

# COVANTA MARION INCINERATOR AIR QUALITY PERMIT TESTIMONY

Permit Number 24-5398-TV-01

The undersigned organizations and individuals have concerns about the environmental and human health impacts of the Covanta Marion waste incinerator in Brooks, Oregon. Past claims that the incinerator has met emissions standards is not sufficient to alleviate our concerns because those standards were based only on Best Available Control Technology (BACT) and do not limit emissions to levels that scientific data indicate are protective of health. Therefore, we submit the following recommendations.

**1. Particulate Matter and Public Health:** The draft permit increases the allowable annual emissions of small and fine particulate matter from 14 and 12 tons, respectively, to 16 tons each. These small particles are known to cause or aggravate health problems in people who breathe them — especially for sensitive groups such as the elderly and very young. According to the US EPA: "Numerous scientific studies have linked particle pollution exposure to a variety of problems, including:

--premature death in people with heart or lung disease

--nonfatal heart attacks

--irregular heartbeat

--aggravated asthma

--decreased lung function

--increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing."

(<https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm>).

Heavy metals and dioxins can attach themselves to fine particulate matter, and in some cases fine particulates are made up of tiny particles of these toxic materials. Such small particles of pollution can penetrate the lungs and enter the bloodstreams of people who inhale them. These toxins cause adverse health effects in exceptionally small quantities.

Recommendation: The DEQ should not allow any increase in particulate matter because of the increased risk of adverse health impacts to people downwind from the incinerator. The DEQ permit should reduce allowable particulate emissions, not allow an increase.

**2. Greenhouse Gas Emission Limits:** The draft permit increases allowable total greenhouse gas emissions to 214,400 tons (194,500 metric tons). However, actual greenhouse gas emissions from the incinerator reported by DEQ from 2014 through 2017 range from a low of 160,517 metric tons of carbon dioxide equivalent in 2016 to a high of 172,780 metric tons in 2014. At these levels, the Covanta Marion incinerator is already the biggest single facility source of greenhouse gas emissions in Marion County. It is counterproductive to allow almost 22,000 additional metric tons of greenhouse gases above the 2014 high when the State has a goal of reducing greenhouse gases overall. Here are the actual emissions Covanta Marion reported to DEQ at the sites linked to this web address (2014 to 2017 Greenhouse Gas Facility Emissions Reports for top Oregon GHG producers):

<https://www.oregon.gov/deq/aa/programs/Pages/GHG-Emissions.aspx>)

2017: 160,844 metric tons

2016: 160,517 metric tons

2015: 168,541 metric tons

2014: 172,780 metric tons

The trend since 2014 is downward.

Recommendation: The DEQ permit should require continued greenhouse gas reductions rather than going in the opposite direction.

**3. Accurate Stack Testing:** The stack test for dioxins and furans should occur for both combustors every year. Now that medical waste can be burned in either combustor, it would be all too easy for the incinerator operators to shift the medical waste to the combustor not being tested for dioxins and furans in any given year and thereby miss an increase in dioxin and furan emissions due to plastics in the medical waste burned by that combustor. Also, by tracking the actual amount of blue bin medical waste and gray bin medical waste being burned in each combustor during stack testing, more data could be collected about the actual effects of medical waste on emissions.

Recommendation: The DEQ must require stack testing for dioxins and furans for both combustors on an annual basis and should delineate incineration of blue bin versus gray bin medical waste to determine how each type of waste could affect the emissions.

**4. Startup/Shutdown/Malfunction Emissions:** Condition Number 29 states that the limits/standards in conditions 14, 15, and 17 through 28 do not apply during periods of startup, shut down, and malfunction. This ignores the fact that the emissions during those periods of upset still enter the lungs of people downwind and affect their health just as surely as emissions that occur during periods of optimum operation. In fact, research in other countries has demonstrated that during these conditions of upset very significant increases in emissions of some of the most toxic chemicals occur. The facility should be held to non-harmful emission limits at ANY time that emissions are occurring. Excluding likely spikes in air toxic emissions during startup, shut down, and malfunction is a left-over concept from before the passage of Cleaner Air Oregon, when state air quality rules were equipment and technology based, and not health-based.

