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GOVERNOR OF HAWAII
KE KIA'AINA O KA MOKU'AINA 'O HAWAII



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In reply, please refer to:
File:

**Testimony COMMENTING on HB2123 HD1
RELATING TO AIR POLLUTION**

MARK M. NAKASHIMA, CHAIR
HOUSE COMMITTEE ON CONSUMER PROTECTION & COMMERCE

Hearing Date: 2/14/2024

Room Number: 329

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 the following comments on this measure
6 that proposes to require, among many other things, that the Honolulu Program of Waste Energy
7 Recovery (H-POWER) municipal waste combustor (MWC) facility develop a plan to implement
8 continuous emissions monitoring systems (CEMS) or continuous automated sampling for 23
9 pollutants and for the Department to establish new permit limits. The bill recognizes that CEMS
10 are already being used for monitoring four of the listed pollutants and we would add that annual
11 source performance tests (aka "stack tests") are done for 15 pollutants. The Department suggests
12 that the United States Environmental Protection Agency (EPA) rules be finalized before
13 imposing new state requirements which will prevent duplication of effort and the possibility of
14 having state requirements that conflict with, or are less stringent than, federal regulations.

15 The Department offers four main points: 1) EPA-approved continuous monitoring or
16 sampling technology that is proven for MWCs and performance specifications necessary to
17 ensure data quality do not exist for the majority of the pollutants listed in the bill; 2) the EPA is
18 in the process of finalizing proposed rules for large MWCs that would clarify the use of
19 continuous monitoring; 3) premature state regulations could be duplicative and conflict with or

1 be less stringent than federal requirements; and 4) the stringent air permit for H-POWER and
2 ambient air quality data from the area do not indicate a demand for this type of monitoring.

3 The stated purpose of the bill is to “implement continuous monitoring and continuous
4 sampling technologies that have been tested and verified by the United States Environmental
5 Protection Agency at waste combustion facilities...” The Department has found that, aside from
6 the four pollutants already being monitored by CEMS, very few of the pollutants listed in the bill
7 meet this requirement. For most of the pollutants, EPA is still working to verify and approve
8 sampling technologies and performance specifications at waste combustion facilities. CEMS
9 technology exists for a few of the pollutants, however, the large majority of the pollutants listed
10 in the measure do not have EPA performance specifications, which are necessary for ensuring
11 the quality and acceptability of the data gathered. Without EPA-approved performance
12 specifications for the sampling methodology used, data quality and defensibility would be in
13 question. If questionable data is used for enforcement and decision making, the state is put at
14 risk of lawsuits.

15 In 2023, the EPA, which is the agency that has the responsibility, expertise, and resources to
16 develop stationary source air pollution standards including monitoring techniques and emission
17 limits, completed an intensive five-year review of large MWC units and is now proposing new
18 rules. EPA’s proposed rules address several issues mentioned in the bill including imposing
19 more stringent emissions limits for eight pollutants listed in the bill. In the proposed rules EPA
20 leaves the use of CEMS for additional pollutants as optional rather than mandatory, and only
21 after performance specifications for these CEMs are promulgated to ensure data quality. EPA
22 also notes concerns with reliability/availability of optional CEMS that have not been extensively
23 applied commercially.

24 In their proposed rules, the EPA is already evaluating the optional use of CEMS for certain
25 pollutants, but notes that it must be reinvestigated as to whether the use of CEMS for compliance
26 testing requires EPA to adopt alternative emission limits. In the proposed rule, EPA is
27 evaluating what alternative emission limits and averaging times would be appropriate for
28 compliance with CEMS. The bill’s requirement to have the Department develop permit limits
29 based on continuous monitoring or sampling when EPA is already evaluating revised limits and

1 averaging periods, is duplicative, and could result in imposing potentially conflicting or multiple
2 emission limits for the facility.

3 The H-POWER facility has a Prevention of Significant Deterioration (PSD) permit, which
4 imposes the most onerous and stringent requirements among categories of air permits and does
5 not allow the facility to operate unrestricted on days when testing is not performed. The permit
6 requires post-construction ambient air monitoring while a source is in operation to ensure air
7 quality impacts do not endanger public health. Post-construction monitoring in the immediate
8 vicinity of H-Power last occurred in 2012 after the facility's third and final unit was installed; the
9 monitoring results showed no indication of elevated air emissions of the hazardous air pollutants
10 monitored.

11 Moreover, the Department operates a federally-mandated National Core (NCore) ambient air
12 monitoring station located approximately 1.6 miles from H-POWER, between the facility and the
13 neighboring Kapolei community. The NCore station conducts monitoring throughout the year
14 and includes data for nine pollutants identified in the bill (cadmium, lead, mercury, arsenic,
15 hexavalent chromium, manganese, nickel, selenium, and zinc). Evaluation of the data indicates
16 that concentrations of hazardous air pollutants (zinc is not a hazardous air pollutant) were all
17 below the significant ambient air concentration as defined in HAR §11-60.1-179 for these
18 pollutants (i.e., no ambient air concentrations were high enough to endanger human health).

19 Finally, we wish to share the cost to purchase a CEMS unit is estimated to be \$100,000 to
20 \$200,000 per pollutant (19 additional pollutants are being proposed) and would be needed for
21 each of the three stacks, eventually resulting in potential costs in the millions of dollars. Site
22 preparation for retrofitting existing facilities could be up to \$300,000 per stack (\$900,000 total)
23 and additional operation and maintenance costs would also be incurred by H-Power and the
24 County.

25 The Department would require additional resources and funds to develop and host the
26 required website with various email alerts, display of data, line charts for each pollutant,
27 calculated rolling averages, download capabilities, summary charts, daily, weekly, monthly, and
28 yearly summaries, trend charts, totals, violation explanations, etc., as specified in the bill.
29 Besides the resources needed to contract and manage the aforementioned website, additional
30 Department resources would also be required to review and approve the plans, determine if data

1 is reliable for enforcement purposes, publish rules, establish new limits, revise permits, and
2 perform compliance and enforcement actions. These types of tasks would require both
3 engineering and environmental health specialist resources.

4 In summary, EPA approved continuous sampling methodologies and performance
5 specifications which are necessary to ensure data quality have not been developed and approved
6 for the majority of the pollutants listed in the bill. Allowing the EPA rules to be finalized before
7 imposing new state requirements will prevent duplication of effort and the possibility of having
8 state requirements that conflict with, or are less stringent than, federal regulations. Moreover,
9 using data for decision making and enforcement actions without approved sampling technologies
10 and performance specifications will subject the state to litigation.

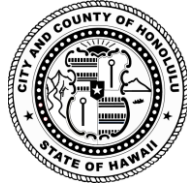
11 **Offered Amendments:** None

12 Thank you for the opportunity to testify.

DEPARTMENT OF ENVIRONMENTAL SERVICES
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IN REPLY REFER TO:
WAS 24-25

LATE

February 14, 2024

The Honorable Mark M. Nakashima, Chair
The Honorable Jackson D. Sayama, Vice Chair
and Members of the Committee on Consumer Protection & Commerce
415 South Beretania Street
Honolulu, Hawaii 96813

Dear Chair Nakashima and Vice Chair Sayama:

SUBJECT: House Bill 2123, Relating to Air Pollution

The City and County of Honolulu's (City) Department of Environmental Services (ENV) submits this testimony in **opposition** to HB 2123, which would impose unnecessary and redundant emissions monitoring requirements on the City's H-POWER waste-to-energy facility and the Waimanalo Gulch Sanitary Landfill (WGSL).

