April 1, 2024

Joe Lyng
General Manager
Emerald EFW
7656 Bramalea Rd.
Brampton, ON L6T 5M5

Via email: eascreening@emeraldefw.com

Dear Mr. Lyng:

Re: Comments on Environmental Screening Report for Emerald EFW proposal for incinerator redevelopment and expansion in Brampton

The undersigned organizations are pleased to provide the following **comments and recommendations** on Emerald EFW's proposal to redevelop and expand the Brampton, Ontario, waste incineration facility from its current capacity of 182,000 tonnes per year to 900,000 tonnes per year, or the equivalent of one-third of Ontario's municipal waste. We respectfully make this submission following a review of Emerald's Environmental Screening Report (ESR) and your March 15 responses to questions posed by Environmental Defence and Toronto Environmental Alliance.

Our concerns fall into four main areas:

- Increased waste burning will add significant air pollution and increase cancer risk in a growing community that is already burdened with industrial and transportation-related pollution.
- The people most likely to be affected by this increased pollution load – residents and workers in Bramalea, northeast Mississauga and northwest Toronto – are more likely to be racialized and have lower household incomes than the GTA and the province as a whole. Environmental racism

and injustice are characterized by the over-burdening of communities like these with polluting facilities.

- Burning waste damages the environment, threatens the health of people, animals and ecosystems, and destroys materials that should instead be retained for new purposes. It is not an environmentally-sound source of energy, and should not be granted any special consideration on that basis.
- To plan for a significant expansion of mass burn waste incineration in the GTA undercuts existing policy and efforts to reduce and eliminate residual waste that is currently treated in landfills and incinerators. Waste reduction strategies are safer, fairer, more affordable and better for the environment than waste burning.

Our main recommendation to the Province of Ontario is to deny the redevelopment and expansion of the Emerald EFW facility in Brampton at this time and pursue ambitious waste reduction strategies aligned with existing provincial policy for both the residential and business sectors. Any expansion must be based on an individual environmental assessment that takes into account cumulative impacts on community and environmental health.

Emerald EFW and pollution

Air pollution

The air monitoring results provided in the Environmental Screening Report show that the area around the incinerator is already burdened with significant air pollution, the impacts of which will grow with climate change.[1] Each phase of the proposed redevelopment will make air pollution worse.

Background levels of hydrochloric acid and benzo (a) pyrene – or B(a)P – *already* exceed the province's air quality criteria.[2] B(a)P is a probable human carcinogen.

The modelled concentrations for nitrogen dioxides, which are harmful to respiratory health, and highly toxic dioxins and furans, would also exceed air quality criteria when phase 2 and 3 of the expansion are complete.[3] See more about dioxins and furans below.

There are no known safe levels of mercury exposure in humans.[4] The concentration levels for the neighbourhoods studied in the human health risk assessment indicate that **the incinerator is the main source of mercury air pollution, with an increase of more than ten-fold estimated for the first phase of the expansion compared to the background concentration, and 47 times the background concentration after Phase 3.**

[1] See https://www.epa.gov/climateimpacts/climate-change-impacts-air-quality
[2] HCL already exceeds provincial air quality criteria by 376%, B(a)P by 125%
[3] NO2 emissions would exceed federal guidelines by 128%, though Ontario's criteria limits are significantly weaker. DF would exceed by 107%
[4] UNEP, "World unites against mercury pollution," 2017. https://www.unep.org/news-and-stories/press-release/world-unites-against-mercury-pollution

The incinerator redevelopment and expansion would also increase levels of dangerous air contaminants: particulate matter (PM 2.5), which can cause adverse effects at any exposure level and includes ultrafine particulates that "may represent a previously unrecognized risk factor for incident brain tumors in adults,"[5] as well as sulphur dioxide.

