Written Testimony

Regarding Proposed Use of Air Curtain Incinerators for Vegetative Debris

Submitted to the
Committee on Government Operations, Veterans Affairs, and Consumer Protection

Chairman: Honorable Senator Avery Lewis

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Good morning, Honorable Senator Avery Lewis, Chairman of the Committee on Government Operations, Veterans Affairs, and Consumer Protection. Good morning to all committee members, fellow Senators, and the people of the Virgin Islands.

My name is Dawn Lisa Henry, and I am the CEO of the Virgin Islands Environmental Association and Interim CEO of Island Green Living Association.

Thank you for the opportunity to provide testimony on Bill No. 36-0232, an act authorizing the use of Air Curtain Incinerators (ACIs) to manage vegetative debris.

My testimony today is not intended to be political or adversarial. I wish only to share with the committee how ACIs are regulated under U.S. law, how those regulations are enforced in practice, and what that reality means for a small, environmentally sensitive community like the Virgin Islands.

I believe there are some basic points on which we all agree: landfill fires are a serious health hazard and a nuisance that degrades quality of life, and all Virgin Islanders—whether senators, agency heads, farmers, environmental organizations, or concerned residents—must work together to find lasting solutions to this long-standing problem. Our environment is precious and worthy of our commitment. Virgin Islanders deserve policies that protect public health.

How Air Curtain Incinerators Are Regulated Under U.S. Law

Under the federal Clean Air Act, air curtain incinerators are regulated as Other Solid Waste Incinerators (OSWI). They are allowed to operate not because they are clean, but because they are narrowly defined, restricted to specific feedstocks, and subject to operational limits that tightly control how they are used.

ACIs are regulated indirectly. The primary environmental safeguard is what goes into the fire, not what comes out of the stack. There is no routine or continuous emissions monitoring for toxic pollutants. Instead, compliance is enforced through opacity readings, paperwork, inspections, and operator declarations about the materials being burned. This raises a fundamental question: what is actually coming out of the stack?

EPA's removal of the Title V permitting requirement was not based on a determination that ACIs emit minimal or not much pollution, are clean or safe, or pose no public-health risk, but rather on their classification as non-major sources for permitting purposes.

This distinction is especially important in the Virgin Islands. EPA's removal of Title V permitting requirements for air curtain incinerators applies only to units that are not located at a Title V major source and are not otherwise subject to Title V. Both the Bovoni and Anguilla Landfills are already Title V major sources and are operating under a federal consent decree. As a result, any air curtain incinerator operated on-site would remain subject to full Title V permitting requirements and would need to be incorporated into the landfill's Title V permit, rather than

treated as an exempt or stand-alone unit. In other words, if the ACIs are placed at either Landfills, a Title V permit is required.

Health and Environmental Impacts

The attached letter to my testimony from Dr. Polly Hoppin, ScD, Research Professor Emeritus at the University of Massachusetts, clearly demonstrates that air curtain incinerators are not pollution-free. Even when restricted to vegetative debris and clean, untreated wood, they emit particulate matter—including inhalable PM_{10} and fine $PM_{2.5}$—as well as other hazardous air pollutants such as polycyclic aromatic hydrocarbons (PAHs), benzene, formaldehyde, volatile organic compounds (VOCs), carbon monoxide (CO), nitrogen oxides (NO_x), and certain metals. Many of these pollutants are associated with both acute and long-term health effects, including cancer.[i] Department of Health statistics show that approximately 400 Virgin Islanders are diagnosed with cancer each year.

Another critical concern is that ACIs are regulated primarily through opacity readings rather than direct testing of the pollutants they emit. Opacity measures only visible smoke and is not an indicator of the presence or absence of toxic pollutants. During combustion, fine ash, soot, and other particles are picked up and carried by the high-velocity air curtain and rising hot gases and released into the surrounding air. These particles can carry the toxic compounds discussed above even when operations meet opacity limits and no visible smoke plume is present.

In simple terms, clear does not mean clean. Carbon monoxide, for example, is an invisible, odorless gas that can be deadly even though you cannot see or smell it. In the same way, emissions from an incinerator may appear clear while still containing harmful pollutants that pose real health risks.

These emissions must be acknowledged and considered in any deliberation about whether air curtain incineration is the most appropriate option for managing vegetative debris in the Territory. Importantly, there is no known safe level of exposure to fine particulate matter ($PM_{2.5}$), and PM_{10} also poses significant respiratory and cardiovascular risks. Because of their small size, these particles can be inhaled deep into the lungs, triggering inflammation and contributing to serious health effects, particularly for children, the elderly, and individuals with pre-existing health conditions

When we consider the volume of vegetative debris the Waste Management Authority proposes to incinerate daily, 20 tons per day on St. Thomas and 60 tons per day on St. Croix, these impacts are compounded day after day. Initial calculations indicate that, if this measure is approved, annual air quality in the Virgin Islands could fall below guideline levels established by the National Ambient Air Quality Standards and the World Health Organization.[ii] It is important to note that air quality standards are not based on one emitting source but what is happening in a designated area or community.

This concern is especially significant in the Virgin Islands, where both districts are operating under federal consent decrees for Clean Air Act violations. It is particularly acute on St. Thomas, where a densely populated residential community exists immediately adjacent to the Bovoni Landfill, and many residents can accurately be described as fenceline communities. In this context, adding an additional and avoidable source of air emissions warrants serious caution.

Fire Risk and Alternatives

One of the primary reasons given in support of ACIs in the territory is the existing stockpile of vegetative debris and the very real concern that these materials have caught fire in the past. I acknowledge that incineration would reduce the size of these piles.

