Submission No 477

INQUIRY INTO PROPOSED ENERGY FROM WASTE FACILITIES

Name: Name suppressed

Date Received: 2 November 2025

The Director

Select Committee on Proposed Energy from Waste Facilities

Legislative Council, Parliament House

6 Macquarie Street, Sydney NSW 2000

I write this submission to **strongly oppose** the proposed waste-to-energy incinerators, including at Woodlawn Tarago to burn Sydney waste – if it is so safe, why isn't it being built at the source in Sydney, why is Tarago who already suffers from the impacts of landfill and the rail waste terminal less important than Sydney – the health of every person should be equally important, we should not be unfairly burdened with Sydney waste while Sydneysiders are carless with their rubbish! A better approach is to reduce the amount of waste at production and sale and educate the carless Sydney residents to ensure a true circular economy and reduce waste from coming into the system in the first place. Sydney has little care for the waste it generates as it is out-of-sight-out-of mind, but their rubbish should not be a regional community's problem at the cost of our health, agricultural livelihood and viability, water catchment quality and the health of our children. The NSW Government has deemed it to risky for the city and originally wanted it banned – now they have backfilled with disregard to the risk it poses to regional communities. The impact on water and air quality will impact agricultural and where food comes from. It is toxic incineration greenwashed as 'waste-to-energy' which other nations are turning away from, I encourage you to genuinely investigate the impact from other waste-to-energy incineration and if the proposal matches international best practice and pollution from existing global waste-to-energy incineration, particularly long-term impacts.

As a neighbouring landowner to the existing Veolia facility, we regularly must close our doors and windows and stay indoors due to the stink that comes from the facility when it rains with regular breaches to EPA blamed on weather events and breaches to licencing ignored by EPA – EPA is gutless and cannot be relied upon to protect the environment and communities from licence breaches. We have also suffered the effects of lead poisoning in our water and land from the rail corridor – don't ask us to take another hit to our agricultural viability and health of our families. Other locations throughout NSW and the ACT have banned similar proposals due to untenable health and environmental concerns, just because Tarago has a smaller population does not mean their health is any less important! Thermal treatment of waste is not a sustainable waste management plan for Australia in the 21st century, Australia can and should do better by implementing sustainable zero waste policies of reduce, recuse and recycle with better regulation and management of waste at the source.

Regardless of whether it is a state significant development, health and environment outcomes should be the number one priority, and there is no guarantee that this development is safe, with very real health, environment, and agricultural impacts that will significantly impact my family health and wellbeing, agricultural viability for food production, water quality and property value. If the thermal treatment of waste (ie burning/incineration) is not safe for Eastern Creek and ACT or the UK (which is banning and decommissioning its incinerators) - it is not safe for Tarago. Veolia has already breached existing licence conditions on numerous occasions resulting in water and air pollution and actively seeks to prevent the community from accessing information about those breaches with the EPA unable and unwilling to enforce licence conditions or revoke their licence –Veolia and the EPA

cannot be trusted to meet any expanded conditions run a thermal waste treatment facility effectively and responsibly in Tarago.[1]

The Veolia proposal

According to Veolia, it proposes to build an *Advanced Energy Recovery Centre (ARC),* a waste to energy (WTE) facility that will thermally treat up to 300,000 tonnes per year of residual waste of Sydney's waste, operating 24 hours a day, 365 days a year for a 'maximum' lifespan of 30 years. [2]

It will produce 500,000 tonnes of toxic, hazardous 'fly ash' and 3 million tonnes of contaminated 'bottom ash' (residual by-products) that will be disposed of in Tarago landfill, with the Tarago village only 6km away, it will contamination our soil and groundwater.[3]

The NSW Department of Planning state that energy from waste proposals **must** represent the most efficient use of the resources and demonstrate they are using international best practice techniques to ensure air quality and human health are protected, however waste to energy facilities are being condemned internationally and shutdown. While it is promoted as 'clean' studies show PFAS and other harmful chemicals are not fully destroyed by incineration, contaminating air, water and ash. Overseas examples are often in industrial zones, not prime agricultural production and residential land where people live or in water catchment areas like Tarago – Tarago is not an appropriate or safe area for a waste-to energy incinerator. If these were safe, why are they banned or rejected in Western Sydney but allowed in regional towns? Put it in Western Sydney or the desert where no one lives or produces food for the nation.