At H-POWER, emissions of NO_x, SO_x, CO, and CO₂ are continuously measured using a Continuous Emission Monitoring System, or CEMS. Based on annual stack testing and CEMS data, H-POWER performs more than 90% below (better than) federal emissions standards for Pb, SO₂, Hg, PM, Cd, HCl and Dioxins. Additionally, low NO_x control equipment is employed on the mass burn unit (the newest of H-POWER's three units), achieving 67% below (better than) the standard for NO_x, and all units operate well below permitted limits. H-POWER's detailed performance statistics are included as an attachment to this testimony.

The United States Environmental Protection Agency (USEPA) is currently in the process of updating the Large Municipal Waste Combustor (LMWC) emissions standards. Here is a link to the website: <https://www.epa.gov/stationary-sources-air-pollution/large-municipal-waste-combustors-lmwc-new-source-performance>. In the proposed rules, the USEPA left CEMS as optional for the pollutants beyond CO, NO_x and SO_x. The USEPA requested comments, stating: "*We request comment on whether the 30-day rolling hourly average is appropriate to use in the large MWC source category, both for the currently required CEMS and for optional CEMS and continuous automated sampling systems, considering potential CEM reliability/availability concerns, especially for the optional CEMS devices that have not*

The Honorable Mark M. Nakashima, Chair
The Honorable Jackson D. Sayama, Vice Chair
and Members of the Committee on Consumer Protection & Commerce
February 14, 2024
Page 2

been extensively applied commercially and lack the extensive track record of the more established CEMS. We also request comment on whether data are available to analyze whether an alternative emission limit should be established for pollutants that have standards based on stack test data.” It is clear from this statement that the USEPA itself has concerns about using experimental CEMS devices lacking a proven operating record that are not commercially available.

Specifically, CEMS technologies for dioxins are still in the development phase. While there are several laboratories that have tried to develop reliable CEMS for dioxins, none have produced consistent results when compared to the USEPA Method 23 measurements. See USEPA’s “Dioxin Emissions Monitoring Systems,” (available at <https://archive.epa.gov/nrmrl/archive-etv/web/pdf/p10012za.pdf>). USEPA tested four CEMS technologies for dioxins, comparing each measurement to reference samples tested using USEPA Method 23. The results showed that three of the technologies deviated from the reference samples by between 22.6% and 78.2%, and the fourth technology was not even able to measure the presence of dioxins. Using unproven CEMS technologies would result in large deviations that would make the testing data misleading and unusable for regulatory compliance.

The proposed bill does not consider the reliability of CEMS equipment and the risks of providing inaccurate data to regulatory agencies and the public. Air emissions from the City’s H-POWER facility and the Waimanalo Gulch Sanitary Landfill are already highly regulated by both the USEPA and the State Department of Health.

ENV respectfully requests the committee to defer HB 2123. Should you have any questions, please feel free to contact me at (808) 768-3486 or via email at roger.babcock@honolulu.gov.

Attachment

Sincerely,

For Roger Babcock, Jr., Ph.D., P.E.
Director

H-Power Waste to Energy Plant

2022 Facility Performance

Landfill Diversion

MSW Processed
690,000 tons

Enough to fill: **83,500** garbage trucks spanning **316 miles**



Entire span of the southeastern islands

Electric Generation

Net Export
370,000 MWh

Enough electricity to: Power **34 thousand** homes for **1 Year**



Charge **86 thousand** electric vehicles for **1 Year**

Metal Recovery

Ferrous
21,000 tons



Non-Ferrous
2,000 tons



18 thousand cars from recovered steel

Energy savings equivalent to **5.5 million** gallons of gasoline



135 million aluminum cans



A paper clip chain that wraps around the Earth **32** times

The metal recovered is equivalent to:

Net GHG Avoidance



1.0 tons of net CO₂e avoided* for every ton of waste diverted from landfill



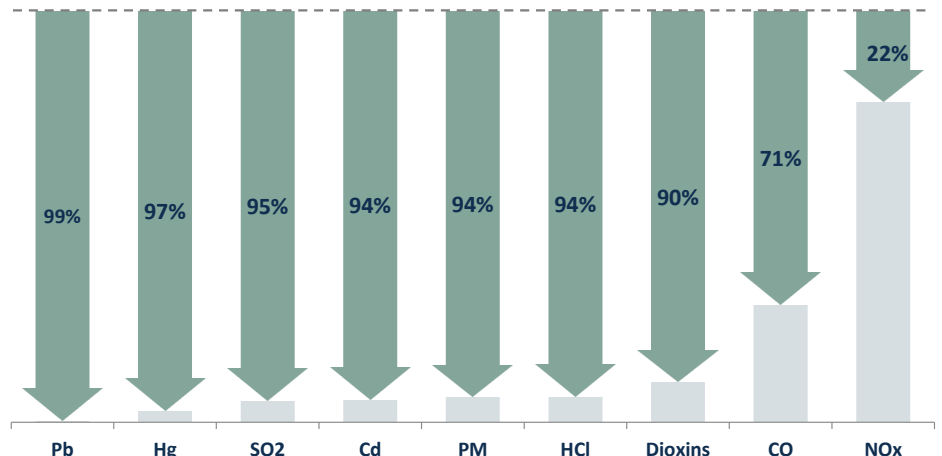
596,000 metric tons of GHGs equivalent to:
Removing **147 thousand** vehicles for 1 year
Displacing **736 million** pounds of coal

