25 JUL 1967

MEMORANDUM FOR THE SECRETARY OF DEFENSE

SUBJECT: Radiation Hazards to Uranium Miners

The Federal Radiation Council met on Thursday, July 20, and unanimously recommended the 1 WL level to the President. The background on this is in Dr. Walske's memoranda to you of May 11, June 21, and July 14, (Tabs A, B, and C). This action resolves the disagreement that had existed within the Federal Radiation Council. Further, it should satisfy the Joint Committee on Atomic Energy on two counts. The Executive Branch has taken a clear cut position and this position should be acceptable to the Joint Committee.

F. Costagliola
Deputy Assistant to the
Assistant to the Secretary of
Defense (Atomic Energy)

Copy to:
DepSecDef

Typed: F. Costagliola/shGellner
24 July 67

Federal Radiation Council
A-150
Drawer #2
(Clin Admin Asst.)

11 MAY 1967

MEMORANDUM FOR THE SECRETARY OF DEFENSE

SUBJECT: Radiation Hazards to Uranium Miners

At a hearing Tuesday of the Joint Committee on Atomic Energy on the above subject, Secretary Wirtz, in his prepared testimony, stated that Secretary of Defense McNamara, a member of the Federal Radiation Council, has concurred in the adoption of the 0.3WL standard. In subsequent discussion at the hearing Mr. Wirtz said that his conversation with you followed his order and that you had authorized him to say that you agreed with his action. Further questioning brought out that at a meeting of the Federal Radiation Council (FRC) last Thursday (at which I represented DoD as the alternate member) there was a split vote with the representatives from AEC, DoD and Agriculture advocating a more deliberate approach to the 0.3WL level, with a 1WL level to be used in an intermediate step. This position was, incidentally, that recommended by the FRC professional staff. HEW, Labor and Interior were in favor of a faster approach.

The issue at the FRC meeting was <u>not</u> whether to go ahead with some new restriction on radiation level, but rather to decide what level was technically justified and on what time scale it could be achieved. Although DoD has only a very small direct interest in uranium procurement under present conditions, I have studied the questions involved because of our membership on the FRC. It seems quite clear that there is a definite correlation between increased lung cancer among miners and exposure to radioactivity. There is, however, very meagre data available from which to determine the quantitative relationship. Additional uncertainties include:

1. Large variations in radioactivity throughout the mines. It is presently unclear to me whether there are corresponding variations in the locations in the mines at which the radioactivities reported were measured.

Foster
5-11-67

2. Patterns of work which cause certain miners to work mainly at the working face where ore is broken out and radioactivity is highest, while most miners work in areas of much lower radioactivity.

3. The allowance that should be made for increases in miners' deaths due to ordinary dust inhalation and to increased cigarette smoking by miners. Both of these causes are known to be substantial contributors to deaths from lung cancer in all types of miners, but neither of these causes has been subtracted from the statistics on radioactivity-caused lung cancer in uranium miners. These causes are particularly important at the low exposure end of the statistics which is just where knowledge is needed in order to choose a sensible limit.

Accordingly, it seems possible that within these uncertainties the "proper" working level to set is either higher than 1WL or lower than 0.3 WL. Several practical considerations enter. First of all, average reported mine levels have been steadily lowered since 1950 from 9.0WL to 2.1WL, contrary to the impression given by some publicity on this problem. The AEC and others have improvement programs and these have been making progress. Secondly, in setting safety levels it is always easy from the public relations point of view to make them tighter, but very difficult to ease them. Thirdly, a year or two at the 1WL level would have given us enforcement experience, more data, and more time for analysis, while at the same time the incremental lifetime exposure of the miners would have been relatively insignificant. Most important of all, it is quite probable that achieving the 0.3WL level will put a serious financial burden on the mines. The AEC has estimated that the ten year cost to the industry to go to a 2WL level would be $7 million, while a further decrease from 2WL to 1WL could cost an additional $7.5 million. No one knows what the cost to reach 0.3WL will be, nor even whether it is possible under practical conditions.

These reasons were why I supported the AEC in its position. I am continuing to dig deeper into the available data in order to improve my understanding.