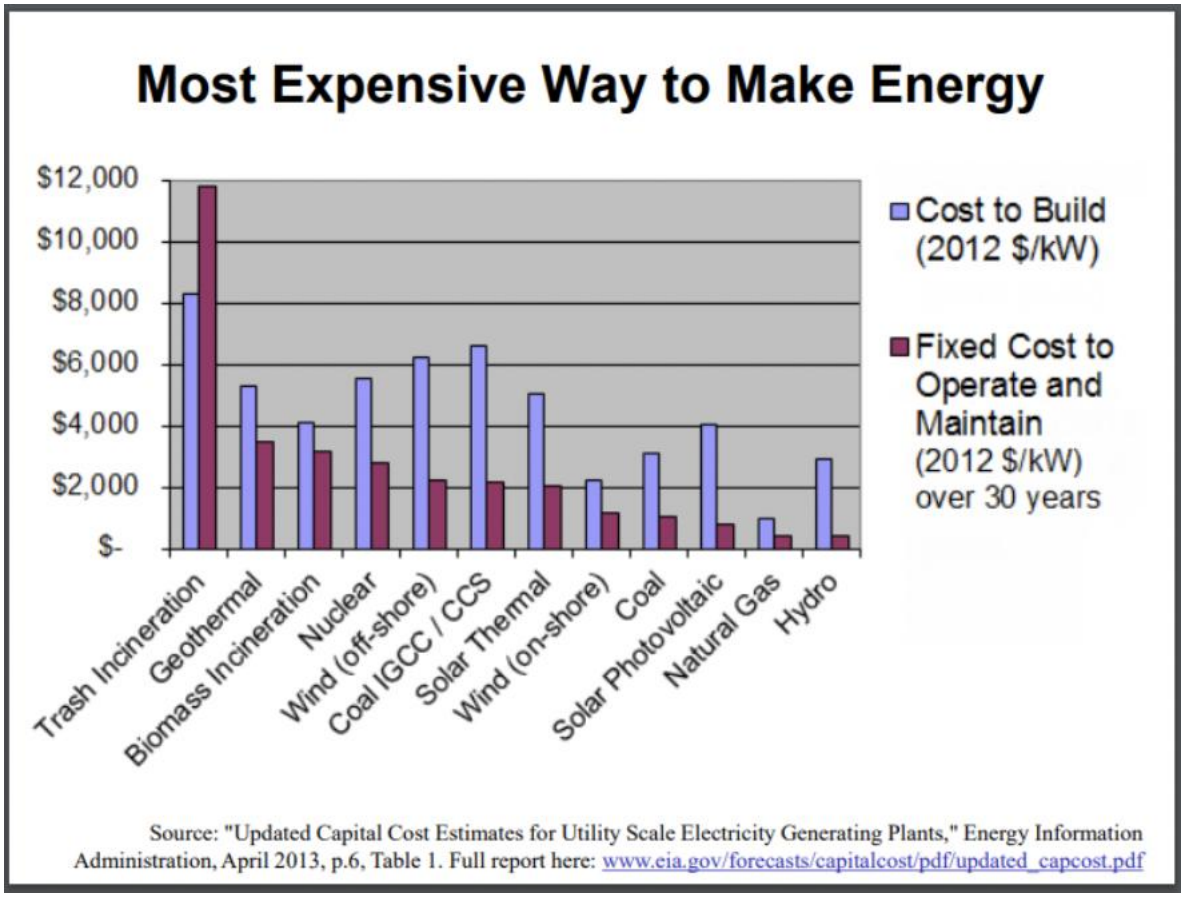
It consumes more energy than it produces

According to Veolia the proposed ARC would divert 380,000 tonnes of waste form Sydney landfill turning it into *up to* 30 megawatts (30MW) of electricity per year, only 2 percent of Australia's energy needs. This is more polluting than a coal-fired power station but produces 12 times less energy – this is simply not financially or environmentally responsible. Further to do this it proposes to use diesel fuel combustion with mobile plant and equipment and auxiliary diesel burners and generators.