Environmental Compliance

✓ **Annual Average Emissions**
Up to **99%** below federal emissions standards**

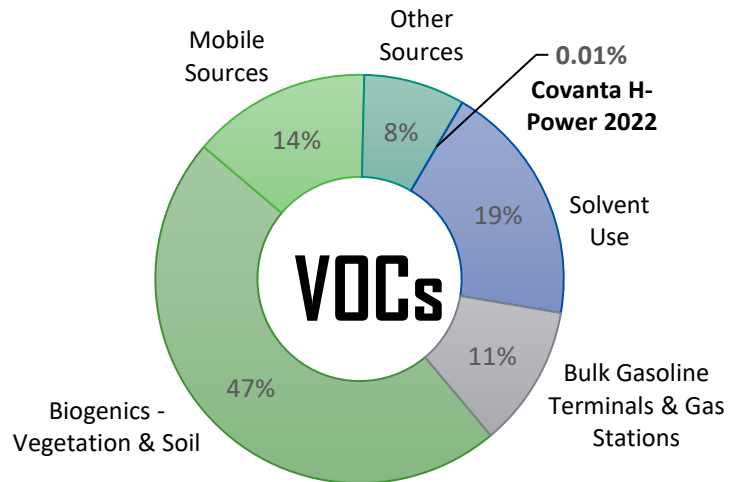
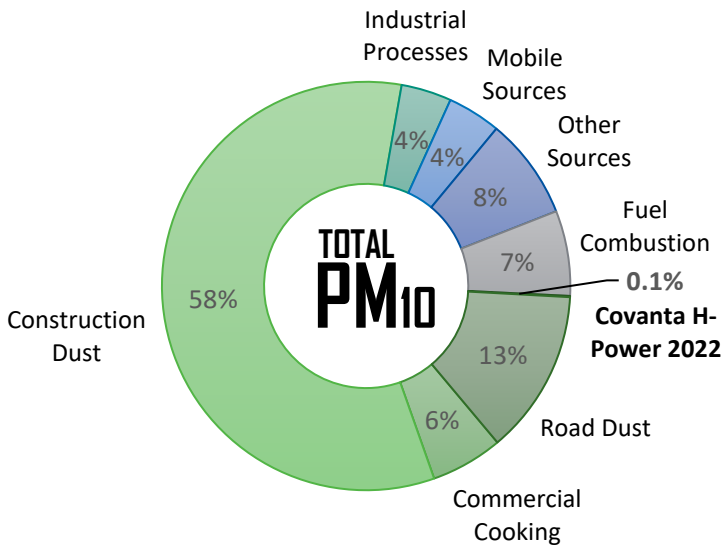
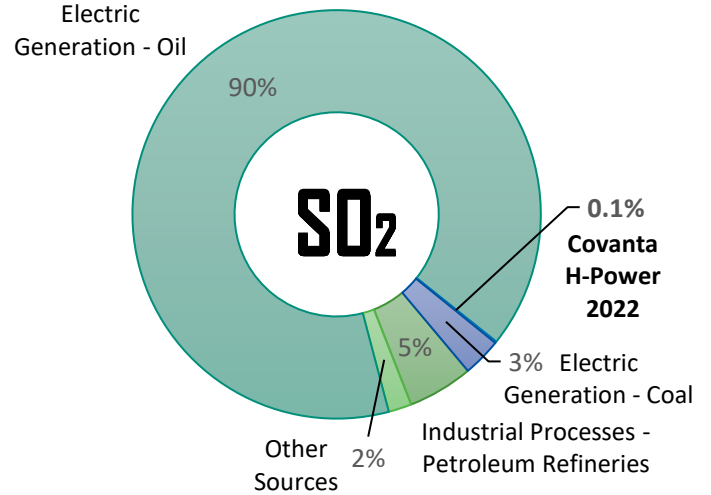
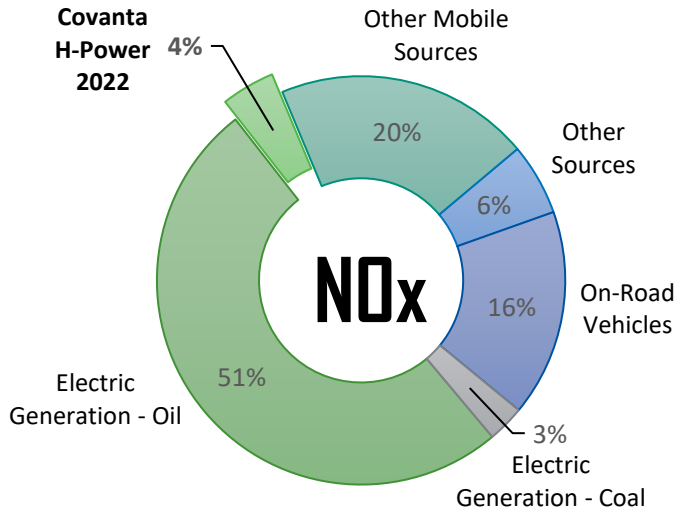
✓ **Continuous Emissions Monitoring**
99.996% compliant with CEMS emissions standards

% BELOW FEDERAL STANDARD



How Do Facility Emissions Compare to Other Sources in the County?

Local air emissions*** in Honolulu County, HI



* GHGs, or greenhouse gases, are represented in CO2 equivalents using global warming potentials (GWPs) to compare the warming power of different gases. This analysis uses the 100-yr GWP for methane of 28 from the IPCC's 5th assessment report. WTE facilities in the U.S. reduce lifecycle emissions by an average of 1 ton of CO2e per ton of MSW diverted from landfills. The data presented here reflects facility-specific operating data and the local electrical grid, which can differ from the national average. More information on the calculation can be found at <https://www.covanta.com/waste-to-energy-vs-landfill>

** 2020-2022 Average Annual Emissions compared to federal guidelines for existing facilities (40 CFR 60 Subpart Cb). Facility may be subject to more stringent requirements by permit or in accordance with other federal guidelines.

*** Based on the 2020 US EPA National Emissions Inventory; the most recently released complete inventory. Where available, the facility's 2020 emissions were replaced with the most recently reported 2022 emissions.



HB-2123-HD-1

Submitted on: 2/12/2024 6:11:20 PM

Testimony for CPC on 2/14/2024 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Jennifer Navarra	Hawaii Environmental Change Agents Solid Waste Task Force	Support	Written Testimony Only

Comments:

It is important that we monitor and sample community exposure to health hazards from toxic emissions from incinerators and make this information public. Please pass this measure.

HB-2123-HD-1

Submitted on: 2/12/2024 7:17:05 PM

Testimony for CPC on 2/14/2024 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Lynette Cruz	Malama Makua	Support	Written Testimony Only

Comments:

I support the right to know what I'm breathing!

HB-2123-HD-1

Submitted on: 2/12/2024 11:07:02 PM

Testimony for CPC on 2/14/2024 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Ted Bohlen	Hawaii Reef and Ocean Coalition and Climate Protectors Hawaii	Support	Written Testimony Only

Comments:

The Hawaii Reef and Ocean Coalition and Climate Protectors Hawaii **STRONGLY SUPPORT** this bill to require waste incinerators to develop plans for continuous monitoring of certain hazardous air pollutants!

Citizens who live around incinerators have a right to know to what hazardous air pollutants they are being exposed. Currently, there is little or no testing of a number of significant air pollutants. That needs to change in order to protect the public health and the environment adequately!

Please pass this bill!

Mahalo!

Hawaii Reef and Ocean Coalition and Climate Protectors Hawaii (by Ted Bohlen)



Environmental Caucus of The Democratic Party of Hawai'i

To: House Committee on Consumer Protection and Commerce
Hon. Mark M. Nakashima, Chair
Hon. Jackson D. Sayama, Vice Chair

Re: HB 2123 HD 1 RELATING TO AIR POLLUTION

Hearing: Wednesday, February 14, 2024, 2:00 p.m., Room 329 & videoconference

Position: Strong Support

Aloha, Chair Nakashima, Vice Chair Sayama, and Members of the Committee on Consumer Protection and Commerce:

The Environmental Caucus of the Democratic Party of Hawai'i (DPH) strongly supports HB 2123 HD1. This bill requires the owner or operator of each waste combustion facility or municipal solid waste landfill to develop a plan to implement continuous monitoring and sampling technologies for the purposes of collecting data regarding emissions. It requires a publicly available website hosted by the Department of Health to track and display data collected on emissions. It also requires the Department of Health to adjust permit limits for air contaminants based on emissions data collected and requires reports to the legislature.

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 strongly supports this measure because continuous monitoring of greenhouse gas (GHG) emissions from the H-Power waste-to-energy plant is crucial for numerous reasons. (1) Monitoring ensures that the plant complies with emission standards and regulations and holds the facility accountable for its impact on air quality and climate change. (2) Continuous monitoring helps protect the health of nearby residents and workers; it ensures that harmful pollutants are kept within safe limits. (3) Waste-to-energy plants emit GHGs during combustion and monitoring allows for the assessment of the plant's contribution to global warming. H-Power's emissions reduction efforts directly impact climate change mitigation. (4) There are four types of continuous monitoring by H-Power: Carbon Dioxide (CO₂) is the primary GHG emitted during combustion. Nitrogen Oxides (NO_x) contribute to smog and respiratory issues. Sulfur Dioxide (SO₂) causes acid rain and respiratory problems, and Opacity measures particulate matter (visible smoke) released from the stack. Other emissions that need to be continuously monitored include Methane (CH₄) where organic waste is incinerated, monitoring methane is essential. Volatile Organic Compounds (VOCs) can impact air quality and human health, and heavy metals such as mercury (Hg) and lead (Pb) can be present in waste and should continuously be monitored. In addition, the most toxic chemicals (dioxins/furans, PCBs, PFAS, and PAHs) known to science should be monitored through continuous *sampling* technology by a cartridge used to collect samples over a 4-to-6-week period. This technique should only be used where continuous *monitoring* technology is not commercially available. Once a year testing of these toxins is insufficient to provide the full extent of these toxic contaminants being emitted into the air we breathe.