Dioxins and furans

Dioxins and furans are highly toxic pollutants that cause cancer, reproductive and developmental problems, immune system damage, and disrupt hormone interactions. These adverse effects can occur at extremely low levels of exposure.[6,7] Municipal waste incinerators are well known sources of dioxins/furans, which are unintentionally produced in the process**.**

Results from an ambient air monitoring plan done by Emerald in 2023 used in the ESR show the **background concentration for dioxins and furans is already 83.57 per cent of the Ontario Ambient Air Quality Criteria (AAQC)[8]**, meaning this is the level that is already present in the ambient air near the incinerator. **The area background concentration of dioxins/furans identified by Emerald is extremely and unusually high and should rule out the proposed expansion.** By comparison, the ambient air dioxin/furan background concentration reported in the Environmental Assessment (EA) for the Durham/York incinerator was 23.7 per cent of the AAQC.[9]

As noted above, the ESR modelling reveals that Phase 3 of the proposed Emerald facility expansion would lead to an exceedance of the AAQC for these dangerous pollutants. These figures are alarming, and we are very concerned the **actual emissions could be worse than identified for the current facility** because Emerald does not test for dioxins/furans during other-than-normal operating conditions, when non-steady state and/or upset conditions can lead to increased formation and release of dioxins and furans. **Furthermore**, **the ESR did not assess the impact of process upset conditions** for the new facility and excluded start-up, shutdown, and upset conditions from the worst-case scenario[10] During start-up, and other unstable combustion periods**,** even "state-of-the-art" incinerators emit dioxins/furans with stack concentrations up to 1000 times higher than normal operation.[11] In contrast, the Durham/York EA

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[5] See https://journals.lww.com/epidem/fulltext/2020/03000/Within_city_Spatial_Variations_in_Ambient.4.aspx?utm_source=yxnews&utm_medium=desktop&utm_referrer=https%3A%2F%2Fyandex.com%2Fnews

[6] U.S. Environmental Protection Agency (EPA), *Fact Sheet: Learn About Dioxins*, December 2023 https://www.epa.gov/dioxin/learn-about-dioxin;

[7] *Interview about Dioxin with Dr. Linda Birnbaum*, *former Director of the U.S. Environmental Protection Agency's (EPA) Environmental Toxicology Division and Director of National Institute of Environmental Health Sciences (NIEHS)*, April 2004; levels for adverse effects discussed at approx. 10 minute mark https://www.youtube.com/watch?v=n3gjUPdfmHQ

[8] GHD, Emerald Energy From Waste Screening Report (ESR), Appendix B, Table D.1, page 240/759

[9] Jacques Whitford, *Air Quality Technical Study Report (AQATSR) for Durham/York EA*,December 4, 2009, Table 3-10, page 38 https://www.durhamyorkwaste.ca/en/resources/Archived%20Documents/Environmental%20Assessment%20Appendix%20C1%20Air%20Quality%20Assessment%20Technical%20Study%20Report.pdf

[10] Emerald ESR, Section 6.5.4, page 98

[11] Weber, Roland et al. "Reviewing the relevance of dioxin and PCB sources for food from animal origin and the need for their inventory, control and management." *Environmental Sciences Europe* vol. 30(1):42, November 2018, page 17 of 42

assessed health risks for both normal operation *and* process upset scenarios for tonnages much lower than those proposed in Emerald's Phase 2 and 3.[12] Furthermore, the Region of Peel had requested Emerald to ensure that all air quality assessments are completed at "a) maximum capacity, b) **start-ups after maintenance shutdowns** and c) regular operations". In a March 15th response letter addressing some of our questions, Emerald stated "*While the facility is in continuous operation, we typically have 13 unit shutdowns per year*". Clearly emissions under upset conditions should have been assessed.

No Multi-Pathway Health Assessment Of Emerald Mega Proposal

Emerald is proposing a supersized incinerator that will continuously emit and deposit pollutants for the next twenty-five plus (25+) years. Some pollutants emitted - including mercury, dioxins/furans, cadmium and lead - deposit on land and waters, do not break down. These toxic substances bioaccumulate and biomagnify in food webs and in our bodies. For instance, for dioxins/furans, over 90 ninety per cent of people's overall exposure is estimated to be *through ingestion of foods.*[13]

The Emerald ESR, however, did not assess the potential risks of this environmental loading to people and other living things through these multiple pathways; Emerald only considered the inhalation pathway. It has no assessment of dioxin and furan, mercury or other heavy metals loading in food webs or flora in the area, including fish or eggs harvested in the vicinity of the facility.