By comparison, a solar farm investment would generate 12 times the electricity, similar ongoing employment and minimal contamination.[4] A solar farm produces minimal operational waste until the panels reach their end of life. One farm has 260,000 panels, even if the total operations could not recycle anything, the waste would be far less than Veolia's proposal to generate the same amount of power. Waste incineration is the most inefficient and expensive way to generate energy and manage waste. It is the most emission-intensive form of power generation, emitting 1.7 times as much greenhouse gasses per unit of electricity produced compared to coal-fired power plants. The

[1] EPA fines Veolia Environmental Services for waste offence 23 July 2021 (NSW EPA) $590,000 financial undertaking secured after asbestos find, 7 October 2022 EPA NSW; Government information Public Access request GIPA EPA 783.
[2] NSW Department of Planning (Woodlawn ARC); Veolia Woodlawn ARC website.
[3] NSW Department of Planning (Woodlawn ARC); Veolia Woodlawn ARC website; Tarago Community communications with Veolia, 2022.
[4] http://aboutregional.com.au/120-million-solar-farm-approved-near-act-border-despite-community-concerns/, 28 Feb 2021.

cost of energy generation is nearly four times higher than solar power and onshore wind energy, twice as much as natural gas and 25 percent more expensive than coal-fired power plants.[5]



Misleading terminology

Veolia claims it is 'grossly misleading and incorrect' to describe their proposed thermal treatment of waste as an 'incinerator', it is 'a highly controlled combustion process'. However, when they need legislation to justify building their ARC, it's a 'Development for the purpose of waste incineration'. When they need to describe the waste ash it produces, it is 'incineration bottom ash'. When they forget to greenwash their Australia/NZ website, its 'incinerators'. When they need to reference standards for their EIS, they use standards for 'the waste incineration industry', or links on their website to 'waste incineration'. If it thermally treats 'waste materials at high temperatures…until it is reduced to ash' (Oxford Dictionary), it is an incinerator.

What happens after 30 years?

What happens after we meet our recycle targets and there is not enough waste to keep the ARC operating at the 100% capacity needed to keep emissions low, will we import waste from other countries, will it be decommissioned despite not being financially/economically viable in the first place?

According to Veolia's EIS, a quarter (24 percent) of what is fed into the WTE incinerator becomes waste ash with 76,000 tonnes of incinerator bottom ash and 15,200 tonnes of air pollution control residues (fly ash). It is proposed this would be disposed of in landfill in Tarago in an encapsulation

[5] The High Cost of Waste Incineration, GAIA; National Toxics Network Australia and Zero Waste Australia, Goulburn Waste to Energy Incineration threat, 30 April 2022.

cell designed to provide 1.5 million cubic metres of airspace, considered sufficient to receive stabilised WTE fly ash for a project life of 25 years. The pit sealants only have a lifespan of 30 years, however the persistent organic pollution and toxins will stay in the pit for 1,000 years, leaching out of concrete into the surrounding environment, contaminating plants, crops, animals and poisoning waterways and the Sydney water catchment as well as human health. This is not acceptable to Tarago residents and should not be acceptable to Government.

Reasons for opposition

1. It is inconsistent with the EPA's Energy from Waste Policy Statement (2021) and NSW Government's Energy from Waste Infrastructure Plan (2021)

The *NSW Energy from Waste Policy Statement* (Policy) states that *"energy from waste can be a valid pathway for residual waste where:*

- *Further material recovery through reuse, reprocessing or recycling is not financially sustainable or technically achievable*
- *Community **acceptance** to operate such a process has been obtained"*

The Veolia proposal would decimate progress in more sustainable methods to resuse, reprocess or recycle due to the large quantity of waste the ARC will demand in order to operate. The Veolia proposal also does not have the social licence or confidence of the community which has not accepted Veolia's proposal to operate. Due to their inability to genuinely engage with the community or listen to concerns, the three community representatives on the Veolia Consultative Liaison Committee resigned in protest of the proposed ARC, noting they are creating an inter-generational-burden for our children and grandchildren.[6]

