



STATE OF HAWAII
DEPARTMENT OF HEALTH
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In reply, please refer to:
File:

**Testimony COMMENTING on HB2123
RELATING TO AIR POLLUTION**

REPRESENTATIVE NICOLE E. LOWEN, CHAIR
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
Hearing Date: 2/1/2024 Room Number: 325

1 **Fiscal Implications:** This measure may impact the priorities identified in the Governor's
2 Executive Budget Request for the Department of Health's (Department) appropriations and
3 personnel priorities. Proposed requirements will require additional staff time, effort, and
4 funding.

5 **Department Testimony:** The Department provides comments on this measure that would
6 require continuous air testing at an estimated 325 composting sites, convenience centers,
7 certified HI-5 redemption centers, landfills, municipal waste incinerators, recycling centers,
8 storage or salvage yards, transfer stations, waste treatment facilities, and other waste
9 management facilities. The Department does not perceive a demand for this type of testing due
10 to air quality concerns and does not have the resources and funding to implement the proposed
11 requirements. Statewide ambient air quality is good; the 18 listed contaminants typically are not
12 pollutants of primary concern for the majority of these operations, and most, if not all workers
13 have safety regulations from Occupational Safety and Health Administration to address air
14 exposures when operating in these industrial processes. Moreover, some of the larger potential
15 emitters already have air pollution control permits from the Department that evaluate the
16 facilities' operations under worst case scenarios, impose state and federal regulations, and
17 require monitoring.

18 The Department already requires monitoring at 30 incinerators, 5 municipal solid waste
19 landfills, and 1 electricity generating municipal waste combustor. The landfills primarily
20 monitor for methane, the product of decomposition of organic materials. The municipal waste
21 combustor, H-POWER, conducts continuous emissions monitoring for 3 criteria air pollutants

1 plus carbon monoxide, as well as annual source performance tests in accordance with U.S.
2 Environmental Protection Agency (EPA) requirements for 8 of the pollutants identified in the
3 bill.

4 More stringent monitoring and additional pollutants should not be needed, as the Clean
5 Air Act requires extensive review of EPA's air pollution control permit regulations every 8 years
6 (5 years for solid waste combustion units) to determine if the emission limits, monitoring,
7 controls, and other requirements need to be revised. EPA must account for improvements in
8 practices, processes, and air pollution controls and/or prevention and assess whether the existing
9 regulations are protective of public health with an ample margin of safety. If they are not, EPA
10 must propose new requirements. EPA has revised the federal air regulations for municipal solid
11 waste landfills in the last couple of years and recently completed a review of and is proposing
12 updated federal air regulations for large municipal waste combustors, currently out for public
13 comment.

14 Another indication that additional monitoring for the 18 listed pollutants is not needed at
15 this time comes from the monitoring results from the Department's federally-mandated National
16 Core (NCore) ambient air monitoring station, located between Campbell Industrial Park and
17 the Kapolei community. The NCore station, which monitors throughout the year for 8 of the
18 18 pollutants listed in the bill, shows results in 2023 that all 8 contaminants were below the
19 significant ambient air concentration as defined in Hawaii Administrative Rules §11-60.1-179
20 for these air pollutants (i.e., no ambient air concentrations were at levels that would endanger
21 human health).

22 Finally, the demand on Department staff and monies would be enormous. The
23 Department does not have resources, equipment, or funding to conduct the additional testing and,
24 if the testing requirements were to be shifted to the companies, business would suffer and their
25 costs would be passed on to consumers. In Lāhainā, the recent post-wildfire air quality
26 monitoring for asbestos, heavy metals, and particulate matter, which is comparatively less than
27 what is proposed in this bill, will cost over \$1,000,000 per monitoring station per year. For
28 325 estimated sites, this would equate to over \$325,000,000 per year.

29 The Department finds that this additional monitoring will be resource intensive and
30 extremely costly.

31 **Offered Amendments:** None

32 Thank you for the opportunity to testify.

Comments before
February 1, 2024 House EEP Committee Hearing

SUPPORTING WITH AMENDMENTS
House Bill 2123

Relating to Incinerator Monitoring

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Aloha Honorable Committee members. Energy Justice Network is a national organization supporting grassroots groups working to transition their communities from polluting and harmful energy and waste management practices to clean energy and zero waste solutions. In Hawai'i, we've been working with residents who first sought our support in 2015. Since mid-2022, we have supported residents in forming the Hawai'i Clean Power Task Force and Kokua na Aina to address numerous energy and waste issues in the state.

We emphatically support the continuous monitoring of air emissions from waste incinerators, since we currently lack the data on what the community around H-POWER is truly being exposed to. Nine of the dangerous pollutants covered by this bill are not required to be monitored at all. Another nine pollutants are tested just once a year under optimal operating conditions, underestimating the actual emissions.

Continuous monitoring shows actual emissions are higher than we're led to believe. At Covanta Delaware Valley, the nation's largest waste incinerator, located in Chester, PA, they continuously monitor hydrochloric acid (HCl) emissions. This data shows that HCl emissions are 62% higher than annual stack tests show. At incinerators in Europe, studies using continuous sampling have found that air emissions of the most toxic chemicals known to science – dioxins and furans – are 30 to 1,300 times higher than annual stack tests show.

Please find suggested amendments, our two-page factsheet, and our response to the Department of Health's comments below and attached. Mahalo nui loa for your efforts to strengthen this important bill!

AMENDMENTS NEEDED: HB 2123 is a good step in the right direction, following in the footsteps of our bill, [HB 2796](#) / [SB 2101](#), which is based on Oregon's [SB 488](#) of 2023, and several local laws we have written and had adopted in eastern U.S. states. However, there are important provisions in our bill that need to be reinserted in HB 2123 so that it functions properly, as intended. This and the next page explain these differences.

HB 2123 creates unreasonable requirements for recycling and composting facilities, and other facilities that don't have smokestacks, while potentially failing to cover pyrolysis and gasification facilities. HB 2123 would apply to incinerators, landfills, transfer stations, composting and recycling plants, and anaerobic digesters. Only incinerators, anaerobic digesters, and the landfill gas burners at landfills have smokestacks where continuous emissions monitors could be placed. Since the emissions of anaerobic digesters are far, it's unreasonable to make them test for all of the listed pollutants. For landfills, and waste facilities that have no smokestack, this bill makes no sense. There is a difference between the technology for continuous monitoring in a smokestack, and being able to continuously monitor emission in the ambient (outside) air at or near a facility. It's impractical and unnecessary to test for all of these chemicals at a recycling or composting facility, even if the technology existed for ambient monitoring of each of the required chemicals. HB 2123 would put an undue burden on facilities where such monitoring is unnecessary. See p.3 for a comparison of definitions.

The definitions in [HB 2796](#) / [SB 2101](#) are carefully crafted to cover waste incinerators without accidentally impacting waste facilities that don't even have smokestacks. The term "waste" should be defined, as we do in [HB 2796](#) / [SB 2101](#), and the definition of a "waste combustion facility" (not any waste *management* facility) including should be inclusive of the smaller pyrolysis and gasification types of facilities that often escape regulation and make grandiose claims about clean emissions while doing almost no monitoring.

HB 2123 is not requiring continuous monitoring / sampling as it purports to. The bill puts DOH in charge of establishing “frequency of continuous testing.” Continuous testing is not something you do periodically. The very point of it is to capture the full set of data on emissions over time. The frequency is “all the time,” though regulations typically provide for a small percentage of equipment down-time before it’s considered to be a violation for monitors to be down too long while an incinerator is operating. Since continuous monitoring or sampling is done in a smokestack, requiring installation of specialized equipment, it is not something you do periodically. That’s what annual stack tests are for – the tests that significantly underestimate certain pollutants, which is why this bill seeks to close the gap by requiring continuous testing.

HB 2123 fails to spell out that continuous sampling can be used in place of continuous monitoring where the continuous monitoring technology is not commercially available. For dioxins/furans, PCBs, PFAS, and PAHs (pollutants 2-5 in HB 2123), continuous emissions monitoring devices are not commercially available for use. However, continuous *sampling* devices are. The difference is that a continuous monitor provides data in real-time while continuous sampling can collect a sample for 4-6 weeks in a cartridge that can be switched out and sent to a laboratory for testing. [HB 2796](#) / [SB 2101](#) and Oregon’s SB 488, which this bill is modeled on, account for this by stating that continuous sampling can be used where continuous monitors are not an option. This is important to state so that DOH and regulated facilities do not evade the testing requirement simply by stating that the technology does not exist. When DOH expressed in their 10/30/2023 memo that they “could not find information on continuous automated sampling systems for these pollutants” (those listed above), we readily provided links to two vendors who currently sell the equipment for this very purpose. See page 11 [here](#).

HB 2123 removes five pollutants from continuous testing requirements. The pollutants missing in this bill are carbon dioxide (CO₂), carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen oxides (NO_x), and particulate matter (total, PM₁₀, and PM_{2.5}). All of those except particulate matter are already required to be continuously monitored at large incinerators like H-POWER. However, smaller incinerators and pyrolysis and gasification units could be exempt from some of these requirements, which is why they should be listed, even if the requirement is already in place for certain facilities. Particulate matter is a very important pollutant to track for public health reasons, especially fine particulate matter (PM_{2.5}). It is not sufficient to know how dark the emissions are (opacity, which is continuously monitored already at H-POWER), as this is not a true proxy for knowing the amount and grade of these PM emissions, where smaller grades can be far more harmful.

HB 2123 has no data disclosure requirements. [HB 2796](#) / [SB 2101](#) have carefully crafted language to ensure that this public data will actually be publicly and immediately available in a user-friendly way via a public website, for transparency purposes. Without this, residents would have to file a request with DOH and wait up to two weeks for a response.

HB 2123 does not address how the data can be used for enforcement once shown to be reliable. It’s not enough to know what is being put in the air. If the data is collected and shows emissions to be high, DOH should be empowered to use that data for enforcement once that data is shown to be reliable.

HB 2123 puts DOH in charge of funding and conducting the testing. While we welcome DOH doing the testing, polluters should pay for it through fees to cover DOH’s costs. Also, since this is not a periodic thing, but entails the installation of long-term equipment that runs continuously, if DOH would be conducting the testing, the bill should specify if that requires DOH staff to be on-site full-time, or just check on the installation periodically to ensure that it’s functioning properly. Covanta, the operator of H-POWER, was once caught tampering with their continuous emissions monitors to make it seem as if their emissions are lower than they actually are. Given this track record, periodic inspection by DOH staff would be appropriate.

Who does this bill apply to?

HB 2123 applies to any “waste management facility,” which “includes but is not limited to *solid waste disposal facilities* and *solid waste reduction facilities*, as defined in section [342G-1](#).”

“Solid waste disposal facility” means any facility which receives solid waste for ultimate disposal through landfilling or incineration. This term does not include facilities utilized for transfer, storage, processing, or remanufacturing for recycling or reuse, or bioconversion.

“Solid waste reduction facility” or “waste reduction facility” means all contiguous land, including buffer zones, structures, appurtenances, and improvements on the land used for solid waste handling. This term includes a facility used as a transfer station, landfill, incinerator, composting plant, bioconversion site, or recycling site utilized for the reduction, consolidation, conversion, processing, or disposal of solid waste.

This is unreasonably broad, but is also too narrow in that it might fail to cover pyrolysis, gasification and certain waste-to-fuels schemes.

[HB 2796](#) / [SB 2101](#) carefully covers just the appropriate facilities, with the following definition:

"Waste combustion facility" means any non-residential facility that:

- (1) Disposes of waste, uses waste to heat an industrial process, or uses waste to produce energy, including heat, electricity or a burnable fuel;
- (2) Performs the actions specified in paragraph (1) through the combustion of waste, or gases produced on-site from the burning, gasification or pyrolysis of waste, or by producing a solid, liquid, or gaseous fuel product through conversion of waste; and
- (3) Is capable of processing at least five tons of waste per day.

“Waste combustion facility” does not include landfills, anaerobic digesters, or facilities burning landfill gas or gas produced from anaerobic digestion; provided that these facilities are not also burning waste.