Recommendation: The DEQ must include emissions from periods of startup, shut down, and malfunction in the standards and limits of this air quality permit based on the likelihood that these events will result in spikes in hazardous emissions that constitute a danger to public health.

**5. Medical Waste Record Keeping:** Condition Number 37f states that a performance test report must include the following: “Amount of medical waste burned in the municipal waste combustor unit during dioxin/furan performance testing.” Medical waste amounts are similarly required to be reported for condition 70b. These conditions should further specify that the amount of blue bin medical waste versus gray bin medical waste be delineated in

these reports. It would also be appropriate to require that a reasonable representation of a typical amount of these types of medical waste be included in some of the test runs so analysis of test results could indicate the effects of these types of medical waste on emissions, and future permit requirements could be adjusted accordingly (such as when the Cleaner Air Oregon requirements are integrated into the permit).

Recommendation: Delineation of blue bin versus gray bin medical waste going into the incinerator should be recorded all year for all incoming medical waste, and actual spot check verification that boxes labeled as blue bin medical waste truly are blue bin medical waste (especially during stack testing) would also be prudent.

**6. Special Waste Management:** Before granting the facility permission to accept waste under a Special Waste Management Plan as referenced in Item 4 (Fuel) of the Review Report appended to the draft permit, DEQ should have reasonable scientific basis to expect that burning a particular type of special waste will not have deleterious effects on the surrounding community. Although the basis for such permission decisions is not contained within the permit language itself, DEQ should assess whether the addition of a particular type of special waste might cause emissions to exceed Cleaner Air Oregon health risk standards and not just MACT or BACT-based standards. As a hypothetical example, if it were found that the large quantities of netting accepted for incineration from the ocean fishing industry were to contain significant amounts of polyvinylchloride plastics (PVC), DEQ might decline to permit the incineration of that material due to the high likelihood of a significant increase in the emission of dioxins as a result of a significant increase in chlorine in the incinerator fuel. Similar decisions might be made about special waste materials that are found to contain heavy metals. Heavy metals can show up in some of the least expected places, such as certain types of colored cardboard as indicated at this web address (<https://bioresources.cnr.ncsu.edu/resources/the-effect-of-colorants-on-the-content-of-heavy-metals-in-recycled-corrugated-board-papers/>). We do not know the extent to which DEQ already analyzes potential special waste for requested Special Waste Management Plans, but we encourage particular attention be paid to the potential health effects from such materials if they are incinerated and emissions from them go out into the community.

Recommendation: The DEQ should include the rationale or basis for permitting Special Waste Management Plans and hold these Plans to high standards in order to avoid increasing potential health risks.

**7. Fire Hazards:** The inclusion of "accidental fires" under the heading "categorically insignificant activities" on page 9 of the appended Review Report vastly understates the problem should a significant fire occur in the waste mixing pit (outside the controlled incinerator). Large quantities of toxic emissions would spread during such an event, especially if the pit contained significant quantities of chlorine containing material, such as PVC.

Such fires have occurred in other states in incinerators operated by Covanta and other companies. Such an event could be more significant in terms of health effects than many

months' worth of regular emissions from the facility (and thus not "categorically insignificant"). Such fires are very hard to put out and have been known to smolder for days or even weeks. The possibility of hazardous air toxic emissions from an accidental fire could be quite significant.

This article describes the health warnings to residents when such a fire occurred in a Covanta facility in Montgomery County, MD in late 2017: "County officials are advising people in the immediate vicinity of the facility, who are experiencing asthma, chronic lung or heart conditions to minimize exposure by either staying indoors or to avoid the area. If you experience increased symptoms, you should contact your health care provider."