I regret that I wrongly estimated that this subject was unlikely to come to your attention and that it was inappropriate to take your time with it. If you would now like further particulars on any aspect, I would be pleased to try to present them.

SIGNED : CARL WALSKE

Carl Walske
Assistant to the Secretary
of Defense (Atomic Energy)

CWalske/ger/11 May 67

cc: DepSecDef

MEMORANDUM FOR THE SECRETARY OF DEFENSE

SUBJECT: DoD Position on Standards for Radiation Exposure of Uranium

The Federal Radiation Council will meet again on Thursday, July 20 to consider a recommendation to the President on the above subject. The background on this is in my memoranda to you of May 11 and June 21 (Tabs A and B). The issue is whether the 0.3 WL level in Secretary Wirtz' order (with the 1 WL level conditionally allowed for the next 18 months), or a flat 1 WL level will be endorsed.

Technically, there has been a thorough re-evaluation by the Public Health Service of the data on which Wirtz based his order. It has been determined that the data could support a threshold for radiation induced cancer at about the 1 WL level, but not at the 0.3 WL level. Of course, a safety factor of three is entirely attractive, except that it appears to work a substantial hardship on the mine owners trying to comply. Consequently, AEC is strongly for the 1 WL level. Secretary Gardner's chief advisors (the Surgeon General and Assistant Secretary Lee) are recommending the 1 WL level to him, but his decision is not yet known to me. Gardner has a date to testify before the Joint Committee on Atomic Energy early in August and he will certainly be acutely aware of the need to justify his decision to them.

On the other hand, Secretary Wirtz' advisors doubt that he will now further ease his order. They cite a variety of reasons he could give, but it seems to me that the main point is that it would represent a retreat for him from a very hard stand.

While DoD has no vested interest in the question, we are in the ambivalent position of my having originally supported the flat 1 WL level,

but Secretary Wirtz having announced your support of his position before the Joint Committee on Atomic Energy. There would be no difficulty, however, in our now presenting a position of DoD support for Secretary Wirtz, if you so desire.

My recommendation, though, is that DoD support the technically more defensible position of 1 WL, if your commitment to Secretary Wirtz allows this.

Carl Walske
Carl Walske
Assistant to the Secretary
of Defense (Atomic Energy)

Secretary's Decision:

Support Secretary Wirtz and 0.3 WL _____

Support 1 WL _____

7/18

21 June 1967

INFORMATION FOR THE SECRETARY OF DEFENSE

SUBJECT: Radiation Hazards to Uranium Miners

Since my May 11 memorandum on this subject various developments have led the Secretary of Labor to change his safety order.

The Secretary of Labor issued an order on May 5 setting a radiation level limit of 0.3 WL in uranium mines with government contracts. The Federal Radiation Council had met the day before on the subject. All agreed that there should be a restriction, but there was a split vote on what level should be recommended.

Since then, the Joint Committee on Atomic Energy's Subcommittee on Research, Development, and Radiation has held hearings. These hearings are currently recessed for further study of the record and of additional materials to be furnished. The sense of the members appears to be and to have been that there is a clear correlation between high radiation exposure and the occurrence of lung cancer, but that the correlation is uncertain at just the lower levels involved in choosing a safe limit of exposure. Hence, they are unconvinced that there is a scientific basis for the level set by Secretary Wirtz. The bulk of the testimony before them corresponds to these views.

On June 9, Secretary Wirtz issued a revised order. It still specifies the 0.3 WL standard but allows a more deliberate pace in meeting this standard. Secretary Wirtz' revision allows that mines with up to 1 WL are "in compliance" over the next 18 months provided that these mines establish programs to protect the health and safety of miners exposed to these conditions and to reduce the level to 0.3 WL by the end of the period.

21 JUN 1967

I view Secretary Wirtz' recent action as a substantial improvement in the situation. He is now closer to what I would have supported at the May 4 Federal Radiation Council meeting. It is as strict a level as can be judiciously set, keeping in mind both the paucity of relevant data and the hardships to the mine operators from compliance.

SIGNED CARL WALSKE

Carl Walske
Assistant to the Secretary
of Defense (Atomic Energy)

FSAdair/lc/21 June 67

cc: DepSecDef