

Testimony to the Joint Ways and Means Sub-Committee on Natural Resources,
in Support of SB 488-7

5/31/2023

Dear Co-Chairs Senator Dembrow and Representative Pham and members of the Joint Ways and Means Sub-Committee on Natural Resources,

On behalf of our thousands of members and the communities we serve across Oregon, Beyond Toxics and PCUN strongly encourage the Committee to support SB 488A and approve the -7 amendment to secure \$118,537 in funding for an environmental monitoring pilot project.

Purpose:

SB 488A provides the structure for a pilot project to test continuous air toxics emissions monitoring technology at Oregon’s waste incineration facility, Covanta Marion. The Oregon DEQ Air Quality Division has assured lawmakers that SB 488A is entirely consistent with DEQ’s regulatory mandate to measure and assess the impacts of toxic air emissions.

Concerning Pollutants Associated with Waste Incineration:

In 2022, the Covanta Marion incinerator burned over 170,000 tons of waste, of which 16,335 tons was medical waste (Statesman Journal 3/16/2023). Waste incineration is a major source of heavy metals, dioxins and furansⁱ which can lead to the spread of these toxic pollutants in the environment.ⁱⁱ Heavy metals, dioxins and furans are associated with a wide range of adverse health effects, including cancer and various types of reproductive, endocrine, developmental, and immune system impairment.ⁱⁱⁱ Dioxins and furans are among the most toxic chemicals known to science.

SB 488A will require continuous emissions monitoring (CEM) of emitted pollutants, specifically heavy metals, dioxins, furans, PCBs, carbon monoxide, sulfur dioxide and nitrogen oxides. These air pollutants require emissions testing because of their ability to harm humans and the environment. Persistent air pollutants, such as dioxins, furans, and mercury, can be dispersed over large regions—well beyond local areas. The main pathway for these pollutants to get into the environment from a waste-incineration facility is through stack emission to the atmosphere.^{iv}

Accurately Measuring Air Pollution:

Most toxic pollutants are tested and reported on only a yearly basis. Emissions are never reported during startups, shutdowns and malfunctions when emissions are often high. This leads to under-reporting of the actual real time and annual quantity of toxic emissions. The value of CEM technology for air toxic emissions is to verify long-term patterns of toxic release into the atmosphere.

After the alarming findings of high levels of dioxins in eggs of backyard chickens, the Netherlands government performed long-term sampling of incinerator pollution using continuous emissions monitoring technology. They used AMESA, which stands for Adsorption MEthod for SAMpling of dioxins. When both short- and long- term sampling are carried out in the same period, results from the Netherlands show that short-term sampling seriously underestimates actual dioxin emission levels. Annual, short-term sampling, cannot be considered representative

for real dioxin emissions from incineration during total yearly operating time.^v As written, SB 488-7 can help resolve infrequent and under-representative emissions testing protocols used by Covanta Marion by piloting CEM, a protocol resulting in accurate and reliable data collection.

Why use CEM to Measure Air Pollution from Waste Incineration?

Covanta accepts municipal, industrial and medical waste which vary in composition and can change hourly. Emissions correlate with the type of waste loaded into the burners. For example, plastic waste with high chlorine content, such as PVC, gave higher toxicity equivalency values.^{vi} SB 488A will help air quality regulators and lawmakers answer the question of what and how much toxic pollution is emitted from waste incineration. Continuous emission monitoring is the best technology available to answer the question asked by Senator Lieber during the March 7th public hearing on SB 488: *Are the levels of heavy metals, dioxins, furans and other pollutants emitted by Covanta dangerous for people and the environment?*

Reliable continuous monitors have existed for years. This is particularly important for particulate matter, dioxin, mercury and other heavy metals, and hydrochloric acid, all of which have well-documented harmful effects on human health. DEQ currently collects continuous monitoring data for only four pollutants: carbon dioxide (CO₂), sulfur dioxide (SO₂), carbon monoxide (CO) and nitrogen oxides (NO_x). SB 488A fixes a monitoring gap and improves air emissions data through a pilot project to measure heavy metals and dioxins/furans using continuous emissions monitoring. These are toxic chemicals the DEQ is required to regulate under Cleaner Air Oregon.

Public Health Protections and Environmental Justice:

Requiring continuous emissions monitoring will benefit communities located near Covanta, including Salem, Brooks, Woodburn and Keizer. Within the deposition radius of Covanta's toxic emissions are schools serving diverse populations including the Chemawa Indian School, Clear Lake Elementary School, Willamette Valley Christian School, Forest Ridge Elementary School and Chemeketa College. Many of the people who live nearest to the incinerator are part of rural, BIPOC and agricultural communities in the mid-Willamette Valley. They are bearing the burden of unknown amounts of heavy metals, dioxins and acids emitted by the incinerator.

A Small Fiscal Request:

The relatively small amount of funding (\$118,537) requested by the agency is needed for DEQ staff to work with Covanta Marion during the pilot project, to measure, document and identify the nature and breadth of toxic emissions and environmental exposures associated with burning municipal, industrial and medical waste. The Oregon DEQ is tasked with protecting our environment and public health by ensuring our clean air and clean water laws are enforced and that industries appropriately monitor and report their emissions. It is crucial that we invest in SB 488A -7 so that the DEQ can fulfill its duty to carry out its Cleaner Air Oregon regulations.

We strongly urge support for SB 488 and the -7 amendment. SB 488A will not impact Oregon's ability to dispose of municipal or medical waste. Thank you for your support of accurate and reliable continuous emissions monitoring for environmental and public health protections.

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ⁱ Thornton J, McCally M, Orris P, Weinberg J. Hospitals and plastics. Dioxin prevention and medical waste incinerators. Public Health Rep. 1996 Jul-Aug;111(4):298-313.

ⁱⁱ World Health Organization, Health Care Waste, published Feb. 2018. Accessed at <https://www.who.int/news-room/fact-sheets/detail/health-care-waste>

ⁱⁱⁱ International Agency for Research on Cancer; 2012. (IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, No. 100F.) 2,3,7,8-TETRACHLORODIBENZO-para-DIOXIN, 2,3,4,7,8-PENTACHLORODIBENZOFURAN, AND 3,3',4,4',5-PENTACHLOROBIPHENYL.

^{iv} National Research Council (US) Committee on Health Effects of Waste Incineration. Washington (DC): National Academies Press (US); 2000.

^v Arkenbout, A, Olie K, Esbensen KH, 2018. Emission regimes of POPs of a Dutch incinerator: regulated, measured and hidden issues, abstract, <http://bit.ly/2QQCmW1>.

^{vi} Shibamoto T, Yasuhara A, Katami T. Dioxin formation from waste incineration. Rev Environ Contam Toxicol. 2007;190:1-41.