June 7th 1995

STATES OF JERSEY AIRPORT - POLLUTION OF WATER SUPPLIES THE MEDICAL IMPLICATIONS

Consultants in Environmental Sciences Limited were employed by the Harbours and Airports Committee to undertake an investigation into pollution in an area of St Pete that had occurred as a result of activities at the Airport Fire Service training ground a the western end of the runway at Jersey Airport.
A number of complex and detailed reports have been produced. Included 'm those reports are the protocols and procedures adopted in analysing environmental sample The Harbours and Airport Committee has undertaken to produce a user friendly guide to the information in those reports, and my comments are solely addressing th(health impact of the pollution that has occurred in the area.

It should be borne in mind that a considerable percentage of the population of Jersey have private water supplies, through necessity or choice. It is known that many of those supplies are not of the highest quality, either due to high acidity, high nitrate levels, sewage pollution, high levels of naturally occurring metals or, in certain domestic supplies, high levels of solvents due to the acidic nature of the water.

Residents in the area in question know that their water is unsatisfactory in a number i ways, irrespective of any problems that have originated at the airport.

The Consultants in Environmental Sciences reports have principally addressed the issue of pollution by foam and its constituents, and hydrocarbons, although in their Chemical analysis they have come across evidence that there is sewage pollution and pollution due to pesticides.

My comments in this report should be taken against this background of a vulnerable water supply.

To specifically address the issue of foams and their breakdown products; foams have been visible in the water supplies of the area for a number of years. The use of these substances ceased in October 1993 and the problem has visually decreased since that time. The levels detected by the appropriate laboratories have declined and the products are now detectable only by the most sophisticated methods. At no stage were levels detected that would have been detrimental to health, and the situation has improved since then.

A question has been raised as to what the levels were in the past. This can only be answered hypothetically but, as foam appears to have been at its maximum level approximately two years ago, one could reasonably expect that levels in the potable supply were at their maximum at that time, and were not at a level that would affect health.

With regard to hydrocarbons in water, there is only recent evidence of hydrocarbons in the potable supplies of the relevant area of St Peter.

Since the airport authorities took steps to reduce the problem of foam and hydrocarbons running down into the catchment area, none of the potable supplies have exceeded the EC Directive level and, indeed, in the worst example of a field drain the hydrocarbon level was actually below the EC Directive maximum. The most recent results show a continuing decline and in 28 results, 22 were below 1µg per litre, two were below 2µg/l , two were below 3 µg/l and only one, at 8.9 µg/l, a field drain was anywhere near approaching the EC level of 10 µg/l. Indeed, in 12 samples hydrocarbons were not detected at all.

Specific concerns have been expressed about Benzene. I am not aware that anyone has reported the odour of Benzene in their water. The lowest odour threshold for ethyl Benzene is 2.4µg/l. The guideline value laid down by the World Health Organisation for this substance is 3OO µg/l and that is intended to correspond to an exposure 10,000 times lower than the highest exposure not shown to have an effect on laboratory animals. Therefore, although Benzene and Benzene-type substances have been detected in the water, they are at very, very small concentrations and are unlikely to produce detectable effects in the population of the catchment area.

The very low exposure levels are far removed from the levels known to cause cancer, and we have been assured that the estimates are intended to be pessimistic.

In summary, the people in this area of St Peter have a water supply that is 'vulnerable to pollution. The pollution due to their own environment, such as sewage and pesticides, illustrates this vulnerability. The pollutants from the airport have aggravated the situation; the level of pollution from substances originating at the airport are likely to be of nuisance value in the sense that they make the water smell or taste worse than before the incident was discovered, and it has certainly shaken people's confidence in their own water supply. However, whether that previous confidence was based on faith or fact is unknown.

It is recommended that a safe supply of potable water should be made available to the people in this area of St Peter, one option being the provision of a mains supply.

C R Grainger

Medical Officer of Health