[HB 2796](#) / [SB 2101](#) also carefully defines waste, which is undefined in HB 2123:

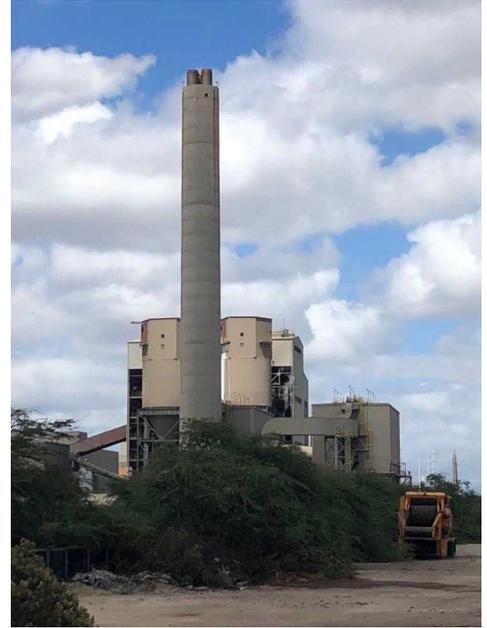
“Waste” means any of the following, or combination of the following:

- (1) “Waste” as defined in title II, chapter 58.1, Hawaii Administrative Rules;
- (2) Plastics;
- (3) Any material that has been source separated for recycling or composting purposes;
- (4) Disaster debris;
- (5) “Hazardous waste” as defined in title II, chapter 261, Hawaii Administrative Rules;
- (6) Processed engineered fuel;
- (7) Solid recovered fuel;
- (8) Refuse-derived fuel; or
- (9) Any material determined by the United States Environmental Protection Agency or state agency to be a non-hazardous secondary material.

Continuous Monitoring of Air Pollution from Waste Incineration

The H-POWER trash incinerator on O‘ahu, located in Campbell Industrial Park in Kapolei, is one of the largest waste incinerators in the nation, capable of burning up to 2,608 tons of waste per day. It is also one of the largest industrial air polluters in the state, according to data reported to the state Department of Health. Two of the three burners at H-POWER (the old ones that started up in 1989) are missing two of the four pollution control systems commonly used at trash incinerators. One of these is the carbon injection system that transfers highly toxic dioxins/furans and mercury from air to the ash.

Like Hawai‘i, the state of Oregon has only one trash incinerator, also operated by Covanta, though the H-POWER incinerator on O‘ahu is nearly six times larger. In August 2023, Oregon’s governor signed Senate Bill 488 into law, making it the first state to require the continuous monitoring of toxic dioxins, PCBs, and various heavy metals emitted from a trash incinerator. Normally, these are tested just once a year.



If we regulated speeding the way we monitor air emissions of most chemicals from industrial smokestacks, motorists would be permitted to drive around all year with no speedometer. Once a year, a speed trap would be set on the highway with signs warning “slow down... speed trap ahead,” and the driver’s brother would be running the speed trap (companies choose who to pay to run the test, and prepare for the test ahead of time).

Only four air contaminants released by H-POWER are monitored on a continuous basis, while another ten are tested just once per year; others, not at all. None of the toxic chemicals released by H-POWER are monitored continuously. Technology, tested and verified by EPA in 2006, exists to continuously monitor dozens of air pollutants, including many toxic chemicals known to be released from incinerators.

Once-a-year testing can drastically underestimate actual emissions. Data from incinerators where continuous emissions monitors have been used show that actual emissions can be far higher than what self-administered, annual stack tests show. In part, this is because the state requires testing during optimal operating conditions, not during startup, shutdown, and malfunction times, when certain emissions are known to be much higher. Hydrochloric acid, one of the major pollutants released by trash incinerators, has been found by continuous monitoring at the nation’s largest waste incinerator (also a Covanta plant) to be 62% higher than what annual stack tests (the only kind used at H-POWER) indicate. Dioxins and furans, the most toxic chemicals known to science, have been shown in European studies to be released in amounts 30 to 1,300 times higher than we’re led to believe in the U.S. when testing once a year.

The Incinerator Air Pollution Right-to-Know Act ([SB 2101](#)) would currently only apply to H-POWER facility, and would require continuous emissions monitoring and real-time reporting to a public website of over 20 chemical contaminants from waste incinerators in the state. Where truly continuous testing technology is not commercially available, the bill allows continuous *sampling* to be used, which means that, instead of a constant read-out of emissions levels, a sampling cartridge collects a sample for up to four weeks and that sample is then replaced and sent to a lab to find out the results, providing year-round coverage.

Learn more in our [response to the Department of Health’s memo on the bill.](#)

The Clean Power Task Force seeks a rapid, just transition of Hawaii’s energy system, halting Hawaii’s contributions to climate warming and air pollution through the use of 100% zero-emission, renewable energy sources, by raising public awareness and impacting public policy through scientific and Indigenous knowledge.

Frequency of air emissions testing at the H-POWER trash incinerator's three burners

Status quo vs. proposed Incinerator Air Pollution Right-to-Know Act (SB 2101)

Chemical	Abbreviation	Testing frequency (status quo)	Proposed bill	Category
Sulfur dioxide	SO ₂	Continuous	Continuous	Criteria air pollutant
Nitrogen oxides	NO _x	Continuous	Continuous	Criteria air pollutant
Carbon monoxide	CO	Continuous	Continuous	Criteria air pollutant
Carbon dioxide	CO ₂	Continuous	Continuous	Greenhouse gas
Ammonia	NH ₄	Annual	Continuous	Released via NOx controls
Dioxins/Furans	2,3,7,8-TCDD TEQs	Annual	Continuous **	Highly toxic organohalogen
Polychlorinated biphenyls	PCBs	Never	Continuous **	Highly toxic organohalogen
Per- and polyfluoroalkyl substances	PFAS	Never	Continuous **	Highly toxic organohalogen
Polycyclic aromatic hydrocarbons	PAHs	Never	Continuous **	Toxic hydrocarbons
Volatile organic compounds	VOC	Annual	Continuous	Toxic hydrocarbons
Hydrogen chloride (Hydrochloric acid)	HCl	Annual	Continuous	Acid gas
Hydrogen fluoride (Hydrofluoric acid)	HF	Annual	Continuous	Acid gas
Arsenic	As	Never	Continuous	Toxic metal
Beryllium	Be	Annual	Continuous	Toxic metal
Cadmium	Cd	Annual	Continuous	Toxic metal
Chromium (VI)	Cr (VI)	Never	Continuous	Toxic metal
Lead	Pb	Annual	Continuous	Toxic metal
Manganese	Mn	Never	Continuous	Toxic metal
Mercury	Hg	Annual	Continuous	Toxic metal
Nickel	Ni	Never	Continuous	Toxic metal
Selenium	Se	Never	Continuous	Toxic metal
Zinc	Zn	Never	Continuous	Toxic metal
Opacity (darkness of emissions; an indirect measure of particulate matter)		Continuous	(unaddressed)	Particulate matter
Total particulate matter (filterable)	PM-FIL	Annual	Continuous	Particulate matter
Coarse particulate matter (filterable)	PM ₁₀ -FIL	None (Units 1-2); Annual (Unit 3)	Continuous	Particulate matter
Fine particulate matter (filterable)	PM _{2.5} -FIL	None (Units 1-2); Annual (Unit 3)	Continuous	Particulate matter
Total particulate matter (filterable and condensable)	PM-PRI (PM Primary)	None (Units 1-2); Annual (Unit 3)	(unaddressed)	Particulate matter
Coarse particulate matter (filterable and condensable)	PM ₁₀ -PRI (PM ₁₀ Primary)	Estimates * (Units 1-2); Annual (Unit 3)	(unaddressed)	Particulate matter
Fine particulate matter (filterable and condensable)	PM _{2.5} -PRI (PM _{2.5} Primary)	Estimates * (Units 1-2); Annual (Unit 3)	(unaddressed)	Particulate matter
TOTALS OF ACTUAL POLLUTANTS MEASURED		4 Continuous + 10 Annual ***	23 Continuous	

Note: those listed as "(unaddressed)" in the bill would continue to be monitored as current permits require.

* Unit one estimates these two types of particulate matter using "Engineering judgment" and Unit two with "USEPA Speciation Profile."

** Would likely need to be tested with continuous sampling. Instead of having real-time data, a long-term sampling cartridge would be switched out every 14 days to be tested at a lab.

*** Opacity is not a true measure of particulate matter and is not counted as a pollutant, itself. The different sizes (grades) of particulate matter are counted only once here.

Incinerator Air Pollution Right-to-Know bill

A response to Hawai'i Department of Health Clean Air Branch

by

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BACKGROUND: In the 2024 legislative session, Senator Mike Gabbard has introduced the [Incinerator Air Pollution Right-to-Know bill](#) (SB 2101). The bill is based largely on Oregon's [Senate Bill 488](#) of 2023, where Oregon became the first state requiring a trash incinerator to use modern technology to continuously monitor for toxic chemicals and other pollutants that are typically not monitored at all, or are tested just once a year under optimal operating conditions that understate actual emissions.

On 10/30/2023, the Hawai'i Department of Health Clean Air Branch (DOH-CAB) drafted a nine-page review of the bill. This review provides some good background information and context, but also contains some statements to which this response provides some clarification. The DOH review is printed verbatim below on pages 3 to 19, set side-by-side with our response for ease of reviewing both. A chart from our [factsheet](#), comparing current vs. proposed monitoring requirements, is attached on page 20.

WHY CONTINUOUS MONITORING? At trash incinerators throughout the U.S., only three pollutants are required to be monitored on a continuous basis (NO_x, SO₂, and CO). Carbon dioxide (CO₂), the global warming pollutant, is often monitored continuously at larger incinerators, as are various parameters like oxygen, temperature, and opacity (darkness of air emissions). In rare other cases, additional pollutants are monitored continuously (see examples on next page).

¹ In Connecticut, Covanta was fined \$20,000 in 1993 in a civil action filed by the state Attorney General in response to an employee adjusting a continuous emissions monitoring device to alter a reading in order to pass a continuous emissions monitoring audit. In Tulsa, Oklahoma in 2013, Covanta was the target of a criminal investigation by the U.S. Attorney's Office "related to alleged improprieties in the recording and reporting of emissions data" in which Covanta entered into a non-prosecution agreement to follow applicable laws and regulations and pay a \$200,000 "community service payment" to the state environmental

Other pollutants, if monitored at all, are typically tested once per year, and sometimes less frequently. If we regulated motorists the way we do most pollutants from smokestacks, it would be akin to enforcing a speed limit by allowing drivers to drive all year with no speedometer. Once a year, a speed trap would be set on the highway with signs warning "slow down... speed trap ahead," and the driver's brother would be running the speed trap (companies choose who they pay to conduct the test). Some incinerator operators have also been known to manipulate emission testing to present lower emissions levels to regulators.¹

UNDERESTIMATING POLLUTION: Testing just once a year underestimates actual pollution levels. An analysis of seven years of data from the nation's largest trash incinerator, Covanta Delaware Valley in the City of Chester, Pennsylvania, where they monitor hydrochloric acid continuously as well as once per year in an annual stack test, the continuous monitors show actual emissions to be 62% higher than annual stack tests show.

Increased downtime at aging incinerators results in higher emissions from startup and shutdown occurrences. Dioxin emissions are a stark example. One study out of Europe found that using continuous sampling for dioxins at incinerators found the actual emissions to be 32-52 times higher than we think they are in the U.S. when requiring incinerators to test each unit just

agency. For the Connecticut incident, see page 37 for this 1993 incident reported in this 93-page compilation of Covanta's U.S. violations through September 2006: www.energyjustice.net/files/incineration/covanta/violations2006.pdf. For Tulsa, see Covanta Holding Corporation's 2019 10-K Securities and Exchange Commission filing, p. 105. (see "Tulsa Matter" describing the consequences of this 2013 incident) d18rn0p25nwr6d.cloudfront.net/CIK-0000225648/992dfb7f-398d-4b17-8e33-75e956f6f235.pdf

once per year under ideal operating conditions.² A more recent study found that our failure to use continuous sampling technology is underestimating dioxin emissions by 460 to 1,290 times.³ Considering that continuous sampling technology has been tested and verified by EPA since 2006⁴ and that dioxin is the most toxic substance known to EPA – 140,000 times more toxic than mercury⁵ – there is no excuse for not requiring continuous dioxin sampling at waste incinerators.

Similarly, the technology to continuously monitor mercury, particulate matter, hydrochloric acid, and other regulated air pollutants from trash incinerators has existed for far too long that it's time for enforcement of new EPA standards to be based on continuous monitoring to ensure that spikes in emissions, especially during startup, shutdown, and malfunction (SSM) times, are not missed for lack of looking.