The Policy also states "in NSW, two key policy objectives are enshrined in the states waste legislation, Firstly, the *Protection of the Environment Operations Act 1997* (POEO Act) sets the framework to ensure that human health and the environment are protected from the inappropriate use of waste. Secondly, the *Waste Avoidance and Resource Recovery Act 2001* (WaRR Act) aims to ensure that consideration of resource management options occurs in the following order:

1. *avoidance of unnecessary resource consumption*
2. *resource recovery (including reuse, reprocessing, recycling and energy recovery)*
3. *disposal.*

The Veolia proposal does not adhere to the resource management hierarchy in that it prioritises the 'last resort'. It completely disregards and will decimate efforts towards preferred 'avoidance' through improved recycling and reduction of waste in the first place and where waste is unavoidable, ensuring resource recovery through recycling, reprocessing and reuse. The Veolia proposal does not apply the EPAs overarching principles to waste avoidance and recovery which states '*air quality and human heath are protected, mass burn disposal outcomes are avoided…*[that] *any energy recovery proposals represent the most efficient use of the resource and the risks of harm*

[6] Media Release, No Waste Incinerator Tarago: Community Representatives of VCLC, 3 November 2022.

to human health or the environment are adequately managed. Clean air is fundamental to everyone's wellbeing.'

With respect to public consultation the Policy indicates a requirement for 'genuine dialogue with the community', that they 'need to be good neighbours – particularly if near a residential setting'. Veolia is 11km from Tarago, it has not been a 'good neighbour'. It has not established a truthful 'genuine dialogue'. It has not upheld its current operating licence requirements resulting in continual odour issues impacting the community and as a result has lost the faith and trust of the community as discussed elsewhere in this submission.

The *NSW Energy from Waste Infrastructure Plan 2021* (Infrastructure Plan) states support for WTE where it can deliver positive outcomes for the community while protecting human health and the environment – Veolia has demonstrated that it does not deliver positive outcome for the community with distrust and breaches of its current operation. It also cannot guarantee protection of human health and the environment and has demonstrated its continual breach of odour management, contamination of waterways and groundwater from leachate for which it was fined multiple times but has not resolved. The Infrastructure Plan states support 'where it is used to manage genuine residual wastes – not as an alternative to waste reduction or recycling' – however such a proposal stifles waste innovation and recycling due to its need for large volumes of waste to operate effectively and to be financially viable for the next 30 years.

2. It is inconsistent with the Federal Government target to recycle or reuse all plastic by 2040 and a circular sustainable economy

Australia's waste should be managed in a more sustainable manner through reduce, reuse and genuine recycling and transition to a truly circular economy. The 2018 National Waste Policy sets the agenda for waste reduction to 2030 and our 2019 National Waste Policy Action Plan drive implementation of seven key targets:

- Target #2: Reduce total waste generation by 10% per person by 2030. To do this they aim to reduce use of single use plastics, reduce food waste and disposable packaging, support buying recycled content and encourage innovation and sustainable design.
- Target #3: Recover 80% of all waste by 2030. Avoiding waste is preferred, disposal the least.
- Target # 4L Significantly increase the use of recycled content by government and industry. Buy more high-quality products from recycled content and drive demand for recycled products.
- Target 5: Phase out problematic and unnecessary plastics by 2025.
- Target 6: Halve the amount of organic waste sent to landfill by 2030.

These targets and policy directly conflict with Veolia's WTE proposal as WTE rely solely on a consistent and high volume of waste to burn, further the lower levels of waste a WTE incinerator burns, the less clean it is.

Further, this year, the Federal Government made a target to recycle or reuse 100 per cent of plastic waste by 2040 and end plastic pollution with legislation slated to bring bigger polluters into line. Last month the Commonwealth, along with the states, also promised to reform packaging regulation by 2025 and aim to create a better circular economy by 2030. If all packaging in Australia will be reusable or recyclable, where will the WTE incinerators source their waste, will we then become subject to foreign waste imports to keep these expensive WTE incinerators operating for their expected 30 years?

3. it is incompatible with and will undermine the recycling industry and reduction efforts

Waste is not and should not be fuel, Veolia's proposal and WTE incineration is fundamentally incompatible with a sustainable circular economy. It will decimate the recycling industry and will stifle innovation towards a move away from plastics. There is no current need for waste management infrastructure in NSW, rather investment should be focused on recycling and alternatives sustainable circular economy and waste reduction.

