FROM THE DESK OF:
E. V. John

W. R. Corey - B2SL
W. B. Papageorge - B2NA
H. S. Bergen - B2SL
E. P. Wheeler - A2SA
J. F. Stapleton - B2SA
K. W. Easley - 1920
P. J. A. Marsh - 5040

15,000 cases of poisoning

The Guardian Sep 25 1972

By ANTHONY TUCKER, Science Correspondent

Fifteen thousand people on Kyushu, one of Japan's main islands, have been affected in a massive outbreak of poisoning. The cause was a group of industrial chemicals known as PCBs — polychlorinated biphenyls.

The Royal Swedish Academy of Sciences journal Ambio, says that the first evidence of a major poisoning incident appeared in 1968 in the form of a strange and hitherto unknown disease.

Symptoms sometimes included gross skin eruptions, brown pigmentation, and eye discharge usually associated with human PCB poisoning, but brain and liver damage and bone deformities were also found. A number of apparently unaffected women have had deformed, pigmented, or mentally affected babies.

The accumulation of PCBs in nature has been discovered by accident and only after serious damage has been done—as in the case of contamination by mercury. It happens that PCBs are identifiable in the analyses that are now used for the routine monitoring of persistent pesticides.

New compounds

But, as Dr S. Jensen, head of the National Swedish Environmental Protection Board analytical laboratory, points out, large numbers of new chemical compounds, many completely unknown in nature, continue to enter the environment each year, and the discovery of hazardous accumulations are likely to occur at any time.

If we are to take proper measures to evaluate substances before they cause damage or irreversible changes in natural systems, then we need a much greater investment by responsible authorities in manpower and equipment for unbiased studies of pollutants, Dr Jensen says.

The cause of the Japanese poisonings was eventually identified as cross-contamination of rice oil—a widely-used foodstuff—with Kanechlor 400, a type of industrial PCBs. According to a survey carried out by Dr G. Umeda, the head of the department of clinical pathology at the Kitakyusyu Research Institute for Environmental Pollution, Japan, four main types of human disease have now been identified.

In a bitter attack on the Japanese authorities, who have so far recognised only 1,081 of the most seriously affected victims, Dr Umeda stresses the ability of PCBs to cross the brain and placental barriers and points to a number of unrecognised effects, including the sudden onset of acute poisoning symptoms as much as three years after accidental exposure to PCBs. In most cases, whether delayed or not, damage is permanent, recovery is rare, and no treatment is available.

Dr Jensen reports on a series of blood analyses carried out on Japanese, some of whom are PCB poisoning patients, on Swedes, and on an American who have spent some time in Japan. He draws attention to the higher PCB levels common in Japan and, disturbingly, to the apparent permanent rise in PCB levels found among those who have lived only a year or so in Japan.

This points to a residual PCB component that is unusually stable. Once into a biological system, it may degrade so slowly that even a very low intake can result in a growing accumulation.

PCBs have, in the West, been implicated in some major wildlife catastrophes and, although widely used since the 1930s, are now under voluntary control.

In mammals they may be accumulated only very slowly but at times of physiological stress may be suddenly mobilised to produce acute poisoning. Perhaps one of the most disturbing aspects of the Japanese disaster, like the massive outbreak of mercury poisoning in Iraq, is the length of time it has taken for information to be published.

PLF
EXHIBIT NO. 262
5/29/92 k

X 262

TRAN 070980

HARTOLDMON0024965