While the ESR acknowledges agricultural lands around the facility, for agricultural impacts, it only makes the anecdotal comment that it has operated since 1992 and no impacts to agricultural activities or lands have been reported.[14] While the ESR advises there was some sort of evaluation of "potential" deposition and accumulation of pollutants in soils that had modelling results which showed negligible contribution of the facility, it does not name the evaluation/study nor does it provide a reference to where it can be found in the ESR.[15] This very short section of the ESR then concludes, still without naming or providing a reference, that: "*As a result, there is no consideration for multi-pathway exposures due to the lack of an exposure footprint beyond inhalation*".[16] This unsupported assumption has led to an unacceptable deficiency in the ESR. Given the size of the facility, its significant emissions, elevated ambient air background for some persistent pollutants (including dioxins), and the decades of deposition that will occur, there should have been a multi-pathway assessment. Durham did conduct a multi-pathway assessment for its EA, identifying potential risk for dioxins/furans for breast-feeding infants for the 400,000 tonnes per annum scenario when upset conditions were taken into account.[17] We must note here that this risk was identified even with Durham's much lower background concentration of dioxins and furans.

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https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6224007/pdf/12302_2018_Article_166.pdf
[12] AQATSR *for Durham/York EA*, Section 4.2.2, pages 56, 57 (p.88,89/329), link provided above
[13] U.S. EPA, *Factsheet: Learn About Dioxins*, December 2023
[14] Emerald ESR, Section 6.10.1.5, page 125
[15] Ibid., page 126
[16] Ibid.
[17] Stantec, *Durham/York Human Health and Ecological Risk Assessment*, December 2009, page 559
https://www.durhamyorkwaste.ca/en/resources/Archived%20Documents/Environmental%20Assessment%20Appendix%20C12%20HHERA%20Technical%20Study%20Report.pdf

Furthermore, we have no information about storage, transportation and treatment of fly ash from the existing or new facility. Note that fly ash contains the dangerous pollutants captured by the pollution control technology.

Monitoring Limitations

Only a handful of combustion gases are monitored continuously at the stack at Emerald. Most measured pollutants, including those of highest concern (such as heavy metals, chlorinated dioxins/furans, PM2.5) are monitored at the stack only through an annual stack test which is pre-announced, conducted under ideal steady state conditions, and is of a very short duration (less than 0.5% of operational time). Stack concentrations of these pollutants for the remaining 99.5+% of the time are unknown. Furthermore, many pollutants of well known health risk, including brominated and fluorinated dioxins/furans , PFAs, and ultrafine particulates are not monitored at all. A discussion acknowledging these monitoring limitations and the risks due to monitoring gaps is absent from the ESR.

Accurately estimating and modelling emissions is also difficult when dealing with variable and uncharacterized waste. In a letter dated March 15, 2024, the company acknowledges that it does not record the composition of the waste it receives – a practice that it appears to propose to continue for the proposed facility.Noting that the waste it receives from municipalities (46.3 per cent for 2023) and businesses (53.7 per cent for 2023) is heterogeneous, the company writes that the "commercial/industrial loads are quite variable. These loads can range from being virtually all plastic to having no plastic." It estimates that municipal loads, by weight, tend to be 45 per cent organics, 20 per cent mixed debris including composite material, soil and ash, 15 per cent paper, 15 per cent plastics and 5 per cent other.

Unpredictable loads make it difficult to maintain the temperature required to achieve full combustion and avoid the creation of new pollutants. Loads with lower caloric value (typically those with more organics and inert materials) will either burn too cool or require an outside source of energy to increase the temperature in the unit. Because Emerald does not know the composition of the loads, the temperature fluctuates, which can lead to increased emissions of dangerous pollutants, including dioxins and furans.