<https://www.mymcmedia.org/hundreds-of-firefighters-battle-blaze-at-incinerator-plant-in-dickerson/>

Two months later a similar fire occurred in a Covanta incinerator in Lorton, VA.

<https://www.wusa9.com/article/news/local/lorton-incinerator-fire-causes-regional-concern/65-397053209>

Recommendation: Based on a history of incinerator fires, the air quality permit should list "accidental fire" as a significant activity and must require Covanta Marion to have adequate fire suppression capacity and a fire emergency plan in place to immediately curtail such a fire. Furthermore, the DEQ should require that Covanta Marion carry adequate insurance to cover damages in the case of a fire and that they be held liable for resulting damages to firefighters and the surrounding community.

**8. Fly Ash Toxicity:** Since fly ash containing significant amounts of toxins is transported from the facility to an ash pile or landfill in a wetted condition and the permit appears to only deal with leakage from the ash transport vehicles when they're on the facility grounds, it seems prudent to also require routine testing along the relevant roadways for deposition of toxins from fly ash particles that might seep out of the vehicles with some of the liquid in the wetted ash. Even though only minute quantities might leak during a given trip, thousands of trips could allow accumulation of significant amounts that could then be breathed by other persons using those roadways. It would be prudent to mitigate the possibility of leakage or escaped ash particles with a lined truck compartment.

Recommendation: The DEQ should require the trucks transporting ash to have a lined compartment to prevent fly ash leakage and test for toxins along the roadways used.

**9. Protecting Public Health from mercury, sulfur dioxide and hydrogen chloride emissions:** Conditions 20, 21, and 22 for mercury, sulfur dioxide, and hydrogen chloride, respectively, should not include the words "whichever is less stringent". Under certain conditions when the currently allowable percentage of emissions of the chemical in the inlet gas stream (e.g., 15 percent of the potential mercury emission concentration) exceed the allowable numerical limit (e.g., 0.050 mg/dscm for mercury), then the actual quantitative limit of the chemical has been de facto raised above the currently allowable numerical limit (of 0.50 mg/dscm in the case of mercury and similarly for sulfur dioxide and hydrogen chloride), which is not acceptable. The facility should be limited by BOTH the relevant numerical amount as well as the relevant percentage reduction. If OARs must be changed to allow this to happen, then the relevant OARs should be changed. The health

of the people downwind from the facility should not be subject to the vicissitudes of the concentration of chemicals “in the inlet gas stream”. Rather, the facility operators should ensure that the concentrations of chemicals in the inlet gas stream stay below levels that would produce unsafe levels of emissions.

Recommendation: The wording for those conditions should be changed as follows:

“Mercury

*20. Mercury emissions from each municipal waste combustor unit (MWC-1 and MWC-2) must not exceed 0.050 milligrams per dry standard cubic meter (0.000022 gr/dscf) AND MUST NOT EXCEED 15 percent of the potential mercury emission concentration (85 percent reduction by weight), corrected to 7 percent oxygen. [OAR 340-230-0310(3)(c)].*

*Sulfur Dioxide*

*21. Sulfur dioxide emissions from each municipal waste combustor unit (MWC-1 and MWC-2) must not exceed 29 parts per million by volume AND MUST NOT EXCEED 25 percent of the potential sulfur dioxide emission concentration (75 percent reduction by weight or volume), corrected to 7 percent oxygen (dry basis). Compliance with this emission limit is based on a 24-hour daily geometric mean.*

*[OAR 340-0230-310(4)].*

*Hydrogen Chloride*

*22. Hydrogen chloride emissions from each municipal waste combustor unit (MWC-1 and MWC-2) must not exceed 29 parts per million by volume AND MUST NOT EXCEED 5 percent of the potential hydrogen chloride emission concentration (95 percent reduction by weight or volume), corrected to 7 percent oxygen. [OAR 340-0230-0310(5)].”*

**10. Require Continuous Emissions Monitoring:** Several of the preceding requests for changes in the facility’s air quality permit would be better addressed by simply requiring the installation of continuous emissions monitoring equipment for toxins, as is currently done for similar facilities in countries all over the world. DEQ should pursue whatever law changes or federal permissions are required to make this happen and then make the installation and operation of this equipment part of the incinerator’s air quality permit requirements.

