

National Pollutant Release Inventory (NPRI)

ENGO Perspectives on Dioxins, Furans and Hexachlorobenzene

March 2007

Prepared by John Jackson

Part A: Background:

Dioxins and furans and hexachlorobenzene were added to the NPRI in 2000 at a set of thresholds specifically developed for these substances. An activity-based threshold was used instead of the standard quantity manufactured, processed or otherwise used threshold. Facilities using a specified seventeen designated activities had to report provided they met the 20,000 hour employee threshold. The seventeen activities are: non-hazardous solid waste incineration of 26 tonnes or more of waste per year, biomedical or hospital waste incineration of 26 tonnes or more of waste per year, hazardous waste incineration, sewage sludge incineration, base metals smelting, smelting of secondary aluminum, smelting of secondary lead, manufacturing of iron using a sintering process, operation of electric arc furnaces in steel manufacturing, production of magnesium, manufacturing of Portland cement, production of chlorinated organic solvents or chlorinated monomers, combustion of fossil fuel in a boiler unit with a name-plate capacity of 25 megawatts of electricity or greater for the purpose of producing steam for electricity, combustion of hog fuel originating from logs that were transported or stored in salt water in the pulp and paper sector, combustion of fuel in kraft liquor boilers used on the pulp and paper sector, and wood preservation using pentachlorophenol. The employee threshold does not apply to these substances just as it doesn't for other substances if the activity is non-hazardous solid waste, biomedical waste, hazardous waste or sewage sludge incineration, wood preservation, terminal facilities, and discharge of treated or untreated wastewater from a waste-water collection system with an annual average discharge of 10,000 cubic meters per day into surface waters.

They are required to report all releases and transfers greater than the level of quantification (LOQ) specified in the Gazette notice. If the quantity is at or below the LOQ, they are not required to report a quantity. For dioxins and furans, they were required to report only one total for all types of dioxins and furans.

Starting in 2003, Environment Canada began to review with the Multi-Stakeholder Work Group possible adjustments to the reporting of dioxins, furans and hexachlorobenzene. Activities did not begin seriously with these explorations until after the completion of the report on harmonization with Ontario's Airborne Contaminants Discharge Monitoring and Reporting Regulation. They also addressed the possible addition of activities that must report releases and transfers of dioxins, furans and hexachlorobenzene.

As a result of this process, changes were made to the dioxins and furans requirements effective with the 2007-reporting year. As of then, releases and transfers must be reported separately for seventeen congeners of dioxins and furans. They must report if the total toxicity equivalent for all dioxins and furans combined exceed the LOQ. Also, instead of reporting in g ITEQ, dioxins and furans will be reported in grams.

Upon the recommendation of the Work Group, Environment Canada has stated that starting with the 2008-reporting year titanium dioxide pigment processes using chloride process will be added to the list of activities for which reports must be submitted.

Part B: Outstanding Issues:

1. Coplanar or dioxin-like PCBS: The Work Group decided to recommend to Environment Canada that the 12 co-planar or dioxin-like PCBS not be reported “at this time” because adequate data is not available to develop quantification methods.¹ Although all stakeholders agreed that the co-planar PCBs meet the NPRI listing criteria because of their human health and environmental impacts, the potential reporters argued against reporting them now “due to the limited information available for accurate release estimates.”²

We fear that this delay will result in dioxin-like PCBS being left off for the long-term. Environment Canada should require polluters to conduct the studies needed to be able to do quantifications so that they can be added very soon.

2. Addition of further activities: The Work Group proposed to Environment Canada that they not add **land application of municipal biosolids** to the NPRI list of activities for reporting of these substances because no emission factors or other estimating tools exist and most measurements that have been carried out came up with results below the LOQ. We accept that recommendation. We also accept the recommendation from the Work Group that Environment Canada should make a national estimate of D-F releases from this source.”³ This would allow Canada to meet its international obligations to report on this item and the information could be used to stimulate actions within Canada to reduce or eliminate the sources of dioxins and furans entering the municipal wastewater system.

We await the provision of further data before taking a position on whether regeneration of spent catalyst in petroleum refineries should be added to the list of activities.

Environment Canada should continue to monitor the inventories of other countries to see whether other types of activities are a source of dioxins, furans and hexachlorbenzene. If

¹ Marbek Resource Consultants, *Report of the National Pollutant Release Inventory Multi-Stakeholder Work Group on Substances*, March 2007, p. 12.

² Highlights of the D-F and HCB Sub-Group (SG) Teleconference Meeting of February 1, 2007.

³ Marbek Resource Consultants, p. 13.

they are, these should be brought forward to the Work Group for investigation and discussion.

Part C: ENGO Position and Recommendations:

- We support the addition of the 12 dioxin-like PCBs immediately or in the alternative that Environment Canada now state that that they will be added no later than for the 2009-reporting year so that potential reporters immediately get the message that they will have to figure out how to report them.
- We urge Environment Canada to stimulate programs that eliminate the sources of dioxins and furans to the municipal wastewater systems, which result in the presence of dioxins and furans in biosolids.
- Every year, Environment Canada should review the latest US Toxics Release Inventory and other countries' PRTR data for dioxins, furans and hexachlorobenzene to determine if any additional types of facilities should be considered for addition to the NPRI.