Currently, Australia only recycles and reuses about 16 per cent of the more than 1 million tonnes of plastic in circulation and is "a large producer of waste by global standards".[7] Any proposed WTE incinerator would incinerate unrecyclable waste but would also decimate the recycling industry as it will not incentivise waste innovation towards zero waste. According to ZeroWaste more than 90% of materials currently disposed of in incinerators and landfills can be reused, recycled, and composted.[8] Burning these materials to generate electricity discourages efforts to conserve and reuse resources, once they are burnt, those resources are gone. Incineration would also disincentivise industry and individuals to recycle.

Further 'waste should not be fuel, burning waste releases toxic chemicals and creates a never-ending demand for waste, using waste as fuel, even under the guise of 'recovery' undermines the efforts for more sustainable and preferable waste management options.'[9] This means much of what is or could be recycled will be redirected to WTE, to ensure it continues to have sufficient waste to burn 24/7 – which in turn generates more demand for waste. However it also does not eliminate waste, instead it converts it into large quantities of hazardous ash (amounting to as much as 30% of the total waste burned)[10], which must then be disposed of - it simply replaces one waste stream with another more toxic waste that has no useful purpose.

Zero Waste is both a pragmatic and visionary goal where designing and manufacturing products and processes reduce the volume of toxicity of waste and materials, conserve and recover all resources, and not burn or bury them. Implementing Zero Waste will eliminate all discharges to land, water and air that may be a threat to planetary, human, animal, and plant health.

It is inconsistent with the High Ambition Coalition to End Plastic Pollution

It is important Australia move to join the *High Ambition Coalition to End Plastic Pollution*, which includes Canada, the United Kingdom, and a number of Pacific nations to reduce the use of plastics. WTE plants are not the "easy fix" many people and government think they are – reducing the amount of packaging society consumes would have greater environmental benefits than burning rubbish, why don't we focus on incentives to generate less waste in the first place instead of polluting and threatening our environment, air, water and human health with expensive WTE incinerators that do not address the core issue of waste?

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[7] https://www.abc.net.au/news/2022-11-15/australian-government-pledges-to-recycle-all-plastics-by-2040/101655630?utm_campaign=abc_news_web&utm_content=link&utm_medium=content_shared&utm_source=abc_news_web

[8] https://www.no-burn.org/wp-content/uploads/GAIA-Facts-about-WTE-incinerators-Jan2018-1.pdf

[9] https://www.no-burn.org/wp-content/uploads/GAIA-Facts-about-WTE-incinerators-Jan2018-1.pdf

[10] Kalogirou, E., The development of WtE as an integral part of the sustainable waste management worldwide, Recuwatt -RecyclingandEnergyconference, October 2012.

The Netherlands is held out as a leader and proponent on WTE incinerators however the Netherlands is moving to reduce the amount of rubbish sent to the country's waste-to-energy plants which raises questions about their longevity of operation and access to sufficient waste for continued viability?

It is inconsistent with the International Stockholm Convention

The objective of the Stockholm Convention on Persistent Organic Pollutants (POPs) is 'to protect human health and the environment from POPs – of which Australia is a signatory.[11]

4. Waste-to Energy Incinerators have been banned in other locations due to health and environmental concerns

In 2021 the state government after multiple controversial proposals in Sydney, outlined just four areas in the state to restrict where a WTE proposals would be considered by the planning department, including Lithgow, Goulburn (Tarago), Parkes and the Richmond Valley near casino.[12] ***'If it's not good enough for Sydney, why is it good enough for us?' If it is Sydney's waste problem, Sydney should deal with it themselves.***

Is it fair that regional towns become Sydney's dumping ground? These regions have hosted coal mines, power stations and wind farms to keep the lights on in Sydney for more than a century and sufferd the impact on lead poisoning from the rail corridor – we have dealt with enough! Tarago particularly is also a Sydney Water Catchment area this means agricultural property landowners like my family, must spend more on less successful and less effective chemicals in weed management to address our legislative requirements to manage noxious weeds (at our own extra cost), so as not to contaminate Sydney's water. Yet Veolia can have leachate leak into the groundwater and river that is also within Sydney Water Catchment with no real consequence. Tarago sits in Sydney's water catchment with international evidence that incineration does not reliably break down PFAS leading to harmful by-products in air, soil and waterways impacting out agricultural production, livelihood and food safety.