Further, the company is unable to estimate the portion of polyvinyl chloride (PVC) in the plastic that the facility processes. Mixed waste, and PVC in particular, is known to generate dioxins and furans when burned. The variability of loads treated at the Emerald facility suggest that continuous long-term sampling of dioxin and furan emissions is necessary to get a better understanding of dioxin and furan emissions.

Recommendations to the Province of Ontario on air emissions measures if the redevelopment is approved:

- **Limit approval in Phase 1 to the current approved capacity for Emerald EFW** (182,000 tonnes p.a.).
- **Require continuous emissions monitoring for hydrochloric acid, carbon monoxide, organic matter, criteria air contaminants (notably Particulate Matter, PM 2.5 and NOx, as recommended by the *Human Health Risk Assessment report (HHRA)*, as well as SO2 and hydrogen fluoride), and mercury. As recommended in the HHRA report, require that monitoring data be made publicly available. Data must be made available to the public as quickly as possible and, at minimum, weekly.**

- **Require continuous long-term sampling of dioxin and furan stack emissions with a minimum monthly sampling frequency using the most robust and reliable technology available (AMESA or better). Data must be made available to the public within two months of sample collection.**
- **Require continued ambient air monitoring near the facility for pollutants with a high background concentration, including dioxins and furans, B(a)P, and HCl, as well as mercury.**
- **Require Emerald EFW to conduct, with a qualified third party, baseline testing for dioxins and furans in eggs locally harvested from backyard or free-range chickens, wild caught fish and local flora, including mosses, prior to the beginning of the first phase of the redevelopment. Require that the testing results be made public as soon as possible.**
- **Require follow-up testing every two years after the startup of any redeveloped facility, with the results to be made publicly available within one month of completion of the testing.**
- **Require the best available air pollution control equipment and operational practices to minimize the release of contaminants, including dioxins and furans and mercury.**

The Emerald EFW facility is located in a densely-populated and growing community, which deserves the highest possible protection from pollutants related to waste incineration. The US Environmental Protection Agency is proposing new air quality standards for new facilities[18] that are lower than existing limits and to require the inclusion of start-up, warmup and shutdown periods in averaging calculations. The much lower-capacity Durham York Energy Centre was the subject of an Environmental Assessment that examined multiple pathway receptors for pollutants.

Recommendations to the Province of Ontario on emissions limits if the redevelopment is approved:

- **Limit emissions from the redeveloped facility according to the limits in the proposed new rule of the US EPA and require the inclusion of startup, warmup and shutdown periods in the averaging of the data reporting.**
- **Expansion beyond 182,000 tonnes per annum should be denied at this time. Any future expansion should be subject to the requirements of a full Environmental Assessment that examines two years of continuous and long-term emissions monitoring that demonstrate that emissions remain below the new emissions limits as well as multiple pathways and receptors, including breastfeeding infants and toddlers.**

<u>Other pollution</u>

The ESR confirms that the proposed redevelopment will impact a tributary of the Etobicoke Creek, affecting fish habitat.

Recommendation for the provincial government and TRCA:

- **Any permit must not allow for further disturbance of the tributary of the Etobicoke Creek.**

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18 https://www.federalregister.gov/documents/2024/01/23/2024-00747/standards-of-performance-for-new-stationary-sources-and-emission-guidelines-for-existing-sources

Fly ash contains the dangerous pollutants that have been captured by pollution control equipment and is generally considered a hazardous waste. It is important for the company to clarify how it handles, treats and disposes of fly ash generated at the facility.

The ESR does not mention monitoring or estimates for per- and polyfluoroalkyl substances (PFAS), toxic forever chemicals which are known to be present in many products and likely emitted from waste incinerators. Emerald EFW should be monitoring for releases of PFAS from its operations – in air and ash at the very least – and take steps to stop these emissions.