While EPA's proposed new regulations for trash incinerators will be removing the loophole that exempts incinerators during startup and shutdown times, that exemption only applies to the three pollutants that are federally required to be tested on a continuous basis (CO, NOx, and SO₂) and will still permit higher emissions during malfunctions to be unregulated. For all other pollutants, the higher emissions during SSM times will still go unmonitored and unregulated.

Municipal solid waste (trash) is a very variable waste stream, and incinerators burning industrial wastes, medical waste, sewage sludge, recyclables, or construction and demolition wastes have even more variability that can alter emissions.

² De Fré R, Wevers M. "Underestimation in dioxin emission inventories," *Organohalogen Compounds*, 36: 17–20.
www.ejnet.org/toxics/cems/1998_DeFre_OrgComp98_Underest_Dioxin_Em_Inv_Amesa.pdf

³ Arkenbout, A, Olie K, Esbensen, KH. "Emission regimes of POPs of a Dutch incinerator: regulated, measured and hidden issues."
docs.wixstatic.com/ugd/8b2c54_8842250015574805aeb13a18479226fc.pdf

WHERE ARE CONTINUOUS MONITORS USED AT INCINERATORS?

Hydrochloric acid: all six trash incinerators in Pennsylvania, plus Covanta's Union and Camden County incinerators in New Jersey, Covanta Onondaga in New York, and Wheelabrator's Portsmouth, VA incinerator.

Ammonia: The Union County, NJ incinerator, and Covanta's Huntington and Onondaga incinerators in New York continuously monitor for ammonia.

Dioxins/furans, PCBs, and toxic metals: Covanta Marion in Oregon, since the passage of Senate Bill 488 in 2023, will have to continuously monitor for dioxins/furans, PCBs, and nine toxic metals.

Dioxins, mercury, and particulate matter: According to [Covanta's website about their innovations](#), they claim that their Covanta Haverhill incinerator in Massachusetts, in 2010, pioneered the "installation and demonstration of a new continuous monitoring system for mercury, dioxin and particulate matter. Although the dioxin monitor still requires laboratory analysis, it allows long-term monitoring of emissions without a team of specialists."

Mercury: Covanta Bristol in Connecticut, if they get permission to start burning medical waste, says they'll continuously monitor for mercury. West Palm Beach #2 in Florida tested mercury CEMS from 2015-2018, as did Covanta's Hillsborough County, Florida incinerator (at Unit #4 from 2009-2015). Durham-York Energy Centre operated by Covanta in Ontario, Canada, and Covanta Onondaga in New York, may also have mercury CEMS.

Dioxins/furans: Durham-York Energy Centre in Ontario, Canada is another incinerator using long-term sampling for dioxins/furans.

⁴ Environmental Protection Agency, Environmental Technology Verification Program.
archive.epa.gov/nrmrl/archive-etv/web/html/vt-ams.html

⁵ Environmental Protection Agency, Risk-Screening Environmental Indicators (RSEI) Model.
www.epa.gov/rsei

Hawai'i Department of Health Clean Air Branch (DOH-CAB) review of the bill (10/30/2023) [reprinted verbatim]	Response by Energy Justice Network on behalf of Hawai'i Clean Power Task Force (1/16/2024)																
<p>The Department of Health Clean Air Branch (DOH-CAB) was requested to provide feedback on a bill being considered for the forthcoming 2024 legislative session. The bill is similar to Senate Bill 488 that recently passed in Oregon to require increased continuous emissions monitoring for burning municipal solid waste (MSW) and caps the facility's medical waste incineration at 18,000 tons/year. The Oregon measure affects the Covanta Marion, Inc. MSW facility in Marion County which operates two 250 ton per day MSW combustor units. Medical waste from outside the State of Oregon is accepted at the Marion facility.</p> <p>The bill considered for Hawaii would affect the Honolulu Program of Waste Energy Recovery (HPOWER) plant on the southwest corner of Oahu owned and operated by Covanta Honolulu Resource Recovery Venture. The HPOWER plant operates one 900 ton per day mass-burn municipal waste combustor (MWC) boiler and two 854 ton per day refuse derived fuel (RDF) MWC boilers. The RDF is produced by processing MSW through shredding and size classification. Shredding and size classification for the 900 ton per day boiler is not required because the combustor is a mass-burn unit.</p> <p>The Hawaii bill will require HPOWER to develop a plan to continuously monitor or continuously sample emissions at its MSW plant from a large list of pollutants including:</p> <ul style="list-style-type: none"> • criteria air pollutants (carbon monoxide, lead, nitrogen dioxide, particulate matter, sulfur dioxide, and volatile organic compounds); <i>currently carbon monoxide, nitrogen dioxide, and sulfur dioxide are sampled continuously</i> 	<p>This is accurate. You can find a copy of the Oregon bill here: Oregon Senate Bill 488</p> <p>H-POWER has three burners (units):</p> <table border="1" data-bbox="1167 574 1768 711"> <thead> <tr> <th><u>Unit</u></th> <th><u>Went Online</u></th> <th><u>Fuel</u></th> <th><u>Capacity</u></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Nov 1989</td> <td>RDF</td> <td>854 tons/day</td> </tr> <tr> <td>2</td> <td>Nov 1989</td> <td>RDF</td> <td>854 tons/day</td> </tr> <tr> <td>3</td> <td>Feb 2013</td> <td>MSW</td> <td>900 tons/day</td> </tr> </tbody> </table> <p>Refuse-derived fuel (RDF) basically just means that the trash (municipal solid waste, or "MSW") is processed to remove much of the metal and glass (which don't burn) before burning the remaining trash. The term "mass burn" is used to describe units like Unit 3 that burn trash (MSW) without removing metals or glass first.</p> <p>See the chart attached as page 20 (also in this factsheet) for a more visual breakdown of current vs. proposed testing requirements.</p> <p>Carbon monoxide (CO), nitrogen oxides (NOx), and sulfur dioxide (SO₂) are already required to be continuously monitored per federal regulation. The bill includes them just to be thorough. Note that DOH uses the term nitrogen dioxide, but should have written nitrogen oxides. Nitrogen oxides (NOx) is a collective term used to refer to nitrogen monoxide (nitric oxide or NO) and nitrogen dioxide (NO₂). H-POWER is already required to monitor both. Volatile organic compounds (VOCs) are tested just once per year. Total particulate matter is tested just once per year, but the smaller (more dangerous) sizes of particulate</p>	<u>Unit</u>	<u>Went Online</u>	<u>Fuel</u>	<u>Capacity</u>	1	Nov 1989	RDF	854 tons/day	2	Nov 1989	RDF	854 tons/day	3	Feb 2013	MSW	900 tons/day
<u>Unit</u>	<u>Went Online</u>	<u>Fuel</u>	<u>Capacity</u>														
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- hazardous air pollutants (arsenic, cadmium, dioxins/furans, hexavalent chromium, hydrochloric acid - HCL, hydrofluoric acid - HF, manganese, mercury, nickel, polychlorinated biphenyls - PCB, polycyclic aromatic hydrocarbons - PAH, Per – and polyfluoroalkyl substances – PFAS, and selenium); *currently dioxin/furans, MWC acid gases, and MWC metals are sampled annually*
- carbon dioxide; *currently carbon dioxide is sampled continuously* and
- zinc.

The bill will also requires DOH-CAB to host a website to make all continuous emissions monitoring system (CEMS) data from HPOWER publicly available in real-time through an internet feed and set annual fees to cover the cost to develop and maintain the website. Requirements for the website include line chart displays of each pollutant monitored, red colored text notifications of violations, summary charts listing all violations of any applicable emissions limit, emission trend charts showing totals for all reporting facilities, and immediate alerts by email to owners, the Department, and other parties who signed up to be notified of any violations of data availability requirements or exceedances of any applicable air pollution limitations.

For implementing the continuous monitoring measures, the owner of the waste combustion facility must submit a plan 3 months after the effective date. Within 3 months of plan approval by the DOH-CAB, the owner would be required to implement the plan. The DOH-CAB would then be required to issue a determination on whether the data is reliable for enforcing permit limits within 12 months after first use of the continuous monitoring or sampling measure. Within 6 months of the determination, the DOH-CAB would then be required to issue rules for enforcement which would start no later than 12 months after its determination on whether the monitoring data is reliable. The DOH-CAB would make these determinations on an annual basis as required by the bill.

The bill requires DOH-CAB to submit the following reports to the legislature:

matter are only tested annually on Unit 3. The old Units 1 & 2 are not tested and only do engineering estimates.

Yes, dioxins/furans, acid gases (hydrochloric and hydrofluoric acids) and four metals (beryllium, cadmium, lead and mercury) are tested once per year. Arsenic, hexavalent chromium, manganese, nickel, selenium and zinc are metals that are never tested.

Yes, carbon dioxide (CO₂) is already continuously monitored, as required by federal regulations. The bill includes it just to be thorough.

This is an accurate description of the bill.

- a) A report of progress made on implementing the continuous emissions monitoring requirements of the bill, no later than the regular session of 2025; and
- b) An annual report on the results of continuous monitoring or sampling that may include recommendations for legislation.

DOH-CAB supports the intent of the bill to require a higher standard of monitoring for MSW combustors and making data publicly available. However, DOH-CAB has the following concerns and comments:

Differences in Oregon’s MSW facility and Hawaii’s HPOWER facility to consider:

- Unlike the Oregon MSW facility for which SB488 placed a capped at burning 18,000 tons/year of medical waste, HPOWER typically burns significantly less medical waste, about 1,200 to 2,400 tons/year (100 to 200 tons/month). The Oregon facility accepts medical waste from outside of the state and burns untreated medical waste. HPOWER’s medical waste is treated. Hawaii Bio-Waste Systems, Inc. and Tripler Hospital have equipment to treat medical waste. After medical waste is treated, the waste is classified as MSW. Unlike the Oregon bill, the HPOWER bill would not limit or decrease emissions with such a cap as the amount of medical waste burned by HPOWER is significantly less than the Oregon facility.
- Wind patterns and location of public areas in the vicinity of the Oregon facility are different than those at the HPOWER facility (please see Figures 1 through 6). While winds transport pollutants downwind to various public areas on all sides of the Oregon facility (please see Figures 1, 2 & 3), prevailing trade winds from the northeast transport pollutants from HPOWER away from residential areas a majority of the time (please see Figures 4, 5, and 6). Generally, in order for emissions to significantly impact residential areas in the vicinity of the HPOWER facility, sustained winds with a southerly component are needed. Wind data from the Kalaeloa Airport over a five year period (January 1, 2018, to December 31, 2022) indicates that winds from this direction (135° -315°) occur 12.79% of the time. For the 87.21% of time

Note that the bill, as introduced, no longer has this requirement to provide the results to the legislature (which will be on a public website, anyway), or to provide recommendations for legislation.

We appreciate DOH-CAB’s support for the intent of the bill and have already addressed their main concerns with amendments made to the bill prior to introduction, in response to DOH-CAB’s memo.

As DOH-CAB admits here, this discussion of the medical waste provisions in Oregon’s SB 488 is irrelevant since the Incinerator Air Pollution Right-to-Know bill (Hawaii Senate Bill 2101) does not include any provisions about medical waste burning.

DOH argues that H-POWER’s emissions predominantly blow out toward the ocean, perhaps trying to imply that these emissions are not worth worrying about. However, DOH documents that 12.79% of the time, H-POWER’s emissions blow toward residential areas, which is still significant.

DOH compares to the Covanta Marion incinerator in Oregon to make its point. However, H-POWER is five times larger and actually burns about four times more waste than Covanta Marion. H-POWER also operates with fewer pollution control devices.

remaining, winds blow pollutants in a direction from HPOWER to the ocean. Please refer to Figure 6.

Even if you subtract all of H-POWER's emissions that blow toward the ocean from what they reported emitting in 2020 according to EPA's National Emissions Inventory, this is how much pollution H-POWER still released that blew toward O'ahu neighborhoods that year:

<u>Pounds</u>	<u>Air Pollutant</u>	<u>Health impacts</u>
230,220	Nitrogen oxides	Asthma attacks
30,031	Particulate matter	Heart attacks / strokes, cancer
3,274	Hydrochloric acid	Lung damage; eye & skin irritant
1.96	Lead	Learning & behavioral disabilities
1.52	Mercury	Neurotoxic, immune damage

These are amounts worthy of concern, especially considering that, except for nitrogen oxides, none of these are monitored on a continuous basis and are likely underestimated.

