with objectivity and professionalism. In addition, none of these staff were involved in the original analysis.

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

cc: W. Parler
E. Beckjord
R. Bernero
P. Bird