Good evening. My name is Karl Aspelund, of 110 Lincoln Street in North Kingstown.

Thank you for this opportunity to speak. I have also submitted written testimony.

I am here to highlight a colossal failure of care, where a regulatory and oversight process that should have been looking out for the citizens of Rhode Island, has opened the door for a worrying volume of toxic emissions to be released into our air, soil, waters, and community.

I. The Regulatory Loophole

The approval process here relied on nimble regulatory sidestepping. As pyrolysis bakes waste to char rather than burning it to ash, this facility utilized a classification that excludes "flameless" processes. And so the developer was exempted from investigations into impact on soil, water, and public health.Furthermore, by labeling this plant a "minor source," the review was expedited.[1] Corporate narratives crafted by paid consultants moved through the Department of Environmental Management unchallenged. The course and logic of this process demands investigation.

II. The Reality of Toxic Emissions

The results of this unchecked process are disturbing. The DEM has now approved the annual release of 83.43 pounds of mercury and 10.42 pounds of lead into the air. The permit lists 23 other toxic hazards (see “Table 2”, attached).[2] Of the 16 metallic elements listed, **seven** are known or possible human carcinogens. **At least six** are documented neurotoxins, and **ten** are known to cause severe damage to the kidneys and liver.

VI. Persistence and Plea

When mercury gets into aquatic environments , it is transformed into methylmercury, a permanent toxin that concentrates in the food chain, contaminating seafood.[3] Lead is similarly permanent and non-degradable. It disrupts vital physiologic processes, with no safe level of exposure for fetuses and children. Chronic exposure to lead is linked to increased infant mortality and to cognitive deficits that can permanently alter a child’s life trajectory.[4]

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[1] The application and approval documents may be found at: https://dem.ri.gov/qss-biosolids-north-kingstown (Accessed 5/5/2026)
[2] See “Table 2” in: State of Rhode Island Department of Environmental Management *QSS Biosolids, LLC, North Kingstown.* 2026-01-16 Approval Nos. 2652-2662. Found at https://dem.ri.gov/qss-biosolids-north-kingstown (Accessed 5/5/2026)
[3] See: Ray, Suryapratap, and Rahul Vashishth. "From Water to Plate: Reviewing the Bioaccumulation of Heavy Metals in Fish and Unraveling Human Health Risks in the Food Chain." *Emerging Contaminants* 10, no. 4 (2024): 100358. https://doi.org/10.1016/j.emcon.2024.100358.
[4] See: The Hidden Toll of Airborne Lead: Infant Mortality Impacts of Industrial Lead Pollution
Author(s): Karen Clay, Edson Severnini and Xiao Wang. IZA - Institute of Labor Economics (2025)
Stable URL: https://www.jstor.org/stable/resrep72085 (Accessed: 02-05-2026)

III. The Synergy of Effects

But, it is even further misleading to evaluate these toxins in isolation. Toxicology considers the synergy of effects; chemicals can be far more damaging combined than alone. The combined neurological impact, for example, of lead and mercury is far more hazardous than the sum of its parts, particularly for the developing brains and nervous systems of children.

IV. The Fallacy of "Property Line" Safety

Then, there is a point of absolute absurdity in the claim that the air levels are safe. This metric only considers inhalation at one moment at the property line. It conveniently ignores how mercury and lead actually harm us: by settling into soil and accumulating in the food chain. Atmospheric modeling shows that heavy metals in a smokestack plume largely "touch down" 0.8 to 1.8 miles away.[5] Because of the high chlorine content in sewage sludge, up to 90% of the mercury is emitted in a form that drops within that radius. And within that zone in North Kingstown there are ten schools.[6]

V. The "Cost-Effectiveness" Barrier

The astonishing absence of care is then further confirmed in the Technical Review.[7] There, we see that the developer's consultants and the regulators evaluated mercury scrubbers and deemed them effective, but then eliminated them because the cost—$20 million over 24 years—was not "economically feasible."[8] The State of Rhode Island, via the Department of Environmental Management (managing who knows what at this point), in other words, agreed that protecting our community from a steady drip of neurotoxins was not worth the investment. I would suggest the investigative committee ask who decided we were not worth that price?

VI. Support Senate Bills S 3224 and S 3225. Remove the "sunset clause" in 3224 (e)

I urge support for Senate Bills S 3224 and S 3225 but I ask that you please remove the "sunset" clause in section (e) of 3224. A temporary prohibition that expires in early 2027 is a half-measure against a toxic legacy that will last for lifetimes.