It's also worth noting that emissions that blow out to the ocean do not vanish, but enter the environment where people recreate, and use as a food source. Emissions like dioxins/furans, PCBs, and mercury will bioaccumulate in fish tissue and expose people at much higher doses than they would receive from breathing the air nearby.

HPOWER Controls, Source Testing, and Risk Assessment:

- The continuous emissions monitoring proposed by the bill is inconsistent with conditions specified in permits already held by HPOWER for operating its MWC boilers. The MWC boilers operate state-of-the-art air pollution control equipment for complying with emission limits including those established by federal New Source Performance Standards and best available control technology pursuant to federal Prevention Significant Deterioration regulations. The mass-burn boiler uses a spray dryer absorber with lime injection to control sulfur dioxide, MWC acid gases, sulfuric acid mist, and fluorides; a fabric filter baghouse for the control of particulate matter and MWC metals; carbon injection combined with spray dryer absorber and baghouse to control dioxin furans; good combustion practices for minimizing carbon monoxide; and Covanta Very Low NO_x system combined with selective non catalytic reduction (SNCR) to reduce nitrogen dioxide emissions. The RDF boilers use a spray dryer absorber with lime injection to

It is not "inconsistent" to require better monitoring by going from testing for a chemical once per year (or never) to modern continuous monitoring or sampling technology. Several trash incinerators already do both, such as monitoring for hydrochloric acid emissions continuously *and* via annual stack tests. Find examples of some of these on page two above.

In fact, the [new regulations](#) that the U.S. Environmental Protection Agency is in the process of adopting for large trash incinerators like H-POWER explicitly provides for the use of continuous emissions monitoring (CEMS). The draft rulemaking states that the 2006 final amendments to rules for large trash incinerators allow the optional use of CEMS for particulate matter and mercury in place of annual stack testing, and allows

control sulfur dioxide, MWC acid gases, sulfuric acid mist, and fluorides; baghouse to control particulate matter and MWC metals; and good combustion practices for minimizing carbon monoxide emissions.

the optional use of CEMS for multi-metal, hydrochloric acid, and dioxins/furans in place of stack tests after performance specifications for these CEMS are promulgated.

EPA's Environmental Technology Verification Program (no longer active) tested and verified a variety of CEMS and continuous sampling technologies, including for multi-metals and dioxins/furans, around 2006. See their [Verified Technologies](#) page for details. EPA's Air Emissions Monitoring Center (EMC) also provides [Promulgated Test Methods](#) and [Performance Specifications](#) for continuous monitoring of most of the pollutants discussed here.

DOH makes a blanket statement about *monitoring* being inconsistent with H-POWER's existing permit conditions. Of course, this is true because existing permits do not require continuous monitoring for more than four pollutants. However, DOH goes on to expound about what pollution *controls* H-POWER has, which is a different issue from monitoring.

DOH's description of the controls, however, confirms that two of the three burners at H-POWER are missing two of the four common pollution control systems used at incinerators, while the new (third) burner has all four (though not as strict as modern requirements for new incinerators).

Most trash incinerators in the U.S. have four different pollution control systems – each designed for different pollutants. DOH describes them fairly well. Three of the systems spray things into the exhaust to reduce certain emissions, often moving those chemicals into the ash. The spray dryer absorber (SDA) injects lime. The carbon injection (CI) system injects activated carbon (like Brita filter material). The selective non-catalytic reduction (SNCR) system injects ammonia or urea to reduce nitrogen oxides (NOx), and the unreacted excess amount becomes ammonia air pollution. The fourth system, the fabric filter (FF) or “baghouse,” is like a large set of vacuum cleaner bags that collect particulate matter (PM) resulting from the exhaust plus the materials injected in the other control systems. This rather toxic “fly ash” is then mixed with the larger volume of

bottom ash left when trash is burned, and this combined ash is then landfilled at Waimanalo Gulch Landfill in Honokai Hale.

Pollution controls in place at H-POWER's three units (burners):

Control:	<u>FF</u>	<u>SDA</u>	<u>CI</u>	<u>SNCR</u>
Injects:	n/a	Lime	Activated Carbon	Ammonia
Reduces:	PM	Acid gases	Dioxins/mercury	NOx

<u>Unit</u>	<u>Fuel</u>				
1	RDF	Y	Y	None	None
2	RDF	Y	Y	None	None
3	MSW	Y	Y	Y	Y*

The fact that two of the three burners at H-POWER are missing very common pollution controls that reduce air emissions of ultra-toxic dioxins and mercury, and asthma-triggering NOx, is rather unusual and shocking. They have the fewest pollution controls of any incinerator in the U.S. Once the new federal regulations kick in by 2028-2029, these will likely be required. The City and County of Honolulu has not yet evaluated what these systems will cost, or if they are affordable to install on such an old facility. Nevertheless, the Incinerator Air Pollution Right-to-Know bill would only require installation of monitors so that we know how extensive the pollution really is, not controls to actually reduce the pollutants, which is a more expensive proposition.

* Covanta's "Low-NOx" system (not "Very Low NOx" as DOH writes) is basically an improved way to spray ammonia at the right places and times to do a better job at reducing NOx. This technology can reduce NOx enough to meet the new federal regulations that will come into effect in 2028-2029 requiring 110 parts per million (ppm). The current federal standard is 180-205 ppm. However, the modern limit for *new* trash incinerators is 45-50 ppm, which can only be met with selective catalytic reduction (SCR), which involves the same as SNCR (spraying ammonia into the exhaust), but also uses a catalyst to reduce these emissions much further. Existing facilities like H-POWER can install this equipment, but it can be rather expensive. A study for the incinerator in Baltimore, MD found that it would

- A risk assessment, as part of the air modeling process for permitting, determined HPOWER's MWC mass-burn boiler to comply with air standards specified in Hawaii Administrative Rules (HAR) §11-60.1-179 for noncarcinogenic and carcinogenic hazardous air pollutants. The RDF boilers were grandfathered from requiring a risk assessment. However, calculations, based on impacts from the mass-burn boiler, predicted the total combined impact from HPOWER's three MWC boilers to be in compliance with HAR §11-60.1-179 for acid gases, MWC metals, and dioxin/furans.

cost \$60-90 million to install at that facility, which also has three burners. While the public health costs of asthma are also quite high (higher than the cost to install this equipment), EPA has chosen not to make the industry bear this cost to bring old incinerator up to modern standards for new facilities.

“Risk assessment data can be like the captured spy. If you torture it long enough, it will tell you anything you want to know.”
— William Ruckelshaus, first U.S. EPA Administrator

Time for a joke: What is the difference between a mathematician, a philosopher, and an environmental consultant? Well, if you ask each one what two plus two equals, a mathematician will tell you $2 + 2 = 4$. The philosopher will tell you it depends on your definition of two, four, plus, and equals. The environmental consultant will take you in the back room and ask you what you want it to equal.

Sadly, this is no joke in far too many situations. Risk assessment can be more art than science, depending on many assumptions that are often off-base, such as looking at toxic exposures to incinerators by examining only air inhalation when the most toxic pollutants (dioxins/furans, PCBs, mercury...) bioaccumulate and reach people via meat and dairy products they consume, which typically fall outside of the analysis. It is highly unusual for a risk assessment to come back with anything other than “this amount of pollution is fine,” especially when conducted on behalf of a paying client that is operating a polluting facility.

That said, a risk assessment showed that H-POWER's 3rd burner is in compliance with the amount of toxic pollution they're allowed to release, but that the two older burners are grandfathered and thus exempt from the requirement to even conduct a risk assessment. DOH's statement that they *calculated* that all of H-POWER complies with the standard for allowable cancer and non-cancer toxic impacts is just that – a modeling exercise that is not based on actual emissions because none of the toxic emissions are monitored on a continuous basis, and are likely underestimated because of this

- The most recent source performance test results indicate the HPOWER facility is well within compliance with all of its air emissions limits. Please see attached source test results.

Enforcement:

- Enforcement would be an issue for many of the pollutants listed in the bill to be continually monitored since:
 - a) There are no emission limits with associated averaging times specified in federal regulations or HPOWER's permits for arsenic, hexavalent chromium, manganese, nickel, PCB, PAH, PFAS, selenium, zinc, and carbon dioxide. However, limits are specified for particulate and opacity which are surrogates for MWC metals. If the facility is complying with particulate and opacity limits, it can be assumed that limits for MWC metals are being complied with. Also, please note that zinc on the list of pollutants to be monitored continually is not listed as a hazardous air pollutant.

fact alone, not to mention issues like only examining inhalation as an exposure pathway, without considering food ingestion.

This only underscores the need to know the real emissions amounts, because these tests are based on once per year self-tests under optimal operating conditions.

It's true that the emissions limits for pollutants tested just once per year are not designed for continuous monitoring, but they can be set in a new standard that is comparable. If an annual stack test is an average of a six hour-period, for example, then a standard for continuous monitoring data could be based on rolling six-hour periods, or back-to-back six-hour periods. The point of using continuous monitoring is to catch the spikes in emissions that can occur if the facility is starting up, shutting down, experiencing malfunctions, or where waste composition or operating conditions (like temperature) changes. Allowing longer averaging times would hide those spikes and allow more air pollution to be legally released.

Particulate matter is not continuously monitored, as the statement implies. Opacity (darkness of emissions) is continuously monitored, but this is not a pollutant, per se. Monitoring darkness of emissions is not an adequate proxy for particulate matter emissions of all sizes, and is absolutely not a surrogate for toxic metals, which are released in much smaller, but significant, amounts that will not sufficiently affect visibility. Even if metals were visible enough, knowing how dark the exhaust is does not specify anything about which metals are released, and in what amounts. Different toxic metals have different emissions limits, different levels of toxicity, and different health and environmental impacts. The point of doing continuous monitoring is to stop this guesswork with surrogates and assumptions about compliance.

b) CEMS are not available for measuring: dioxin/furans, PCB, PAH, and PFAS. Also, DOH-CAB could not find information on continuous automated sampling systems for these pollutants.

While EPA's Environmental Technology Verification Program tested and verified [four dioxin/furan monitoring systems](#) in 2006, some of which are described as real-time or semi-real-time in their [factsheet](#), we are not aware of the real-time or semi-real-time kind being commercially available. This is why the Incinerator Air Pollution Right-to-Know Act provides for the use of continuing *sampling* technology where continuous emissions *monitoring* is not available, just as Oregon's law does.

While continuous monitoring can provide readings on a regular basis, such as every so many minutes, continuous sampling involves gathering a long-term sample, for up to 4-6 weeks in a cartridge, and sending that sample off to a lab for testing. Through back-to-back uses of these sampling cartridges, the full story can be gathered over time, even though real-time readings are not available with this method.

Continuous sampling systems have been in use for over 20 years. The most common is known as [Adsorption Method for Sampling of Dioxins and Furans \(AMESA\)](#). This [1998 study](#) of dioxins tested with AMESA in Belgium found that the actual emissions are 32-52 times higher than annual stack tests indicate. EPA put together a [Powerpoint presentation](#) about this method in 2002 which might be helpful for DOH to review.

Current vendors that make the technology commercially available include:

- Illinois-based Envea's [Amesa-D product](#). They claim "20 years of expertise, 40,000 dioxin analyses, and 400 AMESA® installed in waste incinerators, cement, power plants, etc."
- France-based Tecora's [Continuous Emissions Dioxin Sampler DECS](#). They have a U.S. [distributor](#) in New Hampshire. Their product can continuously sample for dioxins/furans (PCDD/Fs), polychlorinated biphenyls (PCBs), and polycyclic aromatic hydrocarbons (PAHs).

These samplers might also work on PFAS. Air sampling for PFAS is an emerging field, growing out of science showing that

- c) HPOWER's permits do not specify continuous monitoring for the aforementioned pollutants and would need to be revised.

DOH does not have the necessary resources:

- The Department does not have resources to revise the HAR to collect annual fees for developing and maintaining a real-time CEMS website, nor to develop and maintain the website.
- Should a bill be proposed, the Website should be developed, maintained, and funded by HPOWER similar to that done for developing the following real-time website for Puna Geothermal Venture (PGV): [Public Satellite View - Public - Dashboards - Grafana](#). The PGV website was developed for monitoring hydrogen sulfide, noise, wind, and rainfall.