Banned in Wallerawang NSW: The EPA reviewed all submissions received in relation to the WTE proposal for Wallerawang by Greenspot for the old coal-fired power station and informed both Lithgow City Council and the proponents that the Wallerawang Business Park will **not be included in the plan or zoning for a WTE incinerator.**

Banned in Sydney NSW: The NSW Government **banned the in Sydney (Eastern Creek) because they aren't safe**.[13]: In 2018 the Independent Planning Commissioner rejected the proposal for a waste-to-energy incinerator for Western Sydney citing uncertainty over health and safety concerns. If it is not safe for Eastern Creek, it is not safe for Tarago, state significant development or not!

Banned in ACT (Fyshwick): The ACT Government has already **banned waste-to-energy incinerators** and is seeking to legislate a right to a healthy environment.[14]

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[11] Stockholm Convention 2010

[12] https://www.abc.net.au/news/2021-10-10/regions-to-fight-nsw-waste-incineration-plan/100525358

[13] NSW Government Energy from Waste Infrastructure Plan 2021

[14] ACT Waste-to-Energy Policy202-25, ACT Government

Opposed in three (3) NSW local councils for the surrounding areas with Queanbeyan-Palerang, Goulburn-Malwaree and Yass Valley having already **publicly denounced the waste-to-energy proposal**.

The livelihood, wellbeing and health of Tarago and surrounds, our family and children is under threat should the waste-to-energy proposal proceed:

- Our drinking water is rainwater collected from roofs or comes from a groundwater bore; we are not connected to town water so have no alternative.
- Our stock water is groundwater that is already contaminated from Veolia's existing operation that cannot be effectively managed.
- Our soil and water has also already been contaminated by lead which Transport for NSW has failed to remediate, despite knowing of the issue since November 2019. They keep changing the deadline for remediation while we continue to manage the fallout and risk.[15]

The Stockholm Convention provides international guidance on the safe management of persistent organic pollutants (POPs). The objective of the Convention is to minimise or prevent human exposure to POPs. It incorporates a precautionary and manufacturer/user pays approach. The guidelines cover waste incineration because this is a potential source of POPs, including dioxin-like compounds. Waste reduction is a key recommendation.[16]

5. Air Pollution impact – there is no safe threshold

Air quality standards – there are no guarantees no matter how high the standard

There are no guarantees on health and environmental impacts, no matter how high the policy sets emissions limits for air quality. Veolia admits the ARC will exceed the NSW Government safety standards for air emissions.[17] What good are the highest air quality standards if they are not enforced? The EPA has demonstrated time and time again they are unable and unwilling to enforce these standards and have failed to revoke Veolia's licence despite continual breaches, opting for fines that are 'petty cash' for a global company and seen as the cost of doing business.[18] Veolia has breached licence conditions in Australia and has a history of polluting our community with its overseas incinerators often exceeding safety standards.[19] Air pollution causes health problems even when it is below the safety standards, we cannot in good conscious allow Veolia's ARC to go ahead knowing it will exceed current standards, particularly when we know there are **no** safe thresholds.[20]

Further what about Other Than Normal Operating Conditions (OTNOC), for which there are no emissions standards? This include when the incinerator is started up or shut down, emergency

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[15] https://www.abc.net.au/news/2022-05-25/wallerawang-waste-to-energy-plans-scrapped-nsw/101094346; https://www.transport.nsw.gov.au/projects/current-projects/tarago-rail-yards-lead-contamination;

[16] Stockholm Convention BAT and BEP Guidance [Internet].
United Nations Environment Programme, Geneva (CHE) (2008) [cited 2019 May 22]. Available from: http://www.pops.int/Implementation/BATandBEP/BATBEPGuidelinesArticle5/tabid/187/Default.aspx

[17] NSW Department of Planning (Woodlawn ARC); Veolia Woodlawn ARC website.