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[5] See: Sullivan, T. M., et al. "Local Impacts of Mercury Emissions from Coal Fired Power Plants." U.S. Department of Energy, 2005. https://doi.org/10.2172/877288.
[6] See the attached maps here that show the expected distribution patterns.
[7] See: State of Rhode Island Department of Environmental Management *QSS Biosolids, LLC, North Kingstown. 2026-01-16 Approval Nos. 2652-2662 – Technical Review.* Found at https://dem.ri.gov/qss-biosolids-north-kingstown (Accessed 5/5/2026)
[8] See the "Technical Review" p. 24.Found at https://dem.ri.gov/qss-biosolids-north-kingstown (Accessed 5/5/2026)

TABLE 1 – ODOR CONTROL PLANT			
Pollutant	Allowable Emissions		
	lbs/hour	lbs/day	lbs/year
Ammonia (NH_3)	2.83	67.94	24,799
Hydrogen sulfide (H_2S)	6.04E-03	0.145	52.92

TABLE 2 – EMISSIONS CONTROL PLANT			
Pollutant	Allowable Emissions		
	lbs/hour	lbs/day	lbs/year
Acetaldehyde	—	—	126.86
Acetamide	—	—	2019.90
Ammonia (NH_3)	0.593	14.24	5195.95
Aniline	—	0.630	230.04
Antimony & compounds, including antimony trioxide	—	0.030	—
Arsenic & compounds (inorganic)	1.18E-04	—	1.04
Benzene	0.022	0.534	194.87
Boron & borates	4.85E-04	—	—
Cadmium & compounds	—	3.90E-03	1.43
Cobalt & compounds	—	—	0.429
Copper & compounds, except copper cyanide	6.48E-03	—	56.78
Fluorides & compounds, including Hydrogen Fluoride	0.274	6.57	—
Formaldehyde	5.68E-03	0.136	49.76
Hydrochloric acid (hydrogen chloride) (HCl)	0.196	—	1,717.14
Hydrogen cyanide (HN)	0.229	—	2005.58
Hydrogen sulfide (H_2S)	5.09E-03	0.122	44.63
Lead & compounds (inorganic)	—	—	10.42
Manganese & compounds	—	0.151	55.20
Mercury & compounds (elemental & inorganic)	9.52E-03	0.229	83.43
Naphthalene	—	0.453	165.19
Nickel & compounds, except nickel subsulfide	8.09E-04	0.019	7.09
PCDDs, PCDFs, PCBs*	—	—	3.80E-06
Phenol	0.026	—	225.30
Quinoline	—	—	20.38
Vanadium & compounds	3.00E-04	—	—

Notes:
* Polychlorinated dibenzo dioxins (PCDDs), polychlorinated dibenzo furans (PCDFs), and dioxin- like polychlorinated biphenyls (PCBs). In terms of 2,3,7,8-tetrachlorobenzodioxin equivalents.

— No Acceptable Ambient Air Level has been established for that time period.

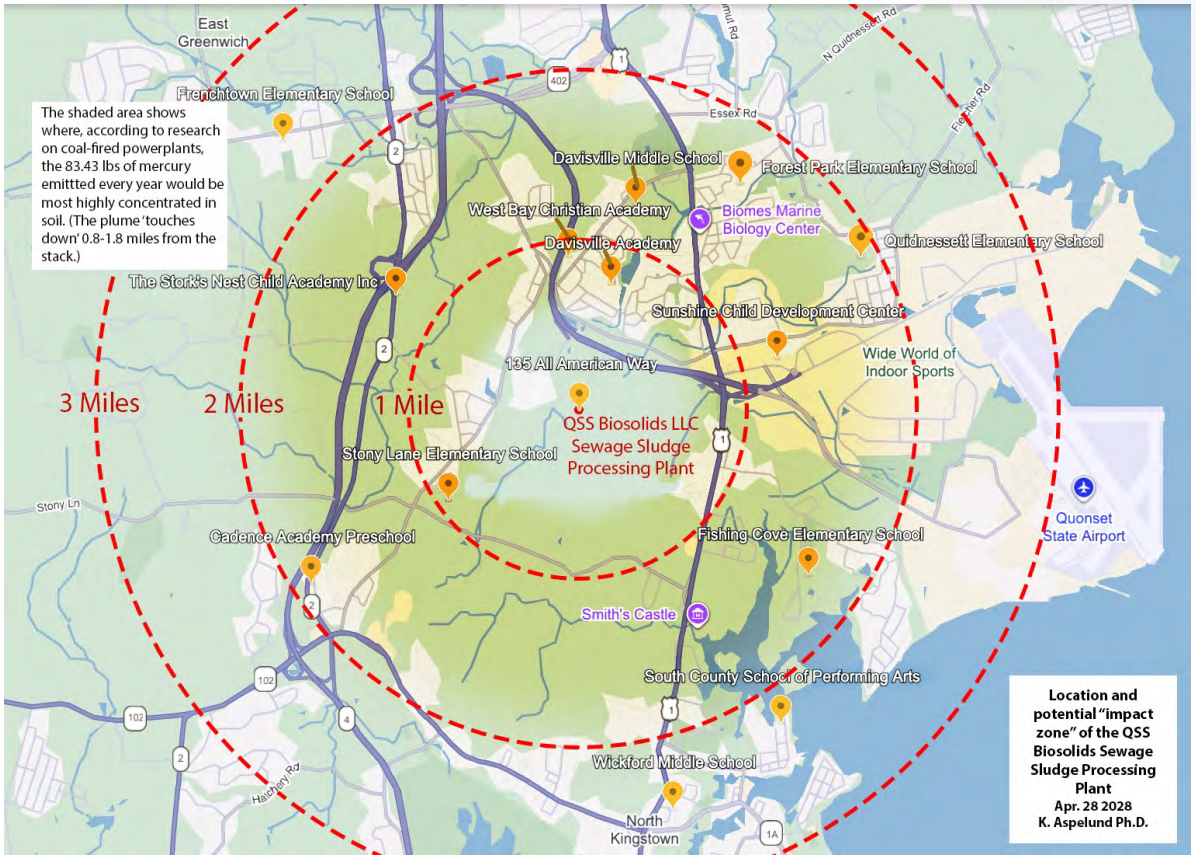
"Table 2" in: State of Rhode Island Department of Environmental Management *QSS Biosolids, LLC, North Kingstown.* 2026-01-16 Approval Nos. 2652-2662. Found at https://dem.ri.gov/qss-biosolids-north-kingstown (Accessed 5/5/2026)

