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COMMENTS ON DRAFT SUBMITTED

The first sentence is an accurate statement and is precisely the reason why such concern should be met subsequently with straightforward statements of what is known and what is not known, as contrasted with what is supposition or speculation. The promotion of hysteria and groundless fears is certainly detrimental and extremely undesirable but the dissemination of incomplete information and facts which have no firm basis of experience or supporting data may be quite as objectionable.

The second sentence is speculative in character, and the water may or may not be safe depending on a variety of meteorological conditions and characteristics of the water source.

The third sentence at least implies knowledge, that as far as we know, is not yet available on a firm basis. As a matter of fact research projects are under way or are being initiated to determine just what the efficiencies of filtration plants and other methods and processes presently used in water treatment are. Also the source of supply of a number of cities is very close or adjacent to the city itself (e.g. the cities around the Great Lakes which use the Lakes as a source of supply). These "further safety factors" are not, in fact, or in all cases evaluated or existent. Also, what about our large cities (New York, San Francisco, etc.) without treatment plants?

The information contained in the fourth sentence is generally known but much information is lacking as to whether this adsorption phenomenon is reversible, what it is affected by and whether all materials exhibit the same adsorption characteristics. At Hanford the Health Physics Division is contemplating setting up a soils science section to obtain the above information with regard to the natural soils of the area. At Johns Hopkins a research project is being carried out to obtain similar information on bacterial slimes. The U. S. Geological Survey is also concerned with adsorption of radioactivity on soils and other earth materials.

In any case the latter half of the fifth sentence does not necessarily follow. Due to such actions as sloughing or organic slimes from pipe walls and lake and reservoir turnover (this occurs in almost all reservoirs and lakes at least twice a year and may occur more frequently depending on meteorologic and climatic conditions). The concentration of radioactive material on lake bottoms and pipe slimes might even be a detrimental factor.

The maximum permissible limit noted for fission products in water is still being evaluated and the statement that "many popular mineral waters contain more than this" does not really prove or disprove the adequacy of the maximum permissible limit. Although other similar statements have been

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DOE ARCHIVES

made regarding mineral waters and springs there has been no information as to the number of people using these sources, the quantities and frequency of consumption, or the effects on the people using these sources. In other words, although statements have been made to the effect that some natural waters contain more radioactivity than allowed by existing maximum permissible limits, there has been little or no epidemiologic evidence to support any statement as to whether this is good or bad.

SUGGESTED REDRAFT

The following redraft of the paragraph is offered as a suggestion.

Much concern has been expressed regarding the possible contamination of drinking water and this is understandable. The following statements indicate what our present state of knowledge is concerning this possibility and what is being done to get answers to problems yet unsolved.

In a high air burst on a clear day the fall-out of radioactive materials will probably be small and with possible dilution in the water the water supply may be safe. The water source should, however, be checked at once for the presence of excessive amounts of radioactivity and if present on a periodic basis so long as contamination persists.

At present, the efficiency of modern water treatment methods in removing radioactivity from water is being investigated. It is known that, under certain conditions, processes similar to those used in water treatment are quite effective in removing radioactivity. Information is also being sought on how contamination may affect water plant operation. By proper operation of intakes and use of safe water in storage, it may, in many cases, be possible for a water works operator to by-pass for limited periods contaminated water which otherwise might enter his system. In cities where there is no treatment plant this may be an important point.

Initially, the tendency of radioactive materials to be adsorbed on muds and slimes may be a safety fact in preventing radioactivity from getting to the consumer. However, reservoir "turn-over" and pipe slime sloughing are common occurrences and must be taken into account in the continuous operation of a water supply for under these conditions a high degree of contamination may follow.

Hazards in the case of a storm or base surge must be further evaluated before sound conclusions can be arrived at as to their effect on sources of drinking water. At Bikini sea water from a heavily contaminated source was distilled and found safe for drinking purposes.