Continuous monitoring ensures environmental compliance, protects health, and contributes to global efforts in reducing GHG emissions. Continuous monitoring is essential for responsible waste management and energy production.

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 Adyja legislativepriorities@gmail.com

Alan B. Burdick burdick808@gmail.com

Co-Chairs, DPH Environmental Caucus



Testimony of **Lahaina Strong**
Before the House Committees on
Consumer Protection & Commerce

In Consideration of House Bill No. 2123 HD1
RELATING TO AIR POLLUTION.

To Chair Nakashima, Vice Chair Sayama, and the Honorable Members of the
Committees,

We are writing on behalf of Lahaina Strong, an organization that was initially formed in 2018 following the Hurricane Lane fire in Lahaina and re-energized 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 emphasizing the importance of local voices and community-driven solutions.

Lahaina Strong stands in support of HB2123 HD1, a bill that requires the owner or operator of each waste combustion facility or municipal solid waste landfill to develop a plan to implement continuous monitoring and sampling technologies for the purposes of collecting data regarding emissions.

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.

Although it seems this bill may have been originally intended to apply to incinerator sites, **considering the known toxicity of the debris and the sensitive nature of Olowalu, Lahaina Strong urges the committee to keep in language that covers “municipal solid waste landfills” so the proposed air quality testing requirements will also apply to the**

temporary debris storage site at Olowalu. This bill as written provides 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 HD1, 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,

Jordan Ruidan, Courtney Lazo & Pa'ele Kiakona

Lahaina Strong

Comments before
February 13, 2024 House CPC Committee Hearing

**IN SUPPORT OF
House Bill 2123**

Relating to Incinerator and Landfill Air Monitoring

Mike Ewall, Esq.
Founder & Director
Energy Justice Network
215-436-9511
mike@energyjustice.net
www.EnergyJustice.net

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 landfills and waste incinerators. We currently lack the data on what communities are truly being exposed to. At the H-POWER incinerator, 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. At landfills, nothing is monitored.

HB 2123 is modeled on a new law in Oregon that requires the state's only trash incinerator to use modern pollution monitoring technology to test what is actually coming out of their smokestack. We know from EPA data that trash incinerators are among the largest industrial air polluters in any jurisdiction, just as our state's only trash incinerator, H-POWER, is one of the largest air pollution sources on O'ahu.

You don't know if you don't look. If we regulated car drivers the way we monitor most incinerator emissions, motorists would be allowed 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, as companies choose who to hire to do their testing. In reality, incinerators are "speeding" other times when no one is looking.

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.

It is not expensive. While there are 23 air contaminants listed in the bill, that number only applies to the one incinerator in the state, H-POWER, or any future incinerators. A shorter list of appropriate pollutants to be monitored at landfills would be determined by the Department of Health. At H-POWER, 4 of the 23 are already continuously monitored. Of the other 19 chemicals, only 5-7 monitoring devices are needed, since Cooper-Sailbri makes a multi-metals monitor that can monitor nine of the metals at once, at least two companies make a long-term sampler that can monitor the PAHs, dioxins/furans, and PCBs with the same equipment, and others make monitors that cover ammonia, both acid gases, and more with the same system.

Continuous monitoring for additional air pollutants is not expensive and represents a tiny fraction of the operating budget for an incinerator or landfill. This monitoring costs far less than the annual cost to public health from incinerator and landfill pollution. If the new information shows high levels that get addressed, the benefits to public health are worth it. After all, Centers for Disease Control and Prevention/National Center for Health Statistics Neighborhood Life Expectancy Project has found that the those living close to the PVT

Landfill in Nānākuli, O‘ahu live 10 years less than the state average of 82 years. In a study of the trash incinerator in Baltimore, which is smaller than H-POWER, it has been projected that just one pollutant (fine particulate matter) from that incinerator causes an estimated \$55 million in annual harm to health, mainly by cutting lives short.

EPA does not have it covered. The U.S. Environmental Protection Agency is working on new regulations for old incinerators like H-POWER. However, these regulations that are supposed to be updated every five years but have not been updated since 2006. It took a federal lawsuit to force the agency to update these regulations, and they are picking the weakest of the options as they develop new regulations that will not kick in until 2028 or 2029 (a 22-year gap, not the required five). These new regulations, as proposed, will make continuous air monitoring optional. Optional means it won’t happen unless the state uses its power to go beyond the federal minimum. Also, these EPA rules do not cover landfills like HB 2123 now does.

The technology exists. EPA has [tested and verified](#) the needed equipment for most of these pollutants around 2006, and has recently adopted [new test methods](#) for PFAS “forever chemicals” (OTM-50) and for surface monitoring of landfills (OTM-51). Industry arguments that the technology doesn’t exist or that regulations to use them aren’t ready are being disproved as Oregon rolls out the requirements on the similar law they passed last year.

Pollution reaches people. While the argument has been made that we need not worry about H-POWER’s emissions because the wind blows their pollution toward the ocean. However, it still blows back toward O‘ahu residents nearly one full day out of every week, and some of the toxic chemicals that blow out to sea can still come back to us when toxic chemicals like mercury and dioxins bioaccumulate in seafood that people eat.

Please ensure that the “temporary” landfill in Olowalu is covered. In case there are any loopholes in the wording that covers municipal solid waste landfills that would allow the “temporary” Lahaina toxic ash and disaster debris landfill in Olowalu to not be covered, we ask that you please close that loophole and make it clearly apply.

Please find attached a factsheet on the bill, as well as our response to issues raised by the Department of Health on an earlier draft of this bill.

Mahalo nui loa for your support for this important matter!

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>														
1	Nov 1989	RDF	854 tons/day														
2	Nov 1989	RDF	854 tons/day														
3	Feb 2013	MSW	900 tons/day														

- 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 NO_x" 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.

