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## High Concentration of Dioxin Found at Waste Treatment Plants

*VietNamNet Bridge - Scientists have for the first time rung the alarm over the high dioxin concentration in emissions and waste water in waste treatment plant areas.*

A number of waste treatment plants have been found with having much higher dioxin concentrations than the permitted level. One plant had a concentration higher by 5,000 times more.

The conclusion was made by scientists conducting research under a project on settling dioxin in heavily polluted areas in Vietnam presided over by the Ministry of Natural Resources and the Environment's (MONRE) Office 33, in charge of coordinating activities to remedy consequences from Agent Orange (dioxin).

"Vietnam has for the first time admitted that besides the dioxin originating from the war, there is also dioxin generated during industrial production activities," said Dr. Le Ke Son, the project's director.

Son said that industrial waste and medical waste incinerators were the largest sources of dioxin.

The high content of dioxin and dioxin-related compounds (DRCs), measured in TEQs (toxic equivalents), have been found in exhaust fumes and waste water from waste water treatment plants.

In Hanoi, the researchers took three emission samples from an industrial incinerator and four samples from an industrial and medical incinerator. Three out of the seven samples had DRCs higher than the permitted level stipulated in QCVN 30:2012, the standard set by MONRE.

One sample showed the highest TEQ of 9800 pg/Nm<sup>3</sup>, or 16 times higher than the permitted level (600 pg/Nm<sup>3</sup>).

In HCM City, one sample showed the TEQ close to the permitted level and another was higher by five times than the permitted level.

In Hai Duong province, two of the three samples were found as having a TEQ tens of times higher than the permitted level.

The waste water samples at the waste treatment plants have also been found as having overly high DRCs.

Vietnam still does not have national standards on DRCs in waste water. However, when referring to the Japanese standard - 10 pg/Nm<sup>3</sup> – the researchers found that two of the five waste water samples in Hanoi had DRC concentration higher by five and 23 times.

A waste water sample in Hai Duong Province contained DRCs higher by 129 times than the permitted level, while a sample in HCM City had 5,000 times.

Scientists say dioxin can have a major impact on human health via air and food.

Dioxin is one of the most toxic compounds discovered. Dioxin created by industrial processes is less toxic than the dioxin used during wartime.