Additional DOH staff would still be needed to review and approve the facility plan, sampling plans, and testing and test reports. Oregon estimated \$118,537 for this in the 2023 -25 biennium.

Associated Cost to consider:

- MSI – Mechanical Systems, Inc. was contacted to obtain information on the types of CEMS available for measuring pollutant emissions. According to MSI, among pollutants listed in the Hawaii bill for continuous monitoring, CEMSs are available for CO₂, CO, NO_x, SO₂, HCL, HF, and PM. There are no CEMS for measuring dioxins/furans, PCB, PAH, and PFAS. HPOWER's permits only specify the use of a CEMS for measuring CO, NO_x, and SO₂. HPOWER's CEMS is also set up to measure carbon dioxide. Therefore, HPOWER would need to install a CEMS to measure HCL, HF, PM, and

incineration does not destroy PFAS, but can spread it into the air. This is discussed in this [2020 presentation](#) and we can put DOH in touch with scientists working in this field.

Yes. Of course. The point of the bill is to get the permit revised to require continuous monitoring/sampling.

The Incinerator Air Pollution Right-to-Know Act ensures that DOH will have the resources it needs by assessing fees on regulated waste combustion facilities. The bill was redrafted in response to DOH's comments to clearly state that DOH may set the fees "to cover the department's cost of enforcing this section." Any amendments needed to ensure that DOH is adequately resourced for implementation are welcome.

We disagree that H-POWER should be in charge of development and maintenance of the emissions data disclosure website. Covanta (the operator of the H-POWER incinerator) and the City and County of Honolulu (the owner) have a conflict of interest and would not be invested in ensuring the most user-friendly disclosure. DOH's mandate for public health aligns better with the mission of public disclosure of data from facilities they regulate.

Mahalo to DOH staff for doing the research to locate cost estimates for this and other costs discussed below.

While it's true that "[t]here are no CEMS for measuring dioxins/furans, PCB, PAH, and PFAS," this does not negate the fact that, where these are not yet commercially available, the bill allows for continuous *sampling* of these chemicals, as Oregon's Department of Environmental Quality found as they start to implement their new law adopted through passage of SB 488 of 2023. As we document above, there are products such as Envea's [Amesa-D](#) and Tecora's [Continuous Emissions Dioxin](#)

VOCs for three MWC boilers. According to MSI, CEMS would cost over a million dollars to continually measure the additional pollutant emissions for the three MWC boilers.

- CEMS will require daily, monthly, quarterly, semi and annual maintenance along with purchase of calibration gases for which CEMS annual service contracts typically cost \$1,000-\$2,500 per month, not including travel costs.

- Cooper Environmental manufactures a Multi-Metal CEMS (640i Monitoring System) that provides continuous near real-time analysis for a wide range of elements including arsenic, cadmium, chromium, manganese, mercury, nickel, selenium, and zinc listed in the bill to be continuously monitored. Please see <https://sci-monitoring.com/product/xact-640-multi-metals-monitor/>.

- Sonoma Technology provided the following rough estimate on the cost to develop a public facing website for accessing real-time CEMS data:
 - a) Implementation of real-time, public facing website displaying CEMS data with email notifications: \$50,000 – \$100,000.
 - i. Depends on 1) data retrieval and processing; 2) website design/customization; and 3) QA/QC requirements; and
 - ii. Text messaging/pushed notifications can be included and may incur additional cost.

 - b) Website operations/maintenance fee after implementation: \$1,800/month, includes:
 - i. Data management system subscription;
 - ii. Website hosting fee;
 - iii. Web server operation and maintenance; and
 - iv. Monitoring of systems, routine backups, and cybersecurity.

[Sampler DECS](#) that can provide continuous sampling of these chemicals.

These and the other costs of compliance are small compared to the budget for a commercial trash incinerator like H-POWER, and are also quite small relative to the costs that will be required when compliance with new EPA regulations forces H-POWER to install the pollution control systems they've been lacking from their start.

Oregon-based Cooper Environmental (now SailBri Cooper) have long been the only company with the multi-metal CEMS capable of monitoring many metals at once.



Figure 1 Close-up image of Covanta Marion, Inc. facility in Oregon State that is shown in the red shaded area.

Interesting, but not relevant in any way to the Incinerator Air Pollution Right-to-Know Act or H-POWER. If DOH's point is that some people live closer to Covanta Marion incinerator in Oregon than O'ahu residents do to H-POWER, it's worth pointing out that emissions travel far enough to impact residents throughout O'ahu and beyond. Dioxin travels as far as the Arctic. Mercury air emissions circumnavigate the globe. While some emissions, like PAHs are heavy and fall more locally, many will blow with kona winds toward population centers on O'ahu.

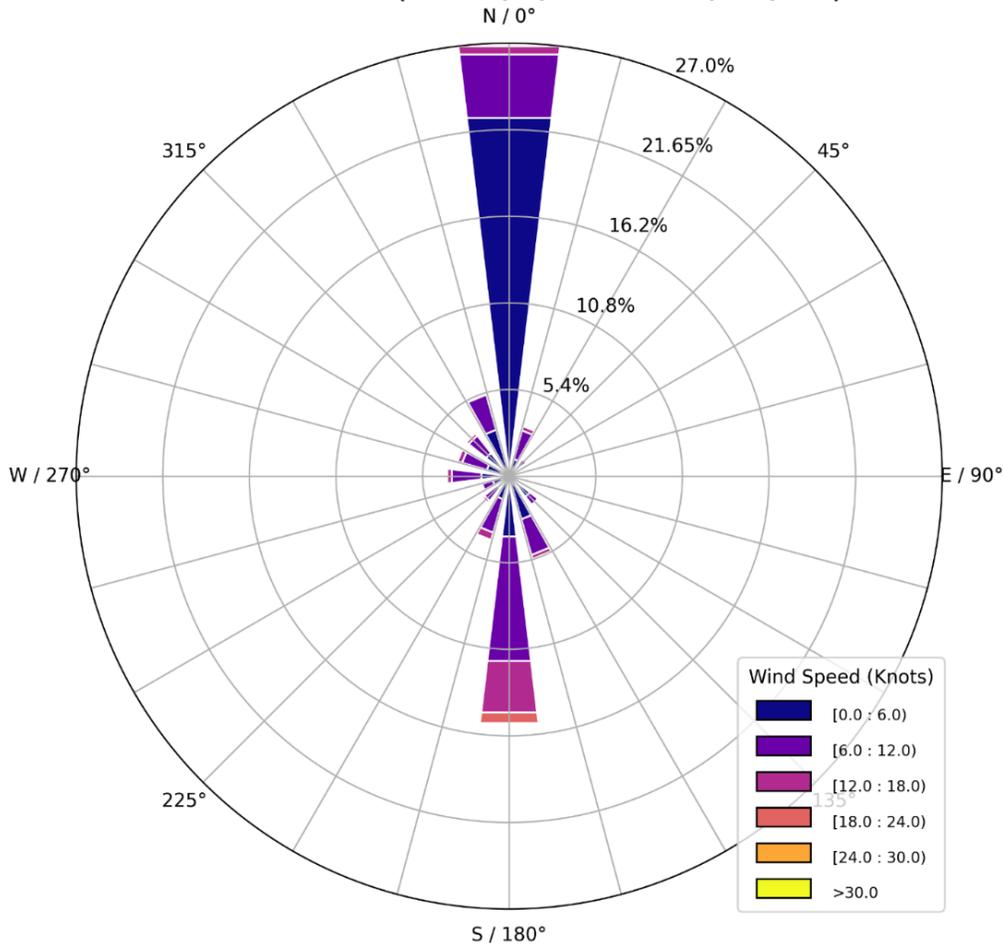


- Covanta Marion Inc Facility Area
- Commercial Area
- Residential Area
- Public Area (Museums + School)

Figure 2 Image of residential areas (yellow), commercial areas (blue), public areas (green), and Covanta Marion, Inc. facility (red).
 Windrose Graph with label in knots:

Yes, there are people in Oregon who live closer to that small trash incinerator than residents on O'ahu do to the much larger H-POWER trash incinerator.

Salem Municipal Airport (Salem, OR) Wind Data (2018/1/1 - 2022/12/31)



Not sure what the relevance is of pointing out Oregon's wind direction.

Figure 3 Windrose graph from the nearest airport (Salem Municipal Airport) to Covanta Marion, Inc. facility in Oregon State. The wind rose shows the general wind direction and speed for the sampling period. Each spoke around the circle shows how often the wind blew from that direction. For example, during the sampling period from January 1, 2018, to December 31, 2022, the wind blew from the north towards the south 27% of the time. The different colors of each spoke provide details on the wind speed in knots (1 knot = 1.15 mph), of the wind from each direction.

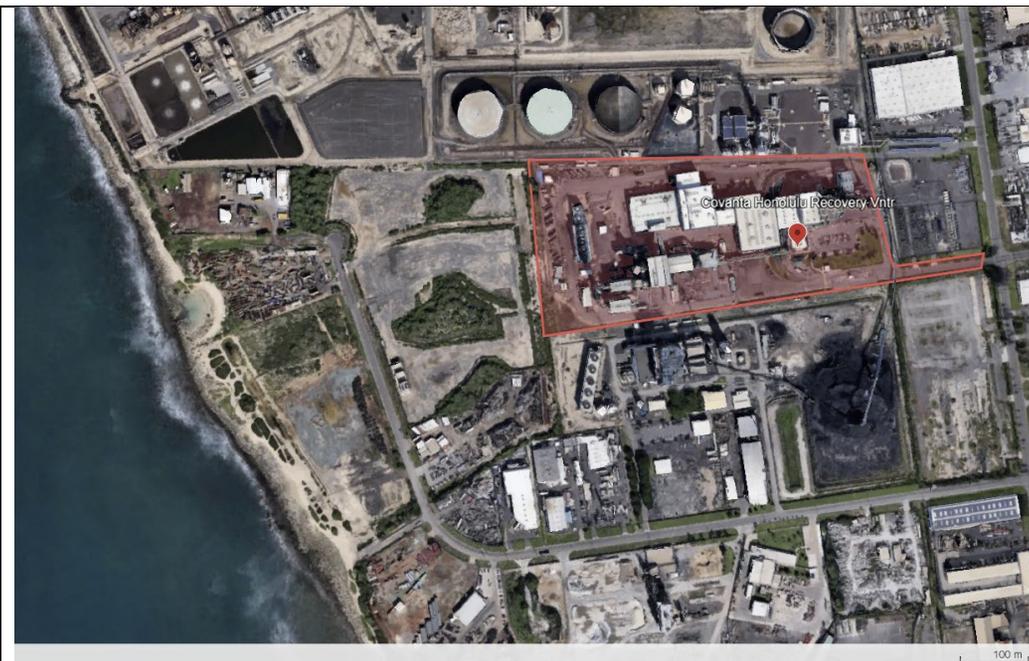
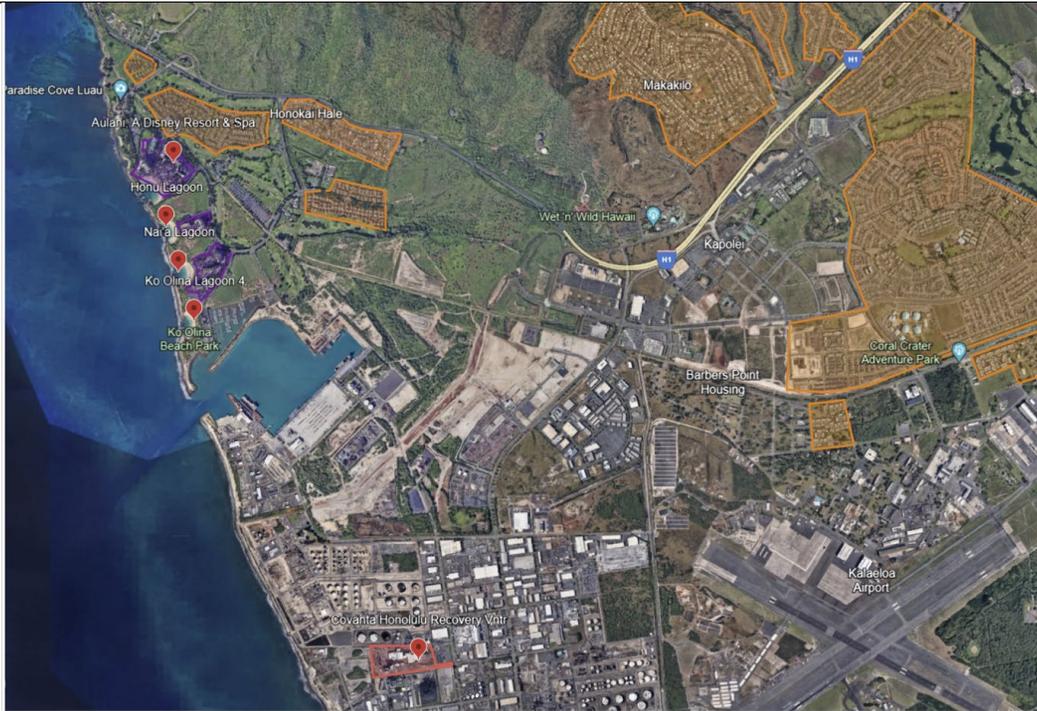