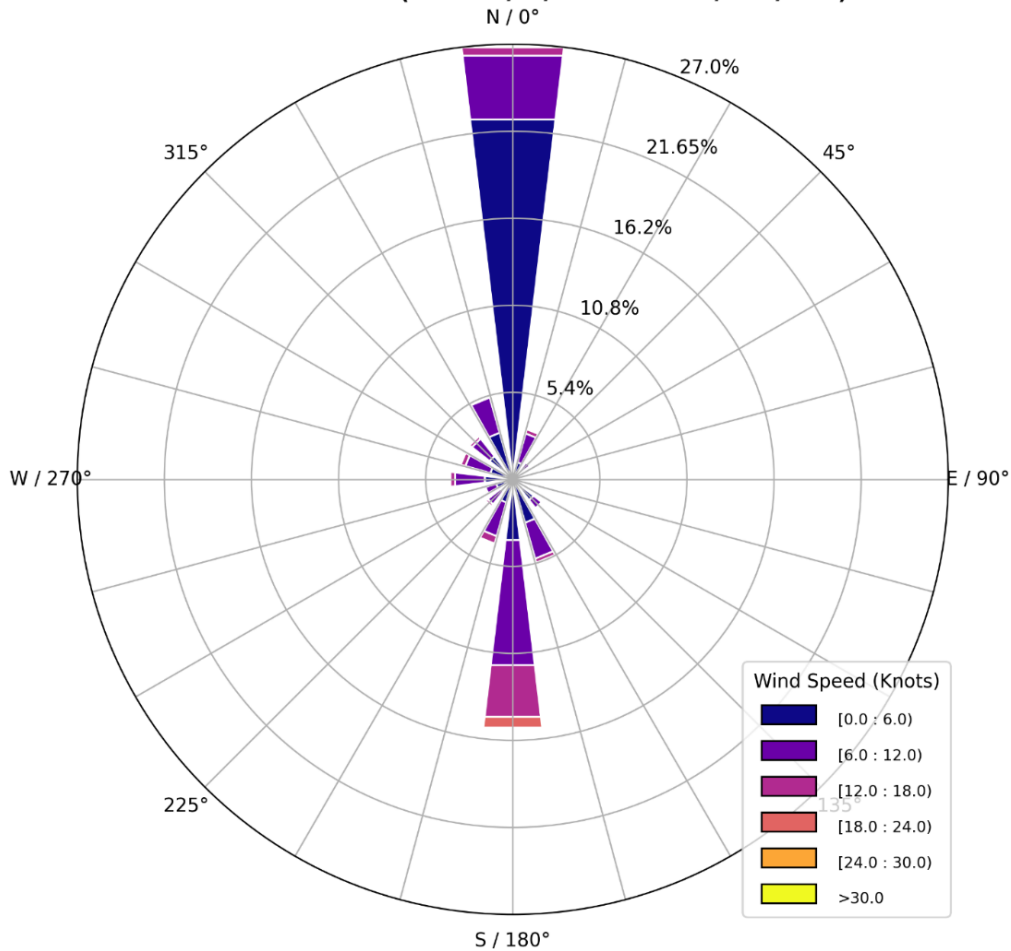


- Covanta Marion Inc Facility Area
- Commercial Area
- Residential Area
- Public Area (Museums + School)

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)

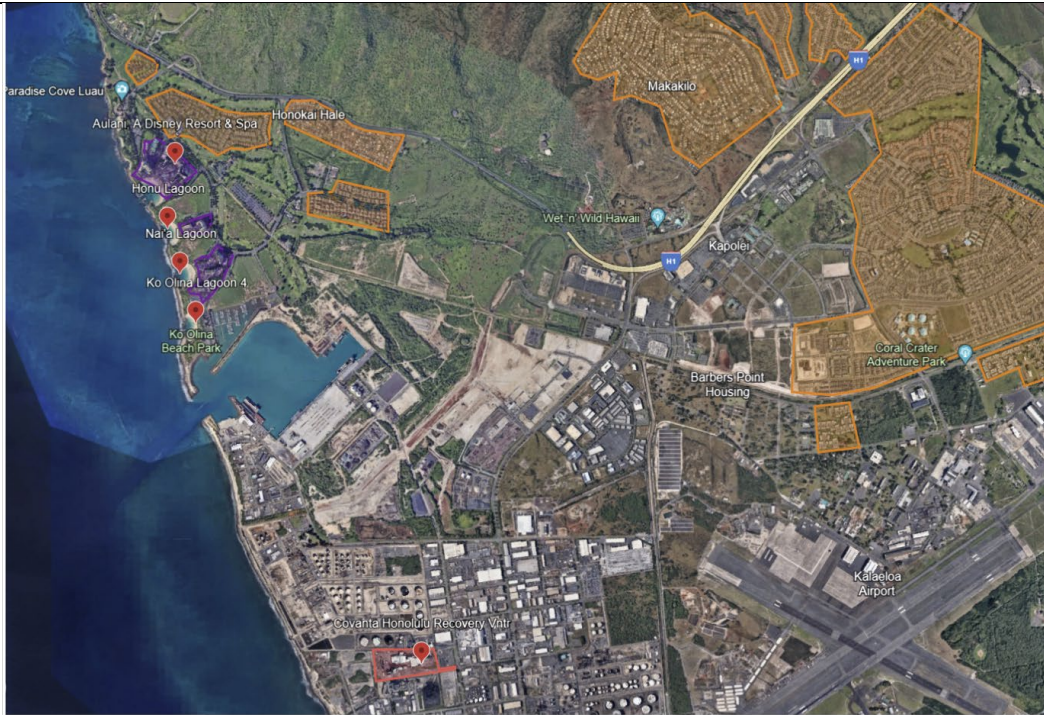


Not sure what the relevance is of pointing out Oregon's wind direction.

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.



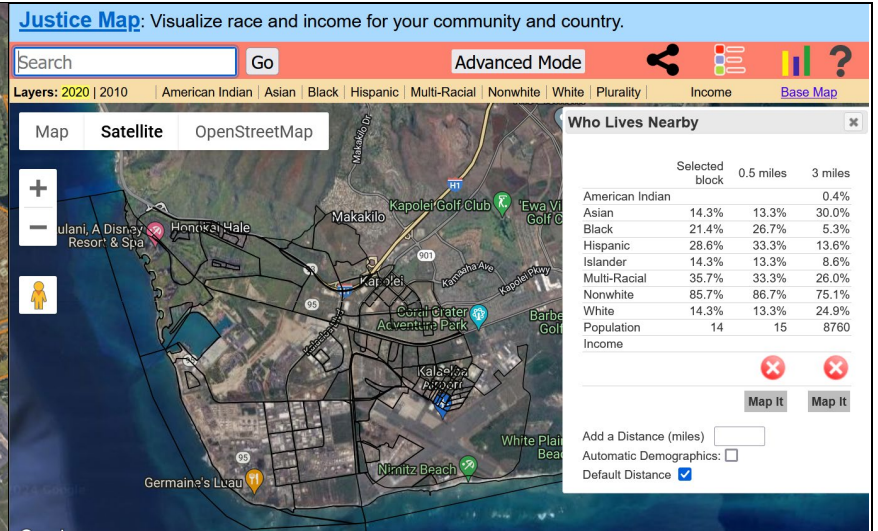
Figure 4 Close-up image of HPOWER facility on southwest corner of Oahu that is highlighted in red.



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.

Kalaeloa Airport (Oahu) Wind Data (2018/1/1 - 2022/12/31)

