

*Quality of Water*

We do not want to unduly alarm people since this has usually occurred at relatively low concentrations, in the parts per billion range or less. This detection has resulted largely from significant advances made in our ability to measure such low concentrations. In most of the cases, the concentrations are so low that they do not represent a health hazard, but at the same time they should not be ignored. Guidelines or objectives are needed to enable an assessment to be made of possible harm to health.

We know that the general public is concerned that conventional water processes, which are designed primarily to control bacteriological contamination and to remove inorganic contaminants, may not adequately remove certain trace organic contaminants. This concern has been manifested by the purchase of home-use treatment devices. It is believed that in-home devices to treat or filter municipal water supplies are used in about 3 per cent to 10 per cent of Canadian homes.

Although many of these water treatment devices may be safe and useful, it must be noted that the quality and safety of these devices is not regulated by any government Department, and considerable excesses in advertising have been known to occur. It is apparent that some control of these devices is required. Requests for government control have been expressed by consumer groups, provincial agencies and the public.

It is now known that some compounds generated in drinking water during treatment may also present health hazards. One of the most widely used treatment chemicals is chlorine, which is used as a disinfectant. Some concern has been expressed that chlorination can give rise to the formation of chloroform and other chlorinated by-products, some of which may be toxic under certain conditions.

The benefits of chlorination far outweigh these concerns, however, and a look at alternative disinfectants suggest that the well proven chlorination process should not be abandoned yet since there is very limited knowledge about the alternatives. Two alternatives being considered are ozone and chlorine dioxide. Ozone is becoming increasingly popular in Canada, particularly in Quebec. Ozonation reaction products are still relatively unknown, but are being studied by scientists in the Department of National Health and Welfare.

Chlorine dioxide does not give rise to the undesirable by-products formed during the normal chlorination process. However, a major disadvantage is the production of chlorate and chlorite which may be of health significance when ingested regularly at high concentrations.

Some chemicals may enter our drinking water indirectly, as a result of the use of piping, paint, coatings or other lining materials used in water storage and distribution systems. Chemicals may be released in small amounts as the material ages, or contaminants of the original material may be released. Concern is expressed about some of our distribution systems utilizing asbestos-lined pipe. Any new legislation should address the problems of lack of mechanisms to evaluate and regulate drinking water contaminants arising from both direct and indirect means.

You will recall, Mr. Speaker, that the recent Speech from the Throne included a commitment from the Government to introduce legislation on drinking water. The Minister of National Health and Welfare (Mr. Beatty) intends to introduce a safe drinking water Act for Canada. Already, officials of the Department of National Health and Welfare are working with the Department of Justice in mapping out the areas to be covered by the Act.

Quality guidelines for drinking water, including microbiological, physical, chemical and radiological characteristics will be established and published in the *Canada Gazette*. For reasons outlined previously, these guidelines will not be mandatory standards unless made so by the provinces, as is the case at present.

The present system for establishing guidelines has worked well for the past 20 years, thanks to the continuing high degree of co-operation demonstrated by all the provinces and, in the last few years, by the territories as well. Thus there would be no change in legislative status, but current practice would be given legislative authority.

Consideration is, however, being given to making drinking water quality objectives, based on the guidelines, mandatory for areas under federal jurisdiction. This would apply to drinking water on all federal passenger carriers, including airlines, railways, ships and interprovincial buses. It would also include community drinking water systems in native communities and reserves that have not yet reverted to control by native people themselves or by the province. Individual wells or