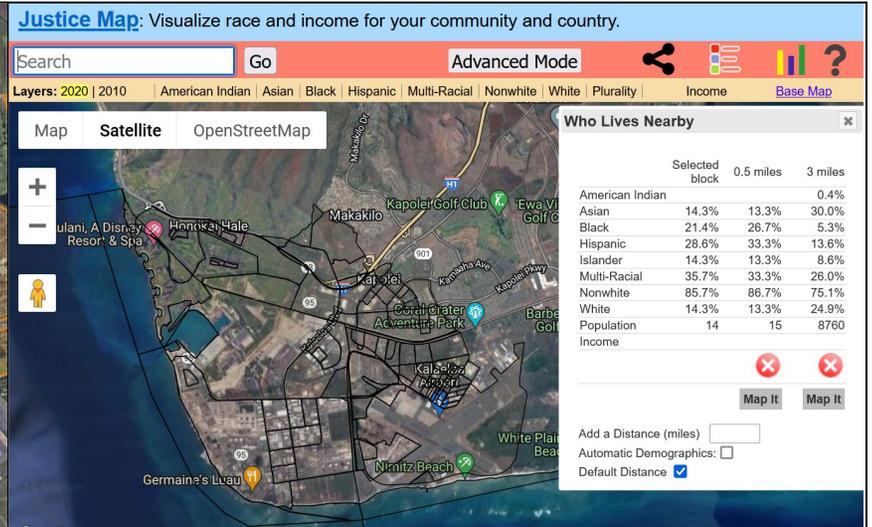
Figure 4 Close-up image of HPOWER facility on southwest corner of Oahu that is highlighted in red.



HPower Facility Area
 Resort Area
 Residential Area

Figure 5 Image of residential areas (yellow), resort areas (purple), and HPOWER facility (red). Kalaeloa Airport is at the at the bottom right of the image.

Windrose Graph with label in knots:



Using the JusticeMap.org site to map race and class demographics, we see that, within three miles (a standard distance for environmental justice analyses used by EPA), nearly 9,000 residents are impacted, 75% of whom identify as Black, Indigenous, or other People of Color (BIPOC) based on the 2020 Census data. This is a start environmental justice issue, especially when combined with the cumulative impacts of the many other industrial polluters concentrated in and near Campbell Industrial Park, and Kapolei, Honokai Hale more generally.

Frequency of air emissions testing at the H-POWER trash incinerator's three burners

Status quo vs. proposed Incinerator Air Pollution Right-to-Know Act (SB 2101)

Chemical	Abbreviation	Testing frequency (status quo)	Proposed bill	Category
Sulfur dioxide	SO ₂	Continuous	Continuous	Criteria air pollutant
Nitrogen oxides	NO _x	Continuous	Continuous	Criteria air pollutant
Carbon monoxide	CO	Continuous	Continuous	Criteria air pollutant
Carbon dioxide	CO ₂	Continuous	Continuous	Greenhouse gas
Ammonia	NH ₄	Annual	Continuous	Released via NO _x controls
Dioxins/Furans	2,3,7,8-TCDD TEQs	Annual	Continuous **	Highly toxic organohalogen
Polychlorinated biphenyls	PCBs	Never	Continuous **	Highly toxic organohalogen
Per- and polyfluoroalkyl substances	PFAS	Never	Continuous **	Highly toxic organohalogen
Polycyclic aromatic hydrocarbons	PAHs	Never	Continuous **	Toxic hydrocarbons
Volatile organic compounds	VOC	Annual	Continuous	Toxic hydrocarbons
Hydrogen chloride (Hydrochloric acid)	HCl	Annual	Continuous	Acid gas
Hydrogen fluoride (Hydrofluoric acid)	HF	Annual	Continuous	Acid gas
Arsenic	As	Never	Continuous	Toxic metal
Beryllium	Be	Annual	Continuous	Toxic metal
Cadmium	Cd	Annual	Continuous	Toxic metal
Chromium (VI)	Cr (VI)	Never	Continuous	Toxic metal
Lead	Pb	Annual	Continuous	Toxic metal
Manganese	Mn	Never	Continuous	Toxic metal
Mercury	Hg	Annual	Continuous	Toxic metal
Nickel	Ni	Never	Continuous	Toxic metal
Selenium	Se	Never	Continuous	Toxic metal
Zinc	Zn	Never	Continuous	Toxic metal
Opacity (darkness of emissions; an indirect measure of particulate matter)		Continuous	(unaddressed)	Particulate matter
Total particulate matter (filterable)	PM-FIL	Annual	Continuous	Particulate matter
Coarse particulate matter (filterable)	PM ₁₀ -FIL	None (Units 1-2); Annual (Unit 3)	Continuous	Particulate matter
Fine particulate matter (filterable)	PM _{2.5} -FIL	None (Units 1-2); Annual (Unit 3)	Continuous	Particulate matter
Total particulate matter (filterable and condensable)	PM-PRI (PM Primary)	None (Units 1-2); Annual (Unit 3)	(unaddressed)	Particulate matter
Coarse particulate matter (filterable and condensable)	PM ₁₀ -PRI (PM ₁₀ Primary)	Estimates * (Units 1-2); Annual (Unit 3)	(unaddressed)	Particulate matter
Fine particulate matter (filterable and condensable)	PM _{2.5} -PRI (PM _{2.5} Primary)	Estimates * (Units 1-2); Annual (Unit 3)	(unaddressed)	Particulate matter
TOTALS OF ACTUAL POLLUTANTS MEASURED		4 Continuous + 10 Annual ***	23 Continuous	

Note: those listed as "(unaddressed)" in the bill would continue to be monitored as current permits require.

* Unit one estimates these two types of particulate matter using "Engineering judgment" and Unit two with "USEPA Speciation Profile."

** Would likely need to be tested with continuous sampling. Instead of having real-time data, a long-term sampling cartridge would be switched out every 14 days to be tested at a lab.

*** Opacity is not a true measure of particulate matter and is not counted as a pollutant, itself. The different sizes (grades) of particulate matter are counted only once here.

Ruta Jordans for Zero Waste Kauai in support of HB2123 with the following amendements

As a resident of Kauai, where we have a biomass facility, I am pleased to see this bill and hopeful it will be amended in the following ways.

-HB 2123 inappropriately regulates recycling and composting facilities that have no smokestacks. This bill is intended to cover toxic, air polluting waste combustion facilities, not every type of waste facility. It should be defined carefully so that it includes only waste burners, including any biomass or fossil fuel power plants that start burning waste, and including any small pyrolysis, gasification or other waste-to-fuels facilities that may be built.

-HB 2123 doesn't require incinerator emissions be tested continuously, but lets DOH decide the "frequency of continuous testing," which makes no sense since the point of installing continuous monitors is to keep them running all the time, so we have full transparency about what is put into our air.

-HB 2123 has no data disclosure requirements. We should be able to find this data live online, without having to ask DOH and wait up to two weeks to know what we're breathing.

-HB 2123 removes five major air pollutants from the list of pollutants to continuously monitor, which could allow small new incinerators to escape the requirement to test these chemicals: carbon monoxide, carbon dioxide,

nitrogen oxides, sulfur dioxide, and particulate matter. While H-POWER already has to test four of these continuously, particulate matter is tested just once a year, and should be continuously monitored.

-HB 2123 does not address how the data should be used for enforcement once that data is shown to be reliable.

-HB 2123 might let incinerators escape monitoring the most toxic chemicals (dioxins/furans, PCBs, PFAS, and PAHs) because it fails to require use of continuous technology where the continuous technology is not commercially available. Continuous sampling is the only current method available for these chemicals. While it does not provide real-time data, it allows a sample to be collected in a cartridge for up to 4-6 weeks, which can be switched out and sent to a lab to get the full picture over time. This is especially important since European studies have shown with continuous sampling that dioxins/furans are 30 to 1,300 times higher than we think they are in the U.S. when we only test once a year under ideal conditions. [Dioxins](#) are the most toxic chemicals known to science.

-HB 2123 puts the state Department of Health in charge of funding the testing, which is a cost that should be paid through fees on the incinerators, not by state taxpayers.



Testimony of **Lahaina Strong**
Before the Committee on
Energy and Environmental Protection

In Consideration of House Bill No. 2123
Relating to Air Pollution

Subject: Testimony in Support of Bill HB2123 - Lahaina Strong

To Chair Lowen, Vice Chair Cochran, and the members of the House Committee on Housing,

We are writing on behalf of Lahaina Strong, an organization that was initially formed in 2018 following the Hurricane Lane fire in Lahaina and reenergized last year after the devastating Lahaina fires on August 8. Our organization, is the largest grassroots, Lahaina-based community organization, with over 20,000 supporters, engaged in providing support and assistance to the victims of these disasters.

Lahaina Strong stands in support of HB2123 (with amendments), a bill that requires the Hawaii Department of Health to conduct continuous air quality testing for certain chemicals at waste management facilities.

This measure is crucial in ensuring the safety and environmental well-being of our communities, particularly in the aftermath of the recent Maui wildfires.

In the wake of the Lahaina fires, a temporary debris storage site was established in West Maui at Olowalu. Olowalu holds significant historical, cultural, and environmental importance, leading to heightened community concern about its use for debris storage.

Considering the known toxicity of the debris and the sensitive nature of Olowalu, **Lahaina Strong urges the committee to consider an amendment to expressly clarify that the proposed air quality testing requirements also apply to "temporary debris storage sites."** This amendment would provide an additional layer of assurance for

neighboring communities that may be directly affected by such temporary storage activities.

We acknowledge the necessity of debris management and removal but stress the importance of safeguarding historically, culturally, and environmentally significant sites like Olowalu. Implementing air quality testing requirements for temporary debris storage sites aligns with Lahaina Strong's mission to protect the well-being of our community members and the environment.

We appreciate the committee's dedication to addressing environmental concerns and ensuring the safety of our communities. By supporting HB2123, and this amendment, we collectively contribute to a safer and more secure future for West Maui and all of Hawai'i.

Mahalo for your attention and commitment to the well-being of our community.

Sincerely,

Courtney Lazo, Jordan Ruidas & Pa'ele Kiakona
Lahaina Strong

**Hawaii
Legislative
Council
Members**

Joell Edwards
Wainiha Country
Market
Hanalei

Russell Ruderman
Island Naturals
Hilo/Kona

Dr. Andrew Johnson
Niko Niko Family
Dentistry
Honolulu

Robert H. Pahia
Hawaii Taro Farm
Wailuku

Maile Meyer
Na Mea Hawaii
Honolulu

Tina Wildberger
Kihei Ice
Kihei

L. Malu Shizue Miki
Abundant Life
Natural Foods
Hilo

Kim Coco Iwamoto
Enlightened Energy
Honolulu

Chamber of
Sustainable
Commerce
P.O. Box 22394
Honolulu, HI
96823



Rep. Nicole E. Lowen, Chair
Rep. Elle Cochran, Vice Chair
Comm. on Energy & Environmental Protection

Thursday, February 1, 2024
9:30 am
Via Videoconferencing

RE: **HB2123** Air Quality Testing - **Conditional Support with Amendments**

Dear Chair Lowen, Vice Chair Cochran & Committee Members,

The Chamber of Sustainable Commerce represents over 100 small businesses across the State of Hawaii that strive for a triple bottom line: people, planet and prosperity – we know we can strengthen our economy without hurting workers, consumers, communities or the environment. This is why we conditionally support HB2123 only with the following amendments.

