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December 19, 1962

Dr. Glenn T. Seaborg
U. S. Atomic Energy Commission
Washington 25, D. C.

Dear Dr. Seaborg:

This letter is addressed to you in your two capacities as Chairman of the AEC and member of the Federal Radiation Council. I too am writing in a dual capacity as Leader of the Health Division at LASL, and also as a member of the New Mexico State Radiation Advisory Council. My inquiry has to do with the problem of the contamination of the atmosphere and of milk with radioactive iodine resulting primarily from activities at the Nevada Test Site.

I am sure that you are quite familiar with the problems which arose last summer in Utah and Minnesota when it was discovered that the I^{131} levels in the milk supply had risen into and even above range III as set forth in Report No. 2 (Background Material for the Development of Radiation Protection Standards), issued by the FRC in September, 1961. Considering the situation that existed at that time, it is hard to see how those two states could have followed any other course of action. This action, however, was criticized by both the U. S. Public Health Service and the FRC as being unnecessary.

Last week, at a meeting of AEC and contractor health protection personnel in St. Louis, Mr. Nehemias of the AEC, in discussing problems related to the statements of the FRC, said that these levels and ranges were not intended to apply to fallout conditions. On the other hand, if we refer back to the Council's Report No. 2 (Section II, paragraph 2.1, page 8), we find the statement, "Currently, the major concern is environmental contamination resulting from fallout from the explosion of nuclear devices and the release of radioactive iodine during the use and processing of fuel for reactors."

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Again, if we refer to the summary-analysis of the hearings held early in June before the Sub-Committee on Research Development and Radiation of the JCAE on the subject of "Radiation Standards, Including Fallout", we are made painfully aware of the very real state of confusion that exists.

It is also painfully evident that this is not an academic point. The Director of the New Mexico Department of Health, Dr. Stanley Leland, has asked the State Radiation Advisory Council to consider this subject at its next meeting. A little over half of the milk consumed in New Mexico is produced in other states, notably Utah, Colorado, Iowa, Oklahoma and Texas. Quite reasonably, I think, the New Mexico Health Department would like to know what it should do should it be found at some time in the future that any parts of our milk supply contain I^{131} at a level greater than some pre-determined number. New Mexico certainly would wish to avoid any "premature action" such as was mentioned in the August 29 letter from Mr. Calebrezze to Mr. Holifield, as quoted in Appendix 4 of the summary of the hearings in June. But neither does the state of New Mexico wish to encounter criticism for failure to take action in a situation where existing guides imply that such action should be taken.

The only "action" which has been taken or recommended so far has been to put dairy cattle on stored feed and to divert as much of the milk as possible to processed products such as butter, cheese and dried milk. In England, after the Windscale incident, considerable quantities of milk were simply dumped. Another alternative which offers very real attractions, is the addition of stable iodine to contaminated milk. Only a few milligrams of this per quart would enormously reduce the radiation dose to the thyroid, and also would rather neatly side-step the preoccupation with ranges and numbers. If the milk is known to contain I^{131} at any significant level, large or small, the administration of stable iodine should afford thoroughly adequate protection without upsetting the dairy industry or giving rise to unfavorable publicity and ungrounded fears. Perhaps any statement about unfavorable publicity should be qualified. We are all aware of the rather unpredictable reaction of the public to perfectly reasonable measures designed for their protection. This has been shown by

the highly vocal minority which has opposed, sometimes successfully, fluoridation of water supplies. The public, however, certainly does not object to the addition of iodine to salt, even though this may create a problem for a few patients already suffering from thyroid diseases. Personally, I feel that the procedure would arouse but little public objection if it were simply carried out with honesty and candor in a straightforward manner.

It is of more than passing interest to note that our friends in the UK are actually prepared to administer stable iodine to people in the event of another incident similar to the one at Windscale. My old friend, Dr. Kenneth Duncan, who is Chief Medical Officer at Harwell, visited here this past week and described the British program. As I understand it, they plan to administer stable iodine in 200 mg doses daily to milk drinking individuals. In this country, as the majority of the milk consumed comes from large distributing centers, it would seem far more simple to add the iodine to the milk, which would give complete assurance that those needing protection would get it.

It should be kept in mind that any cessation of weapon testing does not necessarily eliminate the problem. Each test of a Rover reactor in Nevada adds a not inconsiderable amount of iodine to the atmosphere, and atmospheric conditions at the time of a test could easily bring measurable amounts of I^{131} to the dairy regions in Utah and elsewhere.

May I urge that some action be taken which will resolve this dilemma and which will give our various states some basis for taking action for which they will not be criticized, as well as for avoiding premature action which is equally subject to criticism. I am under no illusion that this is a simple problem, and I sympathize with the difficulties of the FRC. In reiterating the fact that the numbers it assures are guides and not standards, the Council must feel rather like Cassandra in that nobody will believe them. I fear, however, that this is a problem which must be resolved without undue delay, and I respectfully urge your continuing interest in it.

Very sincerely yours,

THOMAS L. SHIPMAN, M.D.
Health Division Leader

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