However, this approach carries unnecessary and substantial risk. Vegetative debris has accumulated at both landfills for years, increasing the likelihood of contamination. In the Virgin Islands, treated and construction-grade wood is widely used, further raising the risk that debris piles are no longer clean or uncontaminated. In addition, elevated moisture content in stockpiled material can increase smoke and emissions during combustion. Remember, EPA regulations for ACIs assume that only clean, uncontaminated plant and wood debris are burned.

A more sustainable and holistic approach to fire prevention relies on continuous material movement, moisture management, and size reduction through carefully managed composting, mulching, chipping, and diversion strategies—an approach that keeps organic material in a productive, circular system.

Under the U.S. EPA's Sustainable Materials Management hierarchy, composting, chipping, and mulching are classified as recycling and organics recovery. As such, they are prioritized over energy recovery through combustion as more environmentally preferable practices. Consistent with this framework, air curtain incinerators are treated under EPA policy as a limited, situational tool, used to replace open burning or addressing temporary emergency conditions, rather than as a long-term vegetation management strategy.

Composting diverts organic material from landfills, reduces methane generation, and supports long-term soil and climate resilience. Methane gas generated by decomposing organic material in landfills is highly flammable, and its accumulation and migration are well-recognized contributors to landfill fires and explosion hazards.

Chipping and mulching provide multiple beneficial uses, including erosion control, slope stabilization, landscaping, soil conditioning, land reclamation, and other on-island applications that keep materials in productive use.

This bill proposes to authorize air curtain incineration without first requiring the development and implementation of composting and other beneficial-use pathways for vegetative debris. If this bill passes, it will eliminate the feedstock needed for composting, chipping, and mulching

and remove incentives to invest in higher-order waste management practices. In doing so, the bill would reverse EPA's own hierarchy and foreclose more sustainable, lower-impact alternatives. We risk institutionalizing burning, depriving ourselves of the economic opportunities and environmental benefits that organic material can provide, and at the same time placing the health of Virgin Islanders at risk.

ACIs Are Not a Sustainable Waste Management Strategy

The following testimony is provided in collaboration with Sommer Sibilly, Executive Director of Virgin Islands Good Food along with a quote from Nate Olive, President of Virgin Islands Farmers Alliance with 92 members across the Territory.

Composting is a foundational element of sustainable waste management, along with beneficial use, chipping, and mulching. From the perspective of farmers in the Virgin Islands, organic material is not waste—it is one of the most critical inputs for building soil and sustaining production.

"Green waste" in food, scraps and other carbon based outputs of society are actually valuable resources. Carbon is the basis for organic chemistry, and therefore the basis of all organic farming and food production. Carbon based materials are not waste. They are the evidence of life used to see if other planets in our universe have life. They are only waste if they are wasted. If they are incinerated, they are wasted. If they are composted, they are turned into a valuable resource that multiple municipalities across the country have proven can be profitable instead of a continual financial drain on the society."

Farmers and gardeners across the Territory work with shallow, fragile soils and face high costs for imported amendments while producing food in a system that relies heavily on imports. Access to locally produced compost improves yields, reduces costs, increases water retention, and strengthens long-term farm and gardening viability.

The question before us is not whether there is demand for these materials, but whether we have built the systems needed to ensure they reach the people and places that need them most. Farmers are already demonstrating demand through on-farm composting and reuse of organic materials. What is missing is a coordinated, Territory-wide system that processes, distributes, and integrates organic material into agriculture, landscaping, and land restoration in a consistent and accessible way.

The Virgin Islands have already identified this pathway. Following the 2017 hurricanes, the USVI Safe, Efficient, and Effective Vegetative Debris Management Plan recognized composting, mulching, and decentralized processing as the most effective long-term strategy.[iii] The opportunity before us is not to redefine the solution, but to fully implement what has already been identified.

When organic material is returned to the soil, it strengthens agriculture and local economies. When it is removed from that cycle, the Territory remains dependent on imported inputs and loses an opportunity to invest in its own land and producers.

Conclusion and Legislative Recommendations

In 2024, several local environmental organizations, led by Island Green Living Association and the Virgin Islands Environmental Association, competed for and won a $20 million grant to implement comprehensive recycling and territory-wide composting. The composting component was budgeted at approximately $5 million over three years and would have diverted vegetative and food waste from the landfills for productive use. The GVI assisted with identifying land on both St. Thomas and St. Croix. Unfortunately, all awards nationwide were terminated by President Trump's administration. We are currently working with national partners and legal advocates to seek reinstatement.

I mention this not for self-promotion, but to demonstrate that there are organizations that consistently partner with WMA and are contributors to advancing comprehensive waste management strategies in the Virgin Islands.

Finally, even assuming the use of a high-quality air curtain incinerator manufactured by a reputable company, the fundamental characteristics of the technology remain unchanged. Air curtain incinerators operate as open combustion systems without add-on pollution controls and therefore continue to emit particulate matter and combustion byproducts. Improved design may reduce emissions compared to uncontrolled burning, but it does not eliminate incomplete combustion, the release of fine particles, or contributions to cumulative air pollution. Our position is ultimately about the health of our people and protection of this beautiful environment we call home.

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[i] Hoppins, ScD; May Concerns about potential hazards from using Air Curtain Incinerators to burn vegetative debris at the Bovoni and Anguilla Landfills, March 19, 2026.

[ii] Hoppins, ScD; May Concerns about potential hazards from using Air Curtain Incinerators to burn vegetative debris at the Bovoni and Anguilla Landfills, March 19, 2026.

[iii] USVI Safe, Efficient, and Effective Vegetative Debris Management Plan, Mulching and Composting: A Commitment to Sustainability and Resiliency, November 7, 2017