Fallacy of "Property Line" Safety

Safety metrics only consider inhalation **at the property line**. They ignore where the chemicals actually land and accumulate.

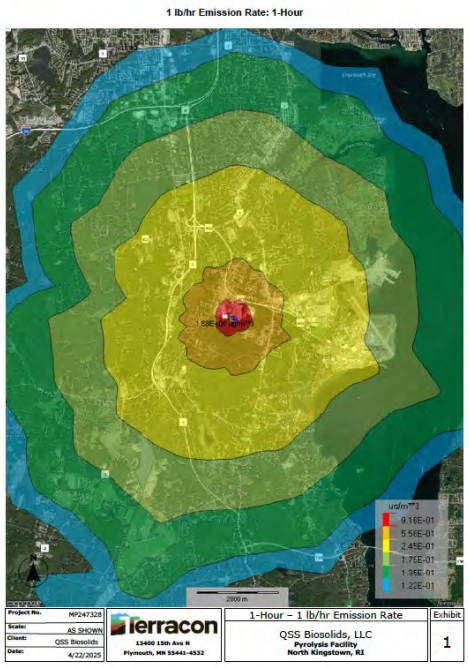
Atmospheric modeling shows that heavy metals "touch down" **0.8 to 1.8 miles** away from the stack.

Impact Zone: 10 local schools are directly within this toxic touchdown radius.

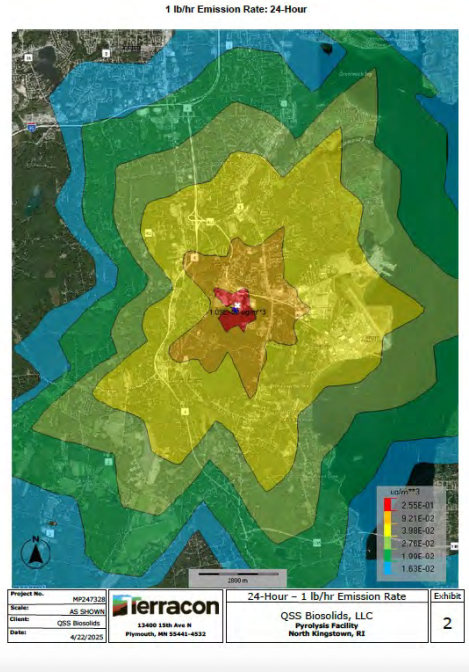


DISTRIBUTION MODELS: The toxins fall toward and into the Bay over time

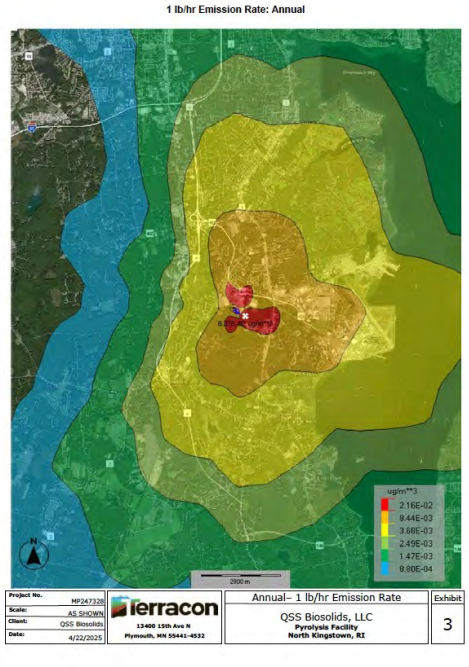
1-Hour @ 1lb/hour emission rate



24-Hour @ 1lb/hour emission rate



Annual @ 1lb/hour emission rate



From:
Sage Environmental, Inc. *Minor Source Permit Application: QSS Biosolids, LLC - Pyrolysis Facility, 135 All American Way, North Kingstown, Rhode Island*. *Appendix B.* Prepared for the Rhode Island Department of Environmental Management, Office of Air Resources. Providence, RI: Sage Environmental, Inc., April 2025. SAGE Project #L5247042.

These are the results of simulations thatmodel the dispersion of particles over time: 1 hour, 24 hours and one year. This does NOT show projected amounts of pollution, just ratios of dispersal. The scale could, however, be used to esitmate amounts based on given emission numbers