Recommendation for the provincial government:

- **Require Emerald EFW to monitor monthly for PFAS in air and ash emissions and make monitoring data available to the public within a month.**
- **Require air pollution control equipment to reduce releases of PFAS.**
- **Require fly ash to be treated as hazardous waste.**

Emerald EFW runs counter to waste reduction policies

Ontario has a *Strategy for a Waste Free Ontario* that aims to divert 80 per cent of Ontario's waste from final disposal by 2050, from a current level of approximately 25 per cent.[19] Achieving this important strategy provides enormous benefits for the environment and health of Ontarians as well as economic opportunities in a cleaner, safer circular economy. However, the amount of waste diverted from landfills and incinerators in Ontario has stagnated since the policy was introduced in 2017 and there is growing concern about the disappearance of landfill capacity in the next decade.[20]

The answer to these complementary problems is not disposal via increased waste incineration, which is expensive, polluting and wasteful. The real answer, as suggested in the Waste Free Ontario strategy, is to prevent things from becoming waste in the first place. That means following the "zero waste hierarchy,"[21] which places incineration and "waste to energy" at the bottom of the priority list.

The description of the waste loads received by Emerald in 2023, as detailed in the letter dated March 15, 2024, suggest that the vast majority of the waste currently burned at the facility should be managed in other existing systems higher up the hierarchy. **The company estimates that a full three-quarters (75 per cent) of the household waste they burn is organics, paper and plastics.** In some cases, 100 percent of commercial/industrial loads are plastic. None of this belongs in a waste incinerator.

Organics can be processed through composting or anaerobic digestion into soil amendment. Paper can be recycled or composted, depending on its condition. These should not be in the garbage as residual waste.

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[19] https://www.federalregister.gov/documents/2024/01/23/2024-00747/standards-of-performance-for-new-stationary-sources-and-emission-guidelines-for-existing-sources

[20] https://www.owma.org/articles/state-of-waste-2034-is-right-around-the-corner

[21] https://zwia.org/zwh/

Ontario's new Food and Organic Waste Framework[22] requires organics collection and diversion from all municipalities and commercial entities, which should reduce the amount of organics in the waste streams that Emerald receives.

As for plastics, the Canadian Council of Ministers for the Environment has a goal of eliminating plastic waste by 2030. This will require concerted effort to eliminate single-use plastics and ensure more durable plastics are safe and collected for repair, reuse and recycling. Moving more ambitiously on this strategy will extend the life of existing landfills, save hundreds of millions of dollars on the costs of building new expensive waste management facilities, prevent toxic pollution from incineration and landfill, and protect the environment and our health.

However, Emerald EFW accepts whatever it is sent from households and businesses with no consideration for the waste hierarchy. As per its letter of March 15, 2024, the only pre-processing the facility does is to remove "bulky" items, including mattresses. This indiscriminate disposal of materials that could be diverted and recovered for other purposes suggests that this facility undermines Ontario's Zero Waste Strategy. It provides a dirty escape valve for waste-intensive business and municipal practices.

Instead, Ontario needs to improve how households and businesses approach waste, including through Extended Producer Responsibility programs that address all sources, including business waste. We also need improvements to pre-sorting and collection of organic waste from households – including multi-residential households – and businesses and enforced requirements for waste reduction and elimination for businesses.

Emerald EFW must be required to support the Waste Free Ontario strategy by sorting loads to remove reusable, recyclable and organic materials, as well as PVC plastics and items known to be coated in PFAS such as textiles and furniture. Such an approach would reduce the need for an expanded incinerator and support the existing processing limit, even with a growing population.

It is also important to note that Emerald, in its letter of March 15, reports sending **post-incineration bottom ash to landfill that is the equivalent by weight of more than one-third of the material it receives for processing**. Incineration is not truly an alternative to landfill. What is needed instead is an alternative to waste.

Recommendation to the province of Ontario:

- **Require Emerald EFW to sort loads to remove organics, recyclable, and reusable materials as well as PVC and items likely to be coated with PFAS prior to processing the residuals in the incinerator.**
- **Require regular audits of Emerald EFW's municipal and commercial waste loads to ascertain waste composition and to ensure compliance with sorting.**

Emerald EFW and climate change

[22] See https://www.ontario.ca/page/food-and-organic-waste-framework

Emerald estimates that it would release **more than 900,000 tonnes of greenhouse gas emissions per year** after the full expansion, with about 40 per cent from biogenic sources (organics, wood and paper) and the larger proportion from plastics and other materials.