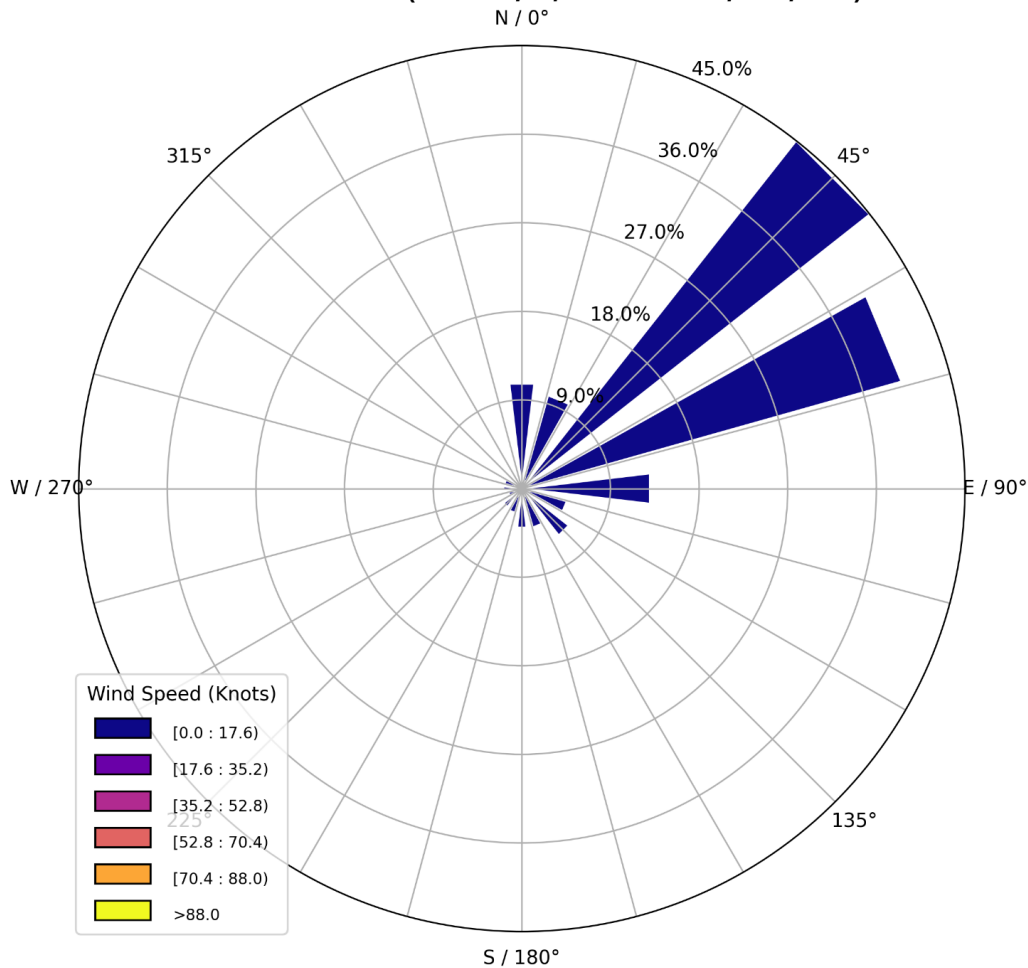


Figure 6 Windrose graph from nearest airport (Kalaeloa Airport) in vicinity of HPOWER facility. Information on the wind data set from the sampling period January 1, 2018, to December 31, 2022, is provided below. The largest spoke shows that winds blow from the northeast (at 45°) 45% of the time.

Kalaeloa Airport

Wind blowing from the direction (135°-315°) towards public areas: 12.79 % of the time.

The wind blowing toward population centers 12.79% of the time means that for nearly one full day of every week (on average), residents are breathing air pollution from H-POWER, and that which deposits on their land and water, or which accumulates in plants and animals that people eat, is available on a more routine basis.

That much of the emissions blow into the ocean is not an effective argument for not being concerned about this pollution.

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.

HB-2123-HD-1

Submitted on: 2/13/2024 1:10:59 PM

Testimony for CPC on 2/14/2024 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Jolie Ryff	Hawaii Clean Power Task Force	Support	Written Testimony Only

Comments:

Hawaii's Clean Power Task Force **strongly** supports SB2123

SB 2101, mirroring a recent Oregon law, mandates modern pollution monitoring for the state's sole trash incinerator. EPA data tells us that trash incinerators are among the largest industrial air polluters in any jurisdiction, and H-POWER is no exception.

Currently, H-POWER is only required to continuously monitor four air pollutants, leaving nine others to be tested just once per year. This bill would require all nine to be monitored continuously, along with nine additional pollutants that currently go unmonitored.

To put things into perspective, if we regulated car drivers the way we monitor most incinerator emissions, motorists would be allowed 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, similar to how companies choose who to hire to do their testing. In reality, incinerators are "speeding" other times when no one is looking.

Once-a-year testing can drastically underestimate reported emissions. At the nation's largest waste incinerator, in Pennsylvania, continuous monitoring found that hydrochloric acid emissions are 62% higher than what their annual stack tests indicate. For dioxins, the most toxic chemicals known to science, continuous sampling at incinerators in Europe has shown actual emissions to be 30 to 1,300 X higher than we're led to believe they are in the U.S. when incinerators test just once a year.

DOH argues that pollution is blown out to sea, suggesting no cause for concern. However, they document that the air blows toward O'ahu residents for nearly one full day out of every week. And what blows out to sea can still come back to us when toxic chemicals like mercury and dioxins bioaccumulate in seafood that people eat.

DOH has stated to the House EEP Committee that they defer to EPA and that EPA updates their regulations on incinerators every five years. That is not true. EPA last updated their regulations on trash incinerators in 2006. EPA is required to update every five years, but had to be sued for a court to require that they update these regulations, which are now out for public comment and won't take effect until 2028-2029 -- a gap of 22 years, not five. EPA's proposed rule makes continuous monitoring optional, which many commenters have objected to.

Mahalo for the opportunity to address this matter.

Jolie Ryff

February 14, 2024

Representative Mark Nakashima, Chair
Representative Jackson Sayama, Vice Chair
Committee on Consumer Protection and Commerce

Re: HB 2123 HD1 Relating to Health

Dear Chair Nakashima, Vice-Chair Sayama and Members of the Committee on Consumer Protection and Commerce:

Covanta respectfully submits this testimony in **opposition** to HB 2123 HD1, which would impose expansive additional emissions monitoring that is unnecessary to demonstrate the efficacy of the air pollution control and monitoring systems currently in place.

The State of Hawaii Department of Health has estimated that the costs for acquiring and installing the additional monitoring equipment would be \$11,400,000 plus additional costs for operations and maintenance. All of these costs would be expected to be paid for by the City and County of Honolulu as the owner of the H-POWER facility.

The current draft of HB 2123 HD1 states that "... the purpose of this Act is to implement continuous monitoring and continuous sampling technologies that have been tested and verified by the United States Environmental Protection Agency at waste combustion facilities and to ensure that waste combustion facility owners continuously monitor, sample, and report the emissions of contaminants". However, the list of emission parameters required to be monitored includes several for which there are no USEPA approved Performance Specifications (i.e., dioxins/furans, PCBs, cadmium, lead, etc.). EPA Performance Specifications are designed to ensure that data generated by continuous emission monitoring systems is verifiable and accurate. The bill also fails to recognize or even consider the risks associated with providing inaccurate data to the public, or relevant standards established by the U.S. EPA for monitoring and measurement devices that are explicitly designed to ensure the quality and accuracy of collected data.

Air emissions from EfW facilities are heavily regulated by both the U.S. EPA and state environmental agencies. Emissions from EfW facilities are determined both through routine stack tests (performed at least once a year) and through continuous emissions monitors (CEMS). CEMS monitor flue gases continuously for carbon monoxide (CO), nitrogen oxides (NOx), sulfur dioxide (SO2), opacity, and carbon dioxide and/or oxygen. Facility operators monitor these parameters and adjust as needed to ensure proper operation and compliance. For example, monitoring CO levels continuously allows operators to respond to changes in the waste (e.g. wetter than normal waste that may have been collected during a rainstorm) to ensure complete and efficient combustion.