While HB2123, in its current draft form, appropriates funds for the department of health to conduct air quality testing for certain chemicals at waste management facilities, there is insufficient language to ensure we are continuously monitoring air quality, lessening greenhouse gas emissions, and reducing global warming.

Please add relevant provisions from HB2796 (Relating to Health) into this bill to achieve the following outcomes:

- only monitor waste burners, including any biomass or fossil fuel power plants that start burning waste, and including any small pyrolysis, gasification or other waste-to-fuels facilities that may be built
- require that incinerator emissions be tested continuously and require that data be available live online
- require testing of carbon monoxide, carbon dioxide, nitrogen oxides, sulfur dioxide, and particulate matter
- if technology for continuous monitoring is not available for redioxins/furans, PCBs, PFAS, and PAHs, require continuous sampling and data reporting
- funding for air quality monitoring should not come from state taxpayers through DOH, it should be covered by fees on the incinerators – this will expose the true costs of this fuel source compared with alternative energy sources.

HB-2123

Submitted on: 1/31/2024 9:33:25 AM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Ted Bohlen	Climate Protectors Hawaii	Support	Written Testimony Only

Comments:

Climate Protectors Hawaii supports the intent of public disclosure of pollutants. Please pass a strong disclosure bill!



Environmental Caucus of
The Democratic Party of Hawai'i

Energy & Climate Action Committee

Thursday, February 1, 2024, 9:30 pm

House Committee on Energy and Environmental Protection

HOUSE BILL 2123 – RELATING TO AIR POLLUTION

Position: Support with Corrective Amendments

Me ke Aloha, Chair Lowen, Vice-Chair Cochrane, and members of the House Committee on Energy and Environmental Protection:

HB2123 requires Requires the Department of Health to conduct continuous air quality testing for notorious greenhouse gases and especially for dangerous toxic chemicals at waste management facilities.

The Energy & Climate Action Committee enthusiastically supports continuous monitoring of incinerator emissions, as many of these pose serious health risks to neighboring populations. This technology has been approved since H-POWER was built but nearly 20 years ago. Current monitoring is done at low-emission intervals once a year, only for four familiar but non-toxic greenhouse gases. Two of the three burners do not even have installed monitoring done elsewhere. Neighboring communities have the right to know of their toxic exposures. We have recently experienced frequent kona weather, which negates a commonly perceived notion that these chemicals just get blown to sea.

Unfortunately, we do need to point out that this bill is deficient compared with HB2796, and request that important provisions be added or amended accordingly. HB2123 omits the four currently monitored, basic greenhouse gases: carbon dioxide, carbon monoxide, sulfur dioxide, nitrogen oxides. These should be reinserted, as should the monitoring of particulate matter (PM2.5), which is a major lung contaminant.

Our Committee has been alarmed by the reluctance of the Department of Health to revisit monitoring requirements under permit, especially as the hazards from toxic materials has become common knowledge nationwide for many years. It is overdue to provide neighboring communities the right to know what hazards they face, especially as many in these communities are already facing health challenges. Toxic emissions from incineration are well known to be health hazards, particularly dioxins and furans, the most toxic materials known to science.

The main concern for continuous monitoring is incinerator smokestack facilities or small pyrolysis facilities, not composting or other properly designed solid waste disposal facilities. This is unnecessary overkill, and probably far too expensive. The bill could productively note that continuous sampling can be acceptable if continuous monitoring equipment is not commercially available.

It is important both that the Department of Health do the monitoring, and that the monitoring be continuous. The costs should be borne by the incinerator as the cost of conducting a sound business, rather than being paid by taxpayers needing essential health information. This information should be reported in real time.

Self-administered monitoring during optimum conditions can drastically underestimate actual emissions, known to be much higher during start-up, shutdown, and malfunctioning. Continuous monitoring, by contrast, has shown that hydrochloric acid, one of the major pollutants released by trash incinerators, can be 80% higher than H-POWER's annual stack tests might show. Continuous testing in Europe has shown that dioxins and furans can be released 30 to 1,300 times higher than once-a-year testing shows.

Finally, the results of this monitoring need to be more readily available to the public in user-friendly publicly-accessible website access. Unfortunately, the DoH website was designed for professionals, with information difficult to find or read. It needs to be updated to be user-friendly for the general public

Mahalo for the opportunity to address this matter.

/s/ Charley Ice, Chair, Energy and Climate Action Committee, Environmental Caucus of the Democratic Party
Hydrologist (retired), Commission on Water Resource Management (25 years)

HB-2123

Submitted on: 1/31/2024 9:47:10 AM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Lisa Hallett	Kokua na Aina	Support	In Person

Comments:

Aloha Chair and EEP Committee,

Kokua na Aina is in support of this bill with the missing important provisions from HB2796.

Mahalo nui loa,

Lisa Hallett

HB-2123

Submitted on: 1/31/2024 9:47:32 AM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Dave Mulinix	Greenpeace Hawaii	Support	Remotely Via Zoom

Comments:

Aloha Chair, Vice Chair, & Committee Members,

Greenpeace Hawaii Supports the intent of HB2123 with amendments. We support the intent of HB2123 to require large trash incinerators in the state of Hawaii, like H-POWER on O'ahu, to continuously monitor their [air emissions of toxic chemicals](#) and other pollutants, and report this important information to a public website, ensuring that accurate data is available on what they are releasing into the air. However we would prefer that HB2123 be strengthened by adding in important provisions from HB2796 as follows:

- Define this measure carefully so that it includes only waste burners, including any biomass or fossil fuel power plants that start burning waste, and including any small pyrolysis, gasification or other waste-to-fuels facilities that may be built.

-Require incinerator emissions be tested continuously, so we have full transparency about what is put into our air.

-Include data disclosure requirements, so data can be found live online.

-Include the additional five major air pollutants from the list of pollutants to continuously monitor: carbon monoxide, carbon dioxide, nitrogen oxides, sulfur dioxide, and particulate matter.

-Address how the data should be used for enforcement once that data is shown to be reliable.

-Require use of continuous *sampling* technology where the continuous *monitoring* technology is not commercially available.

-Specify that funding for testing be paid through fees on the incinerators, not by state taxpayers.

Please pass HB2123 with the above amendments.

Dave Mulinix, CoFounder

Greenpeace Hawaii



Environmental Caucus of The Democratic Party of Hawai'i

To: House Committee on Energy & Environmental Protection
Hon. Nicole Lowen, Chair
Hon. Elle Cochran, Vice Chair

Re: HB 2123 RELATING TO AIR POLLUTION

Hearing: Wednesday, February 1, 2024, 9:30 a.m., Room 325 & videoconference

Position: Support

Aloha, Chair Lowen, Vice Chair Cochran, and Members of the Committee on Energy & Environmental Protection:

The Environmental Caucus of the Democratic Party of Hawai'i (DPH) supports HB 2123 with amendments. This bill requires the department of health to conduct continuous air quality testing for certain chemicals at waste management facilities and it appropriates funds.

The PLATFORM OF THE DEMOCRATIC PARTY OF HAWAI'I as adopted at the 2022 State Convention on May 28, 2022 states as follows:

ENVIRONMENT AND ENERGY

Protect and preserve Hawai'i's environment and achieve energy sustainability. Advance measures to re-establish a healthy climate and environment for humans and fellow species, including actions to urgently address climate change. Work towards 100% renewable clean energy goals. [Emphasis added.]

We believe that all people have the right to live in a clean, healthy and safe environment. We believe that the preservation of our natural environment and its ecological well-being is essential to ensuring a safe, healthy, bountiful life for future generations in Hawai'i. We support policies that create a more sustainable society. We support the restoration, preservation, and protection of native ecosystems.

We believe in the resource management principles outlined in the Public Trust doctrine of the Hawai'i State Constitution. We support policy that incorporates indigenous resource-management practices and technologies such as the Ahupua'a System in modern urban planning and development to create an ecologically sustainable balance between the needs of the people and the rights of nature.

We believe that a key part of a sustainable and self-sufficient future for Hawai'i lies in achieving energy independence through a transition to clean renewable energy sources. We support policies that eliminate our dependence on fossil fuels and other dirty energy sources. We support policies that expand access to public transportation and encourage transit-oriented development and walkable communities.

The DPH Environmental Caucus supports this measure with the following suggested amendments:

Please add the many important provisions in [HB 2796](#) / [SB 2101](#) back to HB 2123, to resolve the following problems:

-HB 2123 inappropriately regulates recycling and composting facilities that have no smokestacks. This bill is intended to cover toxic, air polluting waste combustion facilities, not every type of waste facility. It should be defined carefully so that it includes only waste burners, including any biomass or fossil fuel power plants that start burning waste, and including any small pyrolysis, gasification or other waste-to-fuels facilities that may be built.

-HB 2123 doesn't require incinerator emissions be tested continuously, but lets DOH decide the "frequency of continuous testing," which makes no sense since the point of installing continuous monitors is to keep them running all the time, so we have full transparency about what is put into our air.

-HB 2123 has no data disclosure requirements. We should be able to find this data live online, without having to ask DOH and wait up to two weeks to know what we're breathing.

-HB 2123 removes five major air pollutants from the list of pollutants to continuously monitor, which could allow small new incinerators to escape the requirement to test these chemicals: carbon monoxide, carbon dioxide, nitrogen oxides, sulfur dioxide, and particulate matter. While H-POWER already has to tests four of these continuously, particulate matter is tested just once a year, and should be continuously monitored.

-HB 2123 does not address how the data should be used for enforcement once that data is shown to be reliable.

-HB 2123 might let incinerators escape monitoring the most toxic chemicals (dioxins/furans, PCBs, PFAS, and PAHs) because it fails to require use of continuous *sampling* technology where the continuous *monitoring* technology is not commercially available. Continuous sampling is the only current method available for these chemicals. While it does not provide real-time data, it allows a sample to be collected in a cartridge for up to 4-6 weeks, which can be switched out and sent to a lab to get the full picture over time. This is especially important since European studies have shown with continuous sampling that dioxins/furans are 30 to 1,300 times higher than we think they are in the U.S. when we only test once a year under ideal conditions. [Dioxins](#) are the most toxic chemicals known to science.

-HB 2123 puts the state Department of Health in charge of funding the testing, which is a cost that should be paid through fees on the incinerators, not by state taxpayers.

For all these compelling reasons, logic and science dictate that the department of health conduct continuous air quality testing for certain chemicals at waste management facilities.

Melodie Aalyja legislativepriorities@gmail.com

Alan B. Burdick burdick808@gmail.com

Co-Chairs, Environmental Caucus of the
Democratic Party of Hawai‘i

HB-2123

Submitted on: 1/29/2024 8:03:32 PM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Cory Harden	Individual	Support	Written Testimony Only

Comments:

Aloha legislators,
Please protect people's health by requiring effective monitoring of chemicals from waste incineration. Current measures are woefully inadequate.
mahalo, Cory Harden

HB-2123

Submitted on: 1/29/2024 9:39:02 PM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Cardenas Pintor	Individual	Support	Written Testimony Only

Comments:

Aloha,

I support this bill.

Mahalo nui,

Cardenas Pintor

HB-2123

Submitted on: 1/30/2024 5:24:51 PM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Mele Balbaugh-Fifita	Individual	Support	Written Testimony Only

Comments:

I support HB2123 and propose to include "temporary debris storage sites" and verbiage that includes but not limited to "declared hazardous zones".

HB-2123

Submitted on: 1/30/2024 5:25:00 PM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Tamara C Griffiths	Individual	Support	Written Testimony Only

Comments:

Air quality testing must take place at the toxic waste dump site of sacred Olowalu. Preserve the evidence for how environmentally detrimental this site is to dump the toxic Lahaina fire debris.

Respectfully,

Tamara Griffiths

Lahaina, HI

Testimony in Support of HB2123

Dear Chair Lowen, Vice Chair Cochran, and esteemed members of the House Committees on Energy and Environmental Protection.

I, a concerned member of the Lahaina community, am writing to express my support of HB2123. I would like to request an amendment to expressly clarify that the proposed air quality testing requirements also apply to “temporary debris storage sites.”