Burning plastics is effectively burning fossil fuels, since nearly all plastics are made from oil and gas. Furthermore, burning organic materials requires additional sources of energy for heat to ensure the required temperature is reached. Emerald reports that it uses fossil gas to boost the temperature and plans to continue to do so in the new facility. It is therefore not accurate to describe Emerald's waste incineration as a sustainable and clean source of energy. **Waste to energy is fossil energy.**

While the biogenic waste would generate greenhouse gases in a landfill, it would be carbon neutral if processed in a composting facility, which is where most biogenic waste belongs. New organic waste diversion requirements would cost less and reduce greenhouse gas emissions much more effectively than the incinerator.[23] **Incinerators are the most carbon-intensive option when it comes to both waste management and energy generation.**[24]

Meanwhile, sequestering non-recyclable plastics in a well-engineered landfill would prevent those materials from releasing greenhouse gases and other toxic pollutants into the atmosphere.

The full greenhouse gas emissions estimated for the facility at final proposed capacity, 905,000 tonnes per year, is the equivalent of nearly 9 percent of existing GHG emissions for the entire Peel Region, including the airport.[25] At full proposed capacity, this facility would undermine the Region's plan to reduce emissions.

What's more, natural gas with waste – including plastics – is significantly dirtier and more carbon-intensive than the sources of energy for the Ontario grid as a whole. Waste to energy and waste to hydrogen are not clean sources of energy.

Recommendations for the province to reduce greenhouse gas emissions from Emerald EFW:

- **Stop providing incentives, including grants and subsidies, to Emerald for energy generation.**
- **Prohibit the inclusion of organic waste and plastics for incineration in any permit granted to Emerald EFW.**
- **Require publicly-accessible annual reporting of greenhouse gas emissions that include both biogenic and non-biogenic sources.**
- **Limit the sources of waste to a 150 km distance from the facility and require delivery of material to the facility to be made in electric vehicles.**

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[23] See the recent report by Zero Waste BC for an analysis of false claims by incineration proponents about greenhouse gas emissions and a comparison to landfill and zero waste scenarios - www.no-burn.org/stopping-waste-to-energy-in-canada/

[24] Zero Waste BC and GAIA, "The Whole Picture: climate impacts from waste to energy," 2023. https://drive.google.com/file/d/1V5uhUcEnmnow0rKQgXDbhpwBmHLFTRNZ/view

[25] The Atmospheric Fund estimated 11.3 MtCO2eq of GHGs were emitted in 2022 from all sources in Peel Region in 2022. https://carbon.taf.ca/regions/peel

Emerald EFW and environmental injustice

We have heard from long-time residents whose first language is English, who live near the facilitator and are aware of its presence, but had no knowledge of the proposed redevelopment until we circulated a draft of this letter. While Emerald may have respected the letter of the law when it comes to public notices, these are clearly not enough to inform even those likely looking for information about this facility.

But the approach to communication with the community is entirely inappropriate when considering that nearly three-quarters of Peel residents are people of colour and more than half were born outside of Canada.[26] The Region,[27] and particularly the City of Brampton,[28] is also home to a significant proportion of factory, warehouse and logistics workers in precarious employment.[29] The south-central part of the Region has a higher proportion of low-income families than the provincial average.[30]

Emerald did not report any outreach to residents whose first language isn't English or to recent immigrants and communities of colour in the surrounding area. A full one-third of Peel residents speak a language other than English at home.[31] In the census tracts closest to the incinerator, some 10 per cent of residents do not have a knowledge of English.[32] Given the demographic characteristics of the surrounding communities, notices in English-language publications are inadequate to properly involve residents.

What's more, Peel Region is a growing community within the Greater Toronto Area. The Region is planning for an increase in 28,000 residents in neighbouring Bramalea alone by the middle of the next decade. These prospective residents are, by definition, not likely included in the current consultations about the facility and have no voice on a facility that is slated to pollute their community for the next generation.