Recommendation: The installation and operation of continuous emissions monitoring equipment for toxins must be a standard requirement of this air permit.

**11. Incorporate Cleaner Air Oregon rules immediately:** Page 11 of the appended Review Report says the permit will be modified to incorporate the Cleaner Air Oregon rules (OAR 340 Division 245) once the appropriate analysis has been completed. Based on the evidence that the incinerator emissions present a burden of air toxic exposure for

communities of color and low-income residents downwind of the facility, we request that Cleaner Air Oregon hazardous index and cancer benchmarks be added to the permit as soon as possible. The DEQ is encouraged to recognize and act to minimize the air toxic impacts to nearby vulnerable communities. In doing so, the measurement of actual emissions of toxins should not be based only on annual stack tests that are then “modeled” to simulate the dispersion of the toxins in the surrounding communities. There should be “on the ground” testing that includes such things as moss tests (as were done around the art glass factories in Portland), air monitoring tests outside the perimeter of the incinerator property, measurement of bioaccumulation of toxins in fish and/or other animals that live downwind from the incinerator (especially mercury -- and dioxin, if possible), and such other tests that would give a true estimate of the actual health effects on people who live downwind from the incinerator.

Recommendation: Apply Cleaner Air Oregon requirements in the new permit as soon as possible and specify their inclusion as a requirement of the new permit,

**12. Covanta Marion is a Medical Waste Incinerator:** Although the Covanta Marion incinerator does not currently qualify as a “medical waste incinerator” (by burning at least 10% medical waste per EPA) because only 6.71% of the waste burned there in the past three quarters was medical waste (per a communication from DEQ staff), it seems counterintuitive that this incinerator is not held to the stricter standards that EPA imposes on “large new medical waste incinerators.” Per medical waste incinerator emissions standards information contained in DEQ communications, this incinerator would already have exceeded some of those standards (for sulphur dioxide, carbon monoxide, nitrogen oxides, cadmium, lead, and mercury) during at least some of the recent past source tests. We believe EPA and DEQ should consider the health of people who live downwind from this waste incinerator to be just as important and fragile as the health of people who live downwind from a medical waste incinerator. We want the emission limits to be at least as strict as those for a large new medical waste incinerator. Marion County Commissioners already signed a new contract in September 2019 allowing Covanta Marion to burn up to 13,500 tons of out-of-state medical waste annually, which is a 2,500-ton increase above what was already being burned from out-of-state and in addition to in-state medical waste of more than 1,200 tons annually. The incinerator is well on its way toward the 10% level of medical waste incineration (about 9% if it burns 13,500 tons of out-of-state medical waste on top of in-state medical waste), and it is illogical to assume that its medical waste emissions suddenly become more dangerous *only* as it actually reaches that arbitrary 10% level.

Recommendation: Delay or do not approve a new permit for Covanta Marion until DEQ applies the federal standards of a new medical waste incinerator to the incinerator because, based on recent increases, the incinerator is already emitting toxins similar to a medical waste incinerator (with the same kinds of health effects) and could easily exceed the arbitrary 10% level of medical waste during the duration of this permit.



In conclusion, we ask that the DEQ **not approve** the Air Quality permit for Covanta Marion until all the conditions outlined here are addressed and remedied in order to protect public health and air quality for nearby communities.

Signed by the Following Oregon Organizations:

Lisa Arkin, Executive Director  
Beyond Toxics



Kathryn Salzmann, Member  
Eastside Portland Air Coalition



Laurie Daugherty  
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Mary Peveto, Executive Director  
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