SB 488 - MEDICAL WASTE INCINERATION REGULATIONS

A report researched and created by Beyond Toxics and Clean Air Now

Chief Co-Sponsors: Sen. Patterson, Sen. Manning and Rep Neron
Co-Sponsors: Senators Campos, Gelser Blouin and Golden

Medical waste incineration is outdated and unnecessary.

Very few municipal waste (trash) incinerators in the nation are permitted to burn untreated medical waste. Covanta Marion – the only trash incinerator in Oregon – is one of them. Most hospitals and other producers of medical waste have switched to safer non-burn alternatives in the past 35 years. In 2021, Rhode Island became the latest state to ban medical waste incineration. By importing and burning medical waste from other states as well as Canada, the Covanta Corporation keeps their trash incinerator in Oregon profitable while they have sold off or closed similar facilities around the country. As outlined below, burning medical waste in a trash incinerator is only viable because of a federal loophole that allows weaker standards.

Waste Incineration is a source of Highly Toxic Air Emissions and Climate Pollutants.

Incineration converts trash into toxic air, water and soil pollutants which disperse across communities.

Waste incineration is a large source of greenhouse gas, lead, ammonia, arsenic, beryllium, cadmium, chromium (VI), hydrochloric acid, mercury, nitrogen oxides, particulate matter (PM10), fine particulate matter (PM2.5), and sulfur dioxide emissions. Waste incineration pollutes soils, rivers, and the air with heavy metals and toxic chemicals where they can harm human health and wildlife. Heavy metal ingestion by children causes learning disabilities, lowered IQ, hyperactivity, and attention deficit.[1,2]

Incineration of solid waste also creates new compounds like dioxins and furans, the most toxic class of chemicals known. Dioxins are formed when organic materials (e.g., wood and paper) are burned in the presence of chloride products (e.g., PVCs from medical waste plastics). Dioxins are carcinogenic, cause birth defects, disrupt endocrine systems, suppress the immune system, and decrease fertility.[3]

Does Oregon have a Solid Waste Incinerator and what do we know about it?

Yes. The Covanta Marion incinerator is located in Marion County between the cities of Salem and Woodburn. The facility became operational in 1986. Now over 36 years old, Covanta Marion is older than the average useful life of most incinerators. Each year the incinerator burns more than 176,000 tons of municipal, medical and industrial waste.

Covanta Marion imports approximately 10,000 tons of out-of-state hospital and medical waste on an annual basis. This is over five times the amount that the U.S. Environmental Protection Agency (EPA) uses to classify a medical waste incinerator as “large.” A contract with Marion County allows the Covanta incinerator to burn up to 18,000 tons of out-of-state medical waste.

Covanta Marion's Municipal versus Medical Waste Incineration: The Regulatory Loophole

Federal regulations for medical waste incinerators are far stricter than those for municipal waste (trash) incinerators. However, a loophole in EPA regulations allows an incinerator classified as a "municipal waste incinerator" to burn significant amounts of medical waste without being held to the much stricter **medical** waste incinerator emissions limits. Burning **medical** waste, which is often plastics such as PVC, is known to emit more toxic pollutants than most municipal waste. This regulatory loophole allows the Covanta Marion incinerator to be regulated under the weaker municipal waste incinerator regulations, despite the fact that the facility could, within current regulations, burn up to 70% non-municipal waste, including out-of-state **medical** waste. ***As a result, Covanta Marion can burn thousands of tons of imported medical waste while taking advantage of weaker municipal trash incinerator regulations. This makes Oregon a dumping ground for the toxic pollution that other states don't want.***

The following table[4] summarizes DEQ's emission reports for the Covanta Marion incinerator over the past several years. As shown, Covanta's emissions levels exceed limits for large new medical waste incinerators.

Covanta Marion (OR)

Pollutant	Units of Measurement	Covanta Marion Current Permit	Covanta 2013-2019 Average Emissions*	Highest Emission Rate 2013-2019 from Source Tests	Federal Large New Medical Waste Incinerators
Particulate Matter	mg/m^3	25	6.43	16.55	18
Hydrogen Chloride	ppm	29	11.06	18.36	5.1
Sulfur Dioxide	ppm	29	36	29**	8.1
Carbon Monoxide	ppm	100	88	98	11
Nitrogen Dioxide	ppm	205	191	195	140
Cadmium	mg/m^3	0.02	0.0014	0.0026	0.00013
Lead	mg/m^3	0.2	0.0052	0.0153	0.00069
Mercury	mg/m^3	0.05	0.0034	0.0061	0.0013

* (red indicates exceedence of federal medical waste incinerator standards)

** See 2020 Covanta Review Report p. 60: The descrpency between average and highest SO2 emissions is because DEQ omitted the higher emissions in 2014, 2015, & 2016 due to a loophole that allows the polluter to meet the emission standards by reducing the pollutant by 75%.

Source: Oregon DEQ, 2020 Review Report/Permit No.: 24-5398-TV-01 for Covanta Marion, p. 72

Comparison of Covanta Source Test Results and Medical Waste Incinerator Limits

SB 488 Provides Measurable Protection by Reducing Air Toxics Emissions

By closing the regulatory loophole, SB 488 will appropriately regulate a large polluter and ensure stronger environmental protection and public health outcomes for all Oregonians. If passed, Oregon will apply the EPA's stricter air pollution limits to any incinerator burning enough medical waste to be classified as a large medical waste incinerator. Should a facility exceed the allowed weight of medical waste that gets incinerated, the Oregon DEQ will have the authority to apply the stricter air pollution emission limits required for medical waste incinerators set under federal law.

References

[1] Lee MJ, et al., **Heavy Metals' Effect on Susceptibility to Attention-Deficit/Hyperactivity Disorder: Implication of Lead, Cadmium, and Antimony.** Int J Environ Res Public Health. 2018 Jun 10;15(6):1221. doi: 10.3390/ijerph15061221.

[1] Zhou, Y; Ma, W., **Heavy metal exposure and children's health**. Springer 2020.

[1] U.S. EPA, **Learn About Dioxin.** accessed 1/14/2023 at https://www.epa.gov/dioxin/learn-about-dioxin

[4] Oregon DEQ, 2020 Review Report/Permit No.: 24-5398-TV-01 Covanta Marion, p. 72

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