In the wake of the Lahaina fires, our debris have been slated to be temporarily stored at Olowalu. Olowalu has extreme cultural and historical significance and with the current surrounding residents living near the site I would like to make sure it is included in this measure.

In supporting HB2123, I urge the legislature to pass this bill swiftly to safeguard the Lahaina community and as well as any community living within or working around these sites.

Mahalo for your attention to this pressing matter and your commitment to the well-being of our community.

Sincerely,

Katie Austin

HB-2123

Submitted on: 1/30/2024 8:28:34 PM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Yvonne Alvarado	Individual	Comments	Written Testimony Only

Comments:

Bill 2123 should as include any temporary debris site as well

HB-2123

Submitted on: 1/30/2024 9:03:23 PM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Lorena Martinez	Individual	Support	Written Testimony Only

Comments:

I support this bill and sincerely make the following request. Please include an amendment to include all air quality testing to also include all temporary debris storage sites throughout Maui County.

Mahalo,

Lorena Martinez

Resident of West Maui

HB-2123

Submitted on: 1/30/2024 9:08:54 PM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Gretchen Losano	Individual	Support	Written Testimony Only

Comments:

Aloha honorable members of the EEP committee,

Please support HB 2123, this is a very important bill. It is also important to amend this bill to include and apply to temporary debris storage sites, more specifically, the temporary site at Olowalu. Our county government chose that site not enthusiastically, but reluctantly, knowing we didn't have a clear "good choice" available to us. To ensure the safety of our local community and the cultural, environmental and historical importance of Olowalu, it is imperative to provide the proper air quality testing.

Mahalo piha,

Gretchen Losano

HB-2123

Submitted on: 1/30/2024 10:27:22 PM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
brandi corpuz	Individual	Support	Written Testimony Only

Comments:

Aloha,

My name is Brandi Corpuz and I am in support of HB2123 to add some protection to our communities in Maui. Putting a toxic waste dump on top of our wetland and underground water ways is very concerning for the health of our environment. This bill would help to assure that our air quality is atleast protected while our oceans, reefs and marine life are in great danger. All of us have already been exposed to these chemicals during the fires so regular testing of the air quality at Oluwalus dump site should be monitored closely to assure that we are not further contaminated.

sincerely, Brandi Corpuz

Kula Kai resident, business owner

HB-2123

Submitted on: 1/30/2024 10:58:06 PM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Nicki Tedesco	Individual	Support	Written Testimony Only

Comments:

Hello,

I support this bill as it applies to air pollution testing and applies to Olowalu as well.

Mahalo,

Nicki Tedesco

HB-2123

Submitted on: 1/31/2024 1:09:19 AM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Sonja Corrigan	Individual	Support	Written Testimony Only

Comments:

In the wake of Lahaina fires, a temporary debris storage site was established in West Maui at Olowalu. Olowalu holds historical, cultural and environmental importance, leading to heightened community concern about its use for debris storage. Considering the known toxicity of the debris and the sensitive nature of Olowalu, Lahaina Strong urges the committee to consider an amendment to expressly clarify the proposed air quality testing requirements also apply to "temporary debris storage sites."

HB-2123

Submitted on: 1/31/2024 5:23:46 AM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Marsha Lowery ND	Individual	Support	Written Testimony Only

Comments:

I support this bill

HB-2123

Submitted on: 1/31/2024 8:01:30 AM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
pahnelopi mckenzie	Individual	Support	Written Testimony Only

Comments:

Listen to the people of Lahaina!!!

HB-2123

Submitted on: 1/31/2024 8:24:26 AM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Kiley Adolpho	Individual	Support	Written Testimony Only

Comments:

Support and take care of the people of Lahaina and the long term well being!!

HB-2123

Submitted on: 1/31/2024 8:27:43 AM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Leonard Nakoa III	Individual	Support	Written Testimony Only

Comments:

I support

HB-2123

Submitted on: 1/31/2024 9:08:39 AM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Robert Culbertson	Individual	Support	Written Testimony Only

Comments:

Aloha Representatives!

While I support this bill in the offing, I recognize it fails to address many outstanding deficiencies that HB 2796 more thoroughly identifies.

So, please continue with this bill *after amending it* to properly address the various matters taken up in HB2796, because AIR POLLUTION is a real threat even in these islands. Just ASK the residents of Lahaina for instance.

Mahalo nui loa,

R A Culbertson

Honokaa

HB-2123

Submitted on: 1/31/2024 9:19:03 AM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Elizabeth Hansen	Individual	Support	Written Testimony Only

Comments:

Aloha: My name is Elizabeth Hansen of Hakalau, HI 96710, and I am in support of this bill but request that you consider modifying the bill in the areas listed below. We realize that even in its current form, HB2123 is better than no bill at all.

However, Please add the many important provisions in [HB 2796](#) / [SB 2101](#) back to HB 2123, to resolve the following problems:

-HB 2123 inappropriately regulates recycling and composting facilities that have no smokestacks. This bill is intended to cover toxic, air polluting waste combustion facilities, not every type of waste facility. It should be defined carefully so that it includes only waste burners, including any biomass or fossil fuel power plants that start burning waste, and including any small pyrolysis, gasification or other waste-to-fuels facilities that may be built.

-HB 2123 puts the state Department of Health in charge of funding the testing, which is a cost that should be paid through fees on the incinerators, not by state taxpayers.

Your consideration is most appreciated.

HB-2123

Submitted on: 1/31/2024 9:21:09 AM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Keith Neal	Individual	Comments	Written Testimony Only

Comments:

Aloha Chair Lowen and members of the EEP

I support HB2123 with important amendments to continuous monitoring and public available reporting.

Dioxins/Furans, PCBs, PFAS, and PAHs are very toxic chemicals. These chemicals must be tested for continuously, not just episodically or infrequently. The funding of the testing should be borne by the incinerators, not by state taxpayers.

Testing results must be published and publicly available.

Thank you for your consideration,

Keith Neal

Waimea

HB-2123

Submitted on: 1/31/2024 9:23:31 AM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Sherry Pollack	Individual	Support	Written Testimony Only

Comments:

I support the intent of HB2123, however, there are several important provisions, as already found in [HB 2796](#), that I respectfully request be included. These amendments will strengthen this measure and offer the public health protections needed. Please amend HB2123 with the following:

-Define this measure carefully so that it includes only waste burners, including any biomass or fossil fuel power plants that start burning waste, and including any small pyrolysis, gasification or other waste-to-fuels facilities that may be built.

-Require incinerator emissions be tested continuously so we have full transparency about what is put into our air.

-Include data disclosure requirements. We should be able to find this data live online.

-Include the additional five major air pollutants from the list of pollutants to continuously monitor: carbon monoxide, carbon dioxide, nitrogen oxides, sulfur dioxide, and particulate matter.

-Address how the data should be used for enforcement once that data is shown to be reliable.

- Require use of continuous *sampling* technology where the continuous *monitoring* technology is not commercially available.

-Specify that funding for testing be paid through fees on the incinerators, not by state taxpayers.

Monitoring toxic pollution is critical to protect the health and safety of our community, These amendments will help ensure we do that. Please amend this measure.

Mahalo for the opportunity to testify.

HB-2123

Submitted on: 1/31/2024 9:33:00 AM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Rodger Hansen	Individual	Support	Written Testimony Only

Comments:

Aloha: My name is Rodger Hansen of Hakalau, HI 96710, and I am in support of this bill but request that you consider modifying the bill in the areas listed below. We realize that even in its current form, HB2123 is better than no bill at all.

However, Please add the many important provisions in [HB 2796](#) / [SB 2101](#) back to HB 2123, to resolve the following problems:

-HB 2123 inappropriately regulates recycling and composting facilities that have no smokestacks. This bill is intended to cover toxic, air polluting waste combustion facilities, not every type of waste facility. It should be defined carefully so that it includes only waste burners, including any biomass or fossil fuel power plants that start burning waste, and including any small pyrolysis, gasification or other waste-to-fuels facilities that may be built.

-HB 2123 puts the state Department of Health in charge of funding the testing, which is a cost that should be paid through fees on the incinerators, not by state taxpayers.

Your consideration is most appreciated.

HB-2123

Submitted on: 1/31/2024 11:19:46 AM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
David Hunt	Individual	Support	Written Testimony Only

Comments:

I support HB2123 in general, however I request that you ammend HB2123 to include important provisions in [HB 2796](#) / [SB 2101](#) :

HB 2123 inappropriately regulates recycling and composting facilities that have no smokestacks. I am certain that this was an oversite - simply due to the language used.

This bill is intended to cover toxic, air polluting waste combustion facilities, not every type of "waste facility".

It should be defined carefully so that it includes only waste burners, including any biomass or fossil fuel power plants that start burning waste, and including any small pyrolysis, gasification or other waste-to-fuels facilities that may be built.

HB 2123 doesn't require incinerator emissions be tested continuously, but lets DOH decide the "frequency of continuous testing," which makes no sense since the point of installing continuous monitors is to keep them running all the time, so we have full transparency about what is put into our air.

HB 2123 has no data disclosure requirements. We should be able to find this data live online, without having to ask DOH and wait up to two weeks to know what we're breathing.

HB 2123 removes five major air pollutants from the list of pollutants to continuously monitor, which could allow small new incinerators to escape the requirement to test these chemicals:

carbon monoxide,

carbon dioxide,

nitrogen oxides,

sulfur dioxide, &

particulate matter.

While H-POWER already has to test four of these continuously, particulate matter is tested just once a year, and should be continuously monitored. PM is critically important in seeking to

protect public health from asthma and other respiratory diseases.

HB 2123 does not address how the data should be used for compliance (enforcement) once that data is shown to be reliable.

HB 2123 could let incinerators escape monitoring the most toxic chemicals (dioxins/furans, PCBs, PFAS, and PAHs) because it fails to require use of continuous *sampling technology* where the continuous *monitoring technology* is not commercially available.

Continuous sampling is the only current method available for these chemicals. While it does not provide real-time data, it allows a sample to be collected in a cartridge for up to 4-6 weeks, which can be switched out and sent to a lab to get the full picture over time. This is especially important since European studies have shown with continuous sampling that dioxins/furans are 30 to 1,300 times higher than we think they are in the U.S. when we only test once a year under ideal conditions.

Dioxins are the most toxic chemicals known to science.

HB 2123 puts the state Department of Health in charge of funding the testing, which is a cost that should be paid through fees on the incinerators, not by state taxpayers.

HB2123 is well-intended and a good framework. In building a program - (or, in my analogy, a HOME) Framing alone, however does not keep the "elements" out. And in this case does not adequately protect public health.

Please ammend, then pass HB2123 to make it sufficient to meet its very well-intended goals.

HB-2123

Submitted on: 1/31/2024 11:22:31 AM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
John Kawamoto	Individual	Support	Written Testimony Only

Comments:

I support HB 2123 because waste management facilities emit pollutants that are harmful to human health.

Advances in technology enable continuous testing, which generates much more data than the testing methods used now. However, simply gathering data is not enough; the data must be used. The bill should be amended to indicate how the data would be used for enforcement, and the data should be released to the public.

With these amendments, I support HB 2123.

HB-2123

Submitted on: 1/31/2024 12:34:05 PM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Natalie Forster	Individual	Support	Written Testimony Only

Comments:

I support measuring air quality at the temporary dump site

HB-2123

Submitted on: 1/31/2024 1:32:07 PM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Kirsten Matthews	Individual	Comments	Written Testimony Only

Comments:

In the wake of the Lahaina fires, a temporary debris storage site was established in West Maui at Dlowalu. Olowalu holds significant historical, cultural, and environmental importance, leading to heightened community concern about its use for debris storage.

Considering the known toxicity of the debris and the sensitive nature of Olowalu, Lahaina Strong urges the committee to consider an amendment to expressly clarify that the proposed air quality testing requirements also apply to "temporary debris storage sites."

HB-2123

Submitted on: 1/31/2024 4:28:29 PM

Testimony for EEP on 2/1/2024 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Aja Toscano	Individual	Support	Written Testimony Only

Comments:

Aloha. I am writing as a concerned community member to express my **support for SB2123**. Considering the known toxicity of the debris and the sensitive nature of Olowalu, I urge the committee to consider an amendment to expressly clarify that the proposed air quality testing requirements also apply to “temporary debris storage sites.”

This amendment would provide an additional layer of assurance for neighboring communities that may be directly affected by such temporary storage activities.

Mahalo