

Thursday, April 18 2013

Lowermoor Water Pollution incident ‘unlikely’ to have caused long term health effects

It is unlikely that the short period of increased exposure to the chemicals involved in the Lowermoor water pollution incident in 1988 has caused delayed or persistent harm to health among local people, according to the most comprehensive report into the health effects of the incident published today.

The report, by the Lowermoor Subgroup of the Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment (COT), also concludes that it is unlikely that exposure to the chemicals will cause future ill health.

The Lowermoor water pollution incident took place in 1988 when a contractor's relief driver put 20 tonnes of aluminium sulphate in the wrong tank at the unmanned water treatment works owned by South West Water Authority at Lowermoor, near Camelford, in North Cornwall.

The COT set up the Lowermoor Subgroup (LSG) in 2001 at the request of Health and Environment Ministers to advise on whether exposure to the chemicals from the incident has resulted in delayed or persistent health effects, and whether any additional research is necessary.

In the report, the Subgroup notes that many local people are concerned and distressed about the possible health consequences of the incident. No conclusive link was found between the incident and the chronic symptoms and diseases reported to the Subgroup. However, the Subgroup has recommended that further work is needed in the following areas:

- Effect of contaminants on neurological health
- Effects on the development of children born to women who were pregnant at the time of the incident
- Effects on children aged under one year at the time of the incident
- The incidence of diseased joints in the affected area
- Further toxicological studies on aluminium

Also, the Subgroup noted that further analyses could be carried out on cancer incidence and mortality rates for the population who were in the Lowermoor supply area.

The Subgroup was chaired by Professor Frank Woods and included experts in toxicology, epidemiology and child health. In addition to reviewing scientific research, the Subgroup heard evidence throughout its period of work from people who considered their health to be affected by the incident, as well as local GPs and other relevant professionals.

Professor Woods said: “Our research indicates that it is unlikely that the relatively short term exposure to chemicals from this incident would have caused long term health effects among

local people. However, work on potential long term neurological effects is needed because of problems with the design of previous studies and to follow up an unusual case of dementia in an individual who lived in the Lowermoor water supply area at the time of the incident.

“Further work is also needed to track the health of the most vulnerable groups exposed to the chemicals. These are children born to women who were pregnant at the time of the incident, and youngsters aged under one at the time.”

Notes to editors

1. Press enquiries for the COT are being administered by Public Health England's press office. To arrange an interview with COT Subgroup Chairman Professor Frank Woods, please contact Andrew Tristem on 01235 825405 or Matthew Pardo on 01235 825406.
2. To see the full report go to the COT website:
<http://cot.food.gov.uk/cotwg/lowermoorsub/>
3. The Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment is a nonstatutory independent expert advisory committee which advises the Chief Medical Officer at the Department of Health and the Chairman of the Food Standards Agency, and through them, the government, on a wide range of matters concerning chemicals in food, consumer products and the environment.
4. The Lowermoor Incident Health Advisory group (LIHAG), which reported in 1989 and 1991, concluded that there was no convincing evidence that harmful accumulation of aluminium had occurred, nor that there was a greater prevalence of ill health due to the toxic effects of the contaminated water, but recognised that the incident and subsequent events had led to real suffering in the community. LIHAG also recommended peer review and scientific scrutiny of any Lowermoor studies with implications for public health policy, with assessment by Government expert advisory committees as appropriate.
5. The announcement of the COT investigation into the incident was made on August 14, 2001 by the then Environment Minister Michael Meacher and Health Minister Yvette Cooper. Membership of the Lowermoor Subgroup was announced on 18th January 2002.
6. The Terms of Reference of the COT subgroup are:
 - To advise on whether the exposure to chemicals resulting from the 1988 Lowermoor water pollution incident has caused, or is expected to cause, delayed or persistent harm to human health; and
 - To advise whether the existing programme of monitoring and research into the human health effects of the incident should be augmented and, if so, to make recommendations.
7. The Chairman of the subgroup is Professor H Frank Woods CBE, formerly of the University of Sheffield, now Emeritus. Other members comprised experts in toxicology, epidemiology, pediatric immunology, general medicine and a public interest representative. Two local representatives also served on the group but resigned at the final meeting. More details can be found on the Subgroup's website: <http://cot.food.gov.uk/cotwg/lowermoorsub/>
8. The Subgroup reviewed extensive data on water contaminant concentrations after the incident. They concluded that contaminant levels were highest on the 4-5 days after the incident but then fell markedly.
9. A consultation report was published in 2005. Publication of the final report was delayed until the completion of an inquest by Her Majesty's Coroner for the Western District of Somersetshire into the death of an individual who lived in the Lowermoor water supply area at the time of the incident. The individual had died after a rapidly developing dementia and examination of her brain revealed a severe

condition known as cerebral amyloid angiopathy (CAA), which is uncommon in someone of her age (late 50), and high levels of aluminium in the brain *postmortem*. The inquest concluded in March 2012.