Other regulated pollutants are checked through a rigorous stack testing program performed by a regulator-approved third party. This testing is required by the EPA and state agency to be conducted under representative operating conditions and at >90% of the unit's operating capacity. Additionally, the operating parameters under which the stack test is conducted (e.g. activated carbon addition rate, steam flow rate) set the standard for the facility's operation until the next stack test is completed. Operating the combustion process and air pollution control equipment in accordance with these standards ensures compliance throughout the year, not just during test campaigns. Furthermore, the air pollution control systems in place at HPOWER must run anytime waste is being processed. We cannot bypass or turn-off air pollution control equipment.

We respectfully request the committee to defer HB 2123 HD1. Thank you for the opportunity to provide our testimony.

Frazier Blaylock
Senior Director
Government Relations

HB-2123-HD-1

Submitted on: 2/13/2024 1:57:38 PM

Testimony for CPC on 2/14/2024 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Lisa Hallett	Kokua na Aina	Support	Remotely Via Zoom

Comments:

Aloha Committee Chair Nakashima, Vice-Chair Sayama, and Committee Members.

My name is Lisa Hallett and I'm the foudner of Kokua na Aina, a statewide nonprofit environmental justice organization working to help communities transition from dirty energy and waste industries to clean energy and zero waste.

We enthusiastically support House Bill 2123 as currently written. We've been helping educate residents on four islands about landfills and incineration issues, including connecting with the most impacted communities.

Incinerator companies like Covanta like to brag that they are well within permit limits and that we need not worry about their toxic air pollution. We see this bill as an opportunity for them to put their money with their mouth is, and prove how clean they are with real, reliable data.

The costs for this bill are minimal, and just a small fraction of the operating costs of a landfill or incinerator. We've heard heartbreaking stories from people who have lost family members to cancer, with the fair belief that their lives were cut short due to their proximity to the H-POWER incinerator or the landfills not far from them. It is well worth the price of monitoring to know what is really being put in the air so that we might address any problems and save lives. The economic damage from people's lives being cut short far outweighs the cost of giving us a right to know what we're breathing.

Mahalo,
Lisa Hallett

LATE

HB-2123-HD-1

Submitted on: 2/13/2024 7:13:37 PM

Testimony for CPC on 2/14/2024 2:00:00 PM

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

Nicole Chatterson
Executive Director, Zero Waste O‘ahu
oahu.zerowaste@gmail.com
808.561.7730

LATE



Testimony in **SUPPORT of HB2123 HD1: RELATING TO AIR POLLUTION**

Committee Hearing of CPC

February 14, 2024, at 2:00 PM, CCR 329 & Videoconference

February 13, 2024

Aloha Chair Nakashima and members of the CPC Committee,

As the Executive Director of Zero Waste O‘ahu, a local non-profit working to rebuild an equitable and waste-free Hawai‘i through direct action and public engagement, I am testifying in **SUPPORT of HB2123 HD1: RELATING TO AIR POLLUTION.**

We know from continuous monitoring at waste incinerators outside of Hawai‘i that the public is exposed to far more pollution than we currently test for here at home. The single annual self-test used to detect air pollution at the Covanta-operated H-POWER waste incineration facility on O‘ahu is well understood to be an insufficient and outdated methodology. We need continuous monitoring and we need to expand the pollutants we test for.

As we have seen in testimony from Lahaina Strong and others, we also know there is concern about contamination of ecosystems and residents from placing known toxic debris from the Maui wildfires in a temporary storage site established in the community of Olowalu. We need to ensure continuous monitoring of harmful chemicals at temporary sites as well as at permanent landfills.

Continuous monitoring for additional air pollutants is not expensive and represents a tiny fraction of the operating budget for an incinerator or landfill (temporary or permanent). Further, this cost pales in comparison to social and economic costs the public faces from potentially undocumented exposure to pollutants that are not currently being tested for. The technology is available for more thorough and consistent testing, it is our responsibility to use the best available methods of protecting the health of people and ecosystems.

Please feel free to contact me with any questions. Mahalo for your time and consideration.

A handwritten signature in black ink, appearing to read "NCh".

Nicole Chatterson, Executive Director, Zero Waste O‘ahu

LATE

HB-2123-HD-1

Submitted on: 2/14/2024 1:16:17 PM

Testimony for CPC on 2/14/2024 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Steve Parsons	Kauai Climate ACTION Coalition, Small Biz Owner	Support	Written Testimony Only

Comments:

Aloha Trusted Lawmkers!

KCAC, with 150 members, strongly supports this bill, as there is a harmful emission to the people and Ecosystems in Hawaii! In addition, operators of these are known to cheat and burn cleaner things on the day of testing. NOT Pono!

Sincerely,

Steve Parsons, KCAC, [Surfrider Foundation Kauai Chapter](#) member, Small business owner, Kauai EV Chapter 808-651-3232

HB-2123-HD-1

Submitted on: 2/12/2024 4:47:27 PM

Testimony for CPC on 2/14/2024 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
David Hunt	Individual	Support	Remotely Via Zoom

Comments:

HB2123 HD1 Testimony

2/12/24 CPC Testimony:

Hearing: Feb 14, 2024 2:00 PM

I now strongly support HB2123 HD1 (as amended by focused, concerted effort in the EEP Committee).

IF legislators are sincere in affirming that we have a right to a healthy environment, including the air that we all breathe, then HB2123 is a critical step in fulfilling that commitment.

We have a need (and a right) to know what is being emitted (and in what volumes) from large-scale combustion facilities.

HB2123 is the Responsible, Common Sense, Affordable, and Reasonable thing to do.

I am disappointed that our Department of Health is dragging their feet, resistant, and exaggerating costs rather than seizing this opportunity to actually protect health.

I am sorry to say that I am not surprised that Covanta, seeking to maximize its profits, is providing excuses rather than showing true corporate responsibility and respect for residents breathing their (mostly unknown) emissions. They can and should do better.

Again, HB2123 is the Responsible, Common Sense, Affordable, and Reasonable thing to do. I ask you to pass HB2123.

HB-2123-HD-1

Submitted on: 2/12/2024 5:28:32 PM

Testimony for CPC on 2/14/2024 2:00:00 PM

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

Comments:

Aloha/ please support this bill.

Continuous monitoring at other incinerators has shown that we're exposed to far more pollution than we're told when they rely on a single self-test each year.

Continuous monitoring for additional air pollutants is not expensive and represents a tiny fraction of the operating budget for an incinerator or landfill. It costs far less than the annual cost to public health from their pollution, and if the new information shows high levels that get addressed, the benefits to public health are worth it.

Mahalo

Elizabeth Hansen, Hakalau HI 96710

HB-2123-HD-1

Submitted on: 2/12/2024 5:31:16 PM

Testimony for CPC on 2/14/2024 2:00:00 PM

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

Comments:

Aloha / please support this bill.

Continuous monitoring at other incinerators has shown that we're exposed to far more pollution than we're told when they rely on a single self-test each year.

* Continuous monitoring for additional air pollutants is not expensive and represents a tiny fraction of the operating budget for an incinerator or landfill. It costs far less than the annual cost to public health from their pollution, and if the new information shows high levels that get addressed, the benefits to public health are worth it.

Mahalo,

Rodger Hansen / Hakalau HI 96710

House Committee on Consumer Protection and Commerce
Hearing on Feb. 14, 2024 at 2:00 pm

SUPPORTING HB 2123 HD 1

Aloha, my name is John Kawamoto, and I support HB 2123 HD 1 because waste management facilities emit pollutants that are harmful to human health.

Waste combustion facilities typically emit tons of pollution into the air that we breathe every day that they operate. Many types of pollutants are emitted, including dioxins and furans. These two chemicals, which are similar in structure, are among the most toxic substances in the world. They can cause cancer, damage the immune system, interfere with hormonal activity, and create reproductive and developmental problems.