The ESR notes that there are high background concentrations of a number of pollutants in neighbouring communities, including B(a)P and hydrochloric acid. Emerald's existing facility, a medical waste incinerator, other industrial facilities and a gas-fired power plant are all sources of dangerous air pollution that pose a risk to the health of people in the area. Residents and workers must also contend with a heavy burden of traffic-related nitrogen oxide exposures as compared to other parts of the GTA, according to research led by Environmental Defence and Public Health Ontario.[33]

The people in this community should be protected from increased polluting facilities, not subject to more and bigger polluters. Arguing that expanding the Emerald EFW facility represents a relatively small

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[26] https://www.peelregion.ca/planning-maps/CensusBulletins/2016-immigration-ethnic-diversity.pdf

[27] https://www.thestar.com/news/gta/2021/04/08/more-than-half-of-peel-workers-unable-to-work-from-home-calls-for-on-site-vaccination-new-study-shows.html?utm_source=Twitter&utm_medium=SocialMedia&utm_campaign=GTA&utm_content=peel-workers

[28] https://www.peelregion.ca/planning-maps/censusbulletins/2016-labour_education_mobility-bulletin.pdf

[29] https://www.warehouseworkers.ca/index.html#who

[30] https://www.peelregion.ca/planning-maps/wardprofiles/

[31] https://www.peelregion.ca/articles/2022/census-language-data.asp

[32] https://census-regionofpeel.hub.arcgis.com/pages/languages-2021

[33] https://clearingtheair.ca/

cumulative impact on pollution is inappropriate. In fact, people living and working in this part of Peel Region are already overburdened by pollution and measures must be taken to reduce emissions, not shrug and accept more.

Recommendations for the province

- **Prior to granting any permit to Emerald, require outreach to the local community, including in Punjabi and Urdu, and a community consultation with interpretation in those languages.**
- **Require Emerald EFW to fund community waste reduction initiatives that serve communities of colour and low-income residents in the local area (eg. Bramalea and Malton).**
- **Require Emerald to develop a pollutant Exceedance Notification Protocol to alert the neighbouring communities of pollution events that includes notifications in languages other than English.**

Conclusion

The undersigned do not believe there is a justification for approving the Emerald EFW redevelopment and expansion. Given the magnitude of the project and the pollution that it would create, we urge the provincial government to require an individual environmental assessment of the proposal.

However, if the redevelopment is approved, we recommend any permit require the following conditions:

1. **Limit approval in Phase 1 to the current approved capacity for Emerald EFW** (182,000 tonnes p.a.). **Any future expansion should be subject to the requirements of a full Environmental Assessment that examines two years of continuous and long-term emissions monitoring that demonstrate that emissions remain below the new emissions limits as well as multiple pathways and receptors, including breastfeeding infants and toddlers.**
2. **Require continuous emissions monitoring for hydrochloric acid, carbon monoxide, organic matter, criteria air contaminants (notably Particulate Matter, PM 2.5 and NOx, as recommended by the *Human Health Risk Assessment report (HHRA)*, as well as SO2 and hydrogen fluoride), and mercury. As recommended in the HHRA report, require that monitoring data be made publicly available. Data must be made available to the public as quickly as possible and, at minimum, weekly.**
3. **Require continuous long-term sampling of dioxin and furan stack emissions with a minimum monthly sampling frequency using the most robust and reliable technology available (AMESA or better). Data must be made available to the public within two months of sample collection.**
4. **Require continued ambient air monitoring near the facility for pollutants with a high background concentration, including dioxins and furans, B(a)P, and HCl, as well as mercury.**
5. **Require Emerald EFW to conduct, with a qualified third party, baseline testing for dioxins and furans in eggs locally harvested from backyard or free-range chickens, wild caught fish**

and local flora, including mosses, prior to the beginning of the first phase of the redevelopment. Require that the testing results be made public as soon as possible.

