

HOLLAND: DIOXIN IN COWS MILK FROM INCINERATORS - GOVERNMENT REPORT NOW TRANSLATED.

This report, published on July 14, 1989, details the serious dioxin contamination of milk and meat resulting from the operation of Dutch incinerators. This report should be of great interest to the majority of communities in the U.S. that have operating incinerators because the greatest number operating in the country utilize the same pollution control device as the Dutch incinerators investigated: **ESPs**. Among the report's findings are that "approximately one-third of the household and comparable commercial waste stream is incinerated" in Holland, with "a maximum of 25% of the emissions from Dutch incinerators" deposited within their borders, thus exporting 75% of the air emissions. "...The most critical components of emission are PCDDs (**dioxins**) and PCDFs (**furans**). Direct exposure to those substances by way of inhalation of particulate emissions from the atmosphere is minimal compared with indirect exposure by way of ingestion. **Exposure by way of food contributes approx. 98% to total exposure and is the result of diffuse distribution of these very persistent substances in the environment.** The existing mean PCDD and PCDF exposure level in our country is estimated at approx. 50% of the maximum acceptable level...**The contribution of waste incineration to PCDD and PCDF contamination of the general population amounts to approx. 30%**, according to the investigation. Locally, in the vicinity of facilities, this may be considerably higher. **Waste incinerators constitute the greatest point source of emission of these substances** ...In addition to PCDDs and PCDFs, waste incinerators are important atmospheric emission sources for some metals such as **cadmium, mercury, lead and zinc**. As a result, they may provide a considerable contribution to background concentrations of these substances in the air and, through dry and wet deposits, in the soil accumulation in the direct vicinity of the facility, which is the area of maximum deposit...An increase in the PVC content of the waste to be incinerated favors the formation of PCDDs and PCDFs.

(Editors note: This report and a recent Danish report directly contradicts the much touted Pittsfield, MA, study which claimed to show that PVC additions did not increase dioxin emissions. The Pittsfield study was partially funded by the plastics industry.)

...SUMMARY: In the investigated milk originating from the Lickebaert region, PCDDs and PCDFs were indicated at a mean content of **8.9 pg** of 2,3,7,8-TCDD toxicity equivalents (**TEQs**) per gram of milk fat. The individual values were greater by a factor of 3 or 4 than corresponding contents measured in control samples from two dairy operations in Bergambacht...At normal consumption of milk and cheese originating from cows in the Lickebaert region, the approved daily dose of **4 pg TEG/kg** of body weight is exceeded. Although the excess does not result in acute health effects, health effects cannot be ruled out in case of continuous long-term consumption...The national background level, as indicated by measurements taken at Bergambacht, Den Bosch, Leeuwarden, Utrecht and Zutphen, were between **0.8+0.1** and **2.5+0.5 pg TEQ/g** of milk fat..." Despite all this information the report accepts incineration as an inevitable course for Holland and relies heavily on the **future use** of improved pollution controls to reduce dioxin/furan emissions into the environment. Though the report recommends better pollution controls it does state that "incineration should not stand in the way of higher priorities in environmental policy such as prevention, recycling and useful adaptation." This 48 page translation was commissioned by **Work on Waste-USA, Institute for Local Self-Reliance** and Stephen Krivanek. The title of the report is Air Pollution Aspects of Incineration Facilities for Household Waste and Comparable Commercial Waste written by the Ministry of Public Housing, Urban Planning and Environmental Management of the Kingdom of the Netherlands. Copies of the report are available from **Waste Not** for \$12.

DIOXIN: 36 YEARS AFTER AN ACCIDENT AT A BASF CHEMICAL PLANT IN WEST GERMANY NEW ANALYSIS LINKS DIOXIN EXPOSURE TO CANCER. Even though it occurred 36 years ago, the

following report published in the New Scientist, 10-28-89, pg. 24, is of interest because of the persistent dismissal of dioxin's impact as far as human health is concerned by consultants, industry and regulatory officials. A West German epidemiologist, Friedemann Rohleder, "has produced a report detailing an **unexpectedly high incidence of cancer among workers exposed to dioxins during an industrial accident at a chemicals plant in 1953**. The plant, operated by the West German company **BASF**, made trichlorophenol. **Rohleder claims the company presented the data in a way that disguised the cancers...**The incident which Rohleder reviewed occurred on 17 November 1953 after a runaway chemical reaction at a plant operated by **BASF** in Ludwigshafen. The reaction released dioxins into the factory and its neighbourhood. An investigation of the mortality records of the exposed workers published in 1985 on behalf of the Born Berufsgenossenschaft (**BG**) -the industry association which handles liability claims- became the foundation for refusing compensation to workers. It dismissed associations between exposure to dioxin and cancer. The **BG** report rekindled controversy about dioxin within the German scientific community, and spurred victims and their families to take their cases to the courts. Eventually, the government invited Rohleder, an epidemiologist, to evaluate the evidence independently. The report of his findings provoked controversy at an international symposium on dioxins in Toronto, Canada, late last month. Rohleder compared three sets of data....All sets of data originated from the medical departments of **BASF**. The data for the original **BASF** study mentioned 153 workers classed as having been exposed to dioxin. The most recent data say that only 122 people were exposed. Rohleder compared the medical histories of individuals on both lists, and concluded that **BASF** included in its list 20 supervisors who he believes were not exposed. Another such comparison revealed that the company listed 18 workers as suffering from dermatitis -a milder skin infection- when the **BG** reported clear cases of chloracne, a sign of dioxin poisoning. The study gauged exposure to dioxin by examining the severity of the skin disease. But Rohleder says that because many of the skin ailments were 'misclassified', the investigators found no clear relationship between exposure and skin disease. They then argued against any relationship between dioxin exposure and cancer mortality, although their own research revealed an unexpectedly high incidence of deaths from cancer in the group with chloracne. In his own evaluation, Rohleder investigated **BASF's** 153 workers but eliminated the 20 supervisors...Rohleder grouped together neoplasms of the larynx, trachea, bronchi and lung and other cancers of the respiratory organs. He observed 8 deaths from cancer, instead of the expected 3.01, giving a statistically significant standardised mortality ratio of 2.66. By adding cancers of the digestive tract in a similar fashion he found an identical ratio. Despite the small size of the sample Rohleder concludes that: 'This analysis adds further evidence to an association between dioxin exposure and human malignancy.' When contacted by New Scientist this week, a spokesman for **BASF** said the company was unaware of the new analysis presented by Rohleder in Toronto."

NOTE: It is strange that **BASF** are unaware of this paper presented at the **DIOXIN 89** conference held in Toronto last September because the attendance list indicates that they had a representative at the conference. It is also interesting to note that despite this paper the person giving the keynote address at the conference (Dr. Curtis Travis of Oakridge Laboratory in Tenn. and editor of the journal Risk Analysis) stated that there was no evidence that dioxin causes damage to humans. This statement got headline coverage in the press.

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