Dioxins are so toxic that the EPA, has set a limit that is equivalent to 30 grams of dioxin (just over one ounce of it) per trillion liters of drinking water. ([Document](#) showing that EPA has set the Maximum Contaminant Level for dioxin at 0.00003 parts per billion.)

Dioxins and furans enter the human body by breathing contaminated air, as well as by drinking contaminated water or eating contaminated food. Yet waste combustion facilities in Hawaii are tested only once a year to determine whether the emissions of dioxins and furans are at a safe level. Many other pollutants are also tested only once a year, and a number of pollutants are not tested at all. Very few pollutants are tested continuously.

Testing was once limited by the technology that was available at the time. Advances in technology have improved testing methods, making it possible to monitor numerous pollutants continuously. Those that cannot be monitored continuously can be monitored using continuous sampling methods.

Continuous testing/sampling is critical to ensure human health because the stream of municipal solid waste that is burned in combustion facilities is variable, which can alter the composition of emissions. Those facilities that burn industrial waste, medical waste, construction waste, demolition waste, or sewage sludge have emissions that are even more variable.

The number of pollutants that contaminate the environment is increasing, threatening the health of people and all other living things. The public must be assured that major point sources of pollution, such as waste combustion facilities, are monitored using current technology. Continuous monitoring/sampling would significantly raise the level of confidence in the accuracy of the results of emissions tests for pollution.

For the sake of public health, I urge the committee to pass SB 2123 HD 1.

HB-2123-HD-1

Submitted on: 2/12/2024 6:09:05 PM

Testimony for CPC on 2/14/2024 2:00:00 PM

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

Comments:

Aloha Chair Nakashima, Vice chair Sayama and members of CPC,

I support HB2123 HD1 with important amendments for 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 or ratepayers.

Testing results must be published and publicly available.

Thank you for your consideration,

Keith Neal

Waimea

HB-2123-HD-1

Submitted on: 2/12/2024 6:15:15 PM

Testimony for CPC on 2/14/2024 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Ryan Christopher	Individual	Support	Written Testimony Only

Comments:

Aloha, I'm writting to voice my support of HB2123. We need to take more step to ensure our children will be handed a place where they can thrive with clean water, clean soils, and clean air. This bill will help with that goal.

Ryan C

Honokaa HI

HB-2123-HD-1

Submitted on: 2/12/2024 7:32:47 PM

Testimony for CPC on 2/14/2024 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Mary True	Individual	Support	Written Testimony Only

Comments:

I think clean air is a right and if that right isn't protected by those who have the power to do the correct thing, then I think we should have easily accessible information so we at least know what it is we're breathing. Polluted air kills! We now have scientific proof of that. Please support HB2123 HD1 and help keep our air breathable.

Thanks for your attention, Mary True, Pepekeo, 96783

HB-2123-HD-1

Submitted on: 2/12/2024 7:48:39 PM

Testimony for CPC on 2/14/2024 2:00:00 PM

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

Comments:

Aloha legislators,

It's high time we find out just what is going into the air we breathe from incinerators and landfills.

mahalo,

Cory Harden

HB-2123-HD-1

Submitted on: 2/12/2024 9:53:08 PM

Testimony for CPC on 2/14/2024 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Shannon Matson	Individual	Support	Written Testimony Only

Comments:

Aloha Chair, Vice Chair, and Committee Members,

"Ea" has so many different meanings because it is so important. It is both life and independence, it is rising up and it is our spirit, it is breath and sovereignty and it is AIR. We all deserve and need clean air to breathe. Please support this legislation. Please continue to do everything in your power to support clean air for us all to enjoy and thrive and live in.

Mahalo,

Shannon M.

Hawai'i Island Resident

HB-2123-HD-1

Submitted on: 2/13/2024 12:09:54 AM

Testimony for CPC on 2/14/2024 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Maki Morinoue	Individual	Support	Written Testimony Only

Comments:

Aloha

I SUPPORT [House Bill 2123](#) the basic right to know our air quality with continuously monitoring air pollution at landfills as well as waste incinerators.

Please pass this bill.

Maki Morinoue
Holualoa, Hawai'i Island

HB-2123-HD-1

Submitted on: 2/13/2024 6:33:24 AM

Testimony for CPC on 2/14/2024 2:00:00 PM

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

Comments:

Aloha Representatives!

Continuous monitoring at other incinerators has shown that we're exposed to far more pollution than we're told when they rely on a single self-test each year.

Continuous monitoring for additional air pollutants is not expensive and represents a tiny fraction of the operating budget for an incinerator or landfill. It costs far less than the annual cost to public health from their pollution, and if the new information shows high levels that get addressed, the benefits to public health are worth it.

Let's pass and promote this bill!

R A Culbertson

Honokaa

HB-2123-HD-1

Submitted on: 2/13/2024 9:02:15 AM

Testimony for CPC on 2/14/2024 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Deborah Ward	Individual	Support	Written Testimony Only

Comments:

Aloha, Legislators,

My name is Deborah Ward, and I STRONGLY SUPPORT this bill as amended. I live in Puna, where geothermal gases regularly affect our health and way of life. Yet the weak monitoring and non-existent notification of toxic events has always failed to protect my friends and neighbors.

EPA has new rules coming (20 years late) for large incinerators like H-POWER, but they don't kick in until 2028-2029 and they make continuous air monitoring optional . Continuous monitoring for additional air pollutants is not expensive and represents a tiny fraction of the operating budget for an incinerator or landfill. It costs far less than the annual cost to public health from their pollution, and if the new information shows high levels that get addressed, the benefits to public health are worth it.

I urge you to take the important step to pass this legislation. Thank you!

Deborah WARD

HB-2123-HD-1

Submitted on: 2/13/2024 9:47:04 AM

Testimony for CPC on 2/14/2024 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Palmer Hafdahl	Individual	Support	Written Testimony Only

Comments:

Simply stated I support the intent of this legislation to protect the "milk that we breathe". Monitoring is critical to managing the net effect of our various efforts to reduce our impact on the wafer thin atmosphere that supports our fragile natural life systems and the diverse biology of this natural habitat. Those species now codependent with human ecology depend upon our responsible stewardship and our regard for the nature that inspires us.

HB-2123-HD-1

Submitted on: 2/13/2024 11:31:02 AM

Testimony for CPC on 2/14/2024 2:00:00 PM

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

Comments:

I support

HB-2123-HD-1

Submitted on: 2/13/2024 1:51:34 PM

Testimony for CPC on 2/14/2024 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Leslie Iijima	Individual	Comments	Written Testimony Only

Comments:

I am very concerned about the Air quality that I breathe each day. Air pollution affects everything, including microorganisms and the ocean, not only what we breathe.

Leslie Iijima/ Rusty Iijima

HB-2123-HD-1

Submitted on: 2/13/2024 2:00:34 PM

Testimony for CPC on 2/14/2024 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
DJ RUSTY IJIMA	Individual	Comments	Written Testimony Only

Comments:

I am concerned about the quality of the air we breathe. Air pollution affects all living things on land and sea.

DJ Rusty Iijima

LATE

HB-2123-HD-1

Submitted on: 2/13/2024 7:26:05 PM

Testimony for CPC on 2/14/2024 2:00:00 PM

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

Comments:

Continuous monitoring of toxic pollution using modern technology is critical to protect the health and safety of our community. Please pass this important measure.

Mahalo for the opportunity to testify.