6. **Limit emissions from the redeveloped facility according to the limits in the proposed new rule of the US EPA and require the inclusion of startup, warmup and shutdown periods in the averaging of the data reporting.**
7. **Require follow-up testing every two years after the startup of any redeveloped facility, with the results to be made publicly available within one month of completion of the testing.**
8. **Require the best available air pollution control equipment and operational practices to minimize the release of contaminants, including dioxins and furans and mercury.**
9. **Require Emerald EFW to monitor monthly for PFAS in air and ash emissions and make monitoring data available to the public within a month.**
10. **Require air pollution control equipment to reduce releases of PFAS.**
11. **Require fly ash to be treated as hazardous waste.**
12. **Any permit must not allow for further disturbance of the tributary of the Etobicoke Creek.**
13. **Require Emerald EFW to sort loads to remove organics, recyclable, and reusable materials as well as PVC and items likely to be coated with PFAS prior to processing the residuals in the incinerator.**
14. **Require regular audits of Emerald EFW's municipal and commercial waste loads to ascertain waste composition and to ensure compliance with sorting.**
15. **Stop providing incentives, including grants and subsidies, to Emerald for energy generation.**
16. **Prohibit the inclusion of organic waste and plastics for incineration in any permit granted to Emerald EFW.**
17. **Require publicly-accessible annual reporting of greenhouse gas emissions that include both biogenic and non-biogenic sources.**
18. **Limit the sources of waste to a 150 km distance from the facility and require delivery of material to the facility to be made in electric vehicles.**
19. **Prior to granting any permit to Emerald, require outreach to the local community, including in Punjabi and Urdu, and a community consultation with interpretation in those languages.**
20. **Require Emerald EFW to fund community waste reduction initiatives that serve communities of colour and low-income residents in the local area (eg. Bramalea and Malton).**
21. **Require Emerald to develop a pollutant Exceedance Notification Protocol to alert the neighbouring communities of pollution events that includes notifications in languages other than English.**

Yours sincerely,

Karen Wirsig
Senior Program Manager, Plastics
Environmental Defence

Emily Alfred
Waste Campaigner
Toronto Environmental Alliance

Liz Benneian
Founder
Ontario Zero Waste Coalition

Linda Gasser
Co-founder
Zero Waste 4 Zero Burning

Rahul Mehta
Founder
Sustainable Mississauga *and* Co-founder, Stop Sprawl Peel

Dr. Ingrid Waldron,
Founder and Executive Director
The ENRICH Project *and* Co-Founder and Co-Director, the Canadian Coalition for Environmental and Climate Justice

Naolo Charles,
Founder
Black Environmental Initiative

Lucrezia Chiappetta
Co-Chair
ecoCaledon

Rav Singh
Founder and Farmer
Shade of Miti

Wendy Bracken
Director
Durham Environment Watch (DEW)

Lyba Spring and Nick De Carlo
CoChairs
Seniors For Climate Action Now! (SCAN!)

David Laing
President
Brampton Environmental Alliance

Steven Kirby
Sierra Club Peel Executive Committee

Sue Maxwell
Zero Waste BC

CC.
Andrea Khanjin, Minister, Environment, Conservation and Parks, andrea.khanjin@pc.ola.org
Tesfaye Gebrezghi, Director, Environmental Permissions, MECP, Tesfaye.Gebrezghi@ontario.ca
Mohsen Keyvani, Acting Manager, Environmental Permissions Branch, MECP, mohsen.keyvani@ontario.ca
Abby Laforme, Mississaugas of the New Credit First Nation, abby.laforme@mncfn.ca
Six Nations Land and Resources, lrcs@sixnations.ca
Haudenosaunee Development Institute, info@hdi.land
The Indigenous Network (Peel), info@theindigenousnetwork.com
Bonnie Crombie, Leader, Liberal Party of Ontario, info@bonnieforleader.ca
Sandy Shaw, NDP Environment Critic, SShaw-QP@ndp.on.ca
Patrick Brown, Mayor, City of Brampton, patrick.brown@brampton.ca

Rod Power, Councillor, City of Brampton, rod.power@brampton.ca
Carolyn Parrish, Councillor, City of Mississauga, carolyn.parrish@mississauga.ca
Nando Iannicca, Chair, Peel Region, Nando.Iannicca@peelregion.ca