[18] EPA fines Veolia Environmental Services for waste offence 23 July 2021 (NSW WPA); EPA issues $8,000 to Veolia Environmental Services (Australia) Pty Ltd for offensive odour 10 May 2016 (NSW EPA); Government Information Public Access request GIPA EPA 783.

[19] Veolia Woodland ARC website; Tarago Community communications with Veolia, 2022.

[20] NSW Government Energy from Waste Infrastructure Plan 2021.

events and whenever Veolia does maintenance on the filters. In Europe, six years of standard dioxins emissions were recorded in just a few minutes of incineration start-up (a single OTNOC event) in Harlingen, the Netherlands![21] If Veolia requires four OTNOC events each year (a low estimate), that would equate to toxic output equivalent to 25 years of standard emissions for every year of operation – that is 750 years' worth of toxic pollutants over its proposed 30 year operation, and that is just from air emissions alone! That doesn't include the thousands of tonnes of toxic fly ash and contaminated bottom ash created by the incinerator that will be disposed in landfill. Veolia's CEO Mr Richard Kirkman confirmed during a TADPAI meeting that Veolia will **NOT** be adhering to emissions standards during OTNOC.

Emissions and toxic ash – there is no safe threshold

The NSW government has stated that 'for some common air pollutants, there is NO SAFE threshold of impact'. I refer you to Zero Waste Australia 'Incinerator and air toxins', which states that while WTE incinerators may use pollution filters, they capture a lot (but not all) pollutants that are then transferred to 'fly ash' which is contaminated and must be disposed of in landfill.[22] Fly ash is classified as 'hazardous waste' by the NSW EPA.[23] Veolia's ARC will produce **500,000 tonnes of toxic, hazardous 'fly ash'** and **3 million tonnes of contaminated 'bottom ash'.** The 'less'-contaminated bottom ash will be disposed of in landfill at Tarago, while the hazardous fly ash will be disposed of by mixing it with concrete and bury it in an onsite landfill cell/pit in Tarago. The lifespan of this concrete pit sealants is 30 years, however fly ash will exist for over 1,000 years, leaching into our ground and waterways, risking water and soil health on which our region relies for agricultural production and waterways that are Sydney catchment area.[24] These persistent organic pollutants (POPs) and toxins in the pit will only be contained for the first 30 years, it will then leach out of the concrete into our surrounding soil and groundwater for the next 970 years![25]

What happens when the 'specifically designed air pollution control systems' fails or reaches end of life, will these filters with high levels of pollutants be buried in our landfill to contaminate our soil? Even modern WTE incinerators are still significant sources of hazardous air toxics emissions that are difficult to control and can travel great distances, contaminating local soil, groundwater and produce. Australia has no regulatory framework for nano-particles, which present a significant threat to human health. Ultrafine particles are also overwhelmingly harmful to human health and are a threat from all forms of WTE incinerators with no state or national air quality standards, license conditions or regulations to protect the Australian community from ultrafine particles. The latency of onset of symptoms means it will be decades before we see the effects of these toxins on our vulnerable young children and immune compromised.[26]

While WTE proponents hold out Japan as an advanced industrialised WTE economy, it does this at a significant public health cost, with 'dioxin contamination levels ten times higher than any other industrialised country and is now struggling to reduce dioxin emissions…high levels of dioxin

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[21] Hidden emissions: A story from the Netherlands (Case Study), November 2018 – ToxicWatch
[22] https://zerowasteoz.org.au/incineration/incineration-and-air-toxics/
[23] Waste Classification Guidelines, NSW EPA.
[24] NSW Department of Planning (Woodlawn ARC); Veolia Woodlawn ARC website.
[25] Environmental Health Risk Assessment of Dioxin Exposure through Foods in a Dioxin Hot Spot – Bien Hoa City, Vietnam; Tuet-Hanh et al, 2010, International Journal of Environmental Research and Public Health; After incineration: The Toxic Ash Problem, IPEN, 2005; Toxic Fallout – Waste Incinerator Bottom Ash in a Circular Economy, Zero Waste Europe 2022.
[26] Air pollution negotiations: falling short of breath, Zero Waste Europe, 05 July 2016; Incineration and air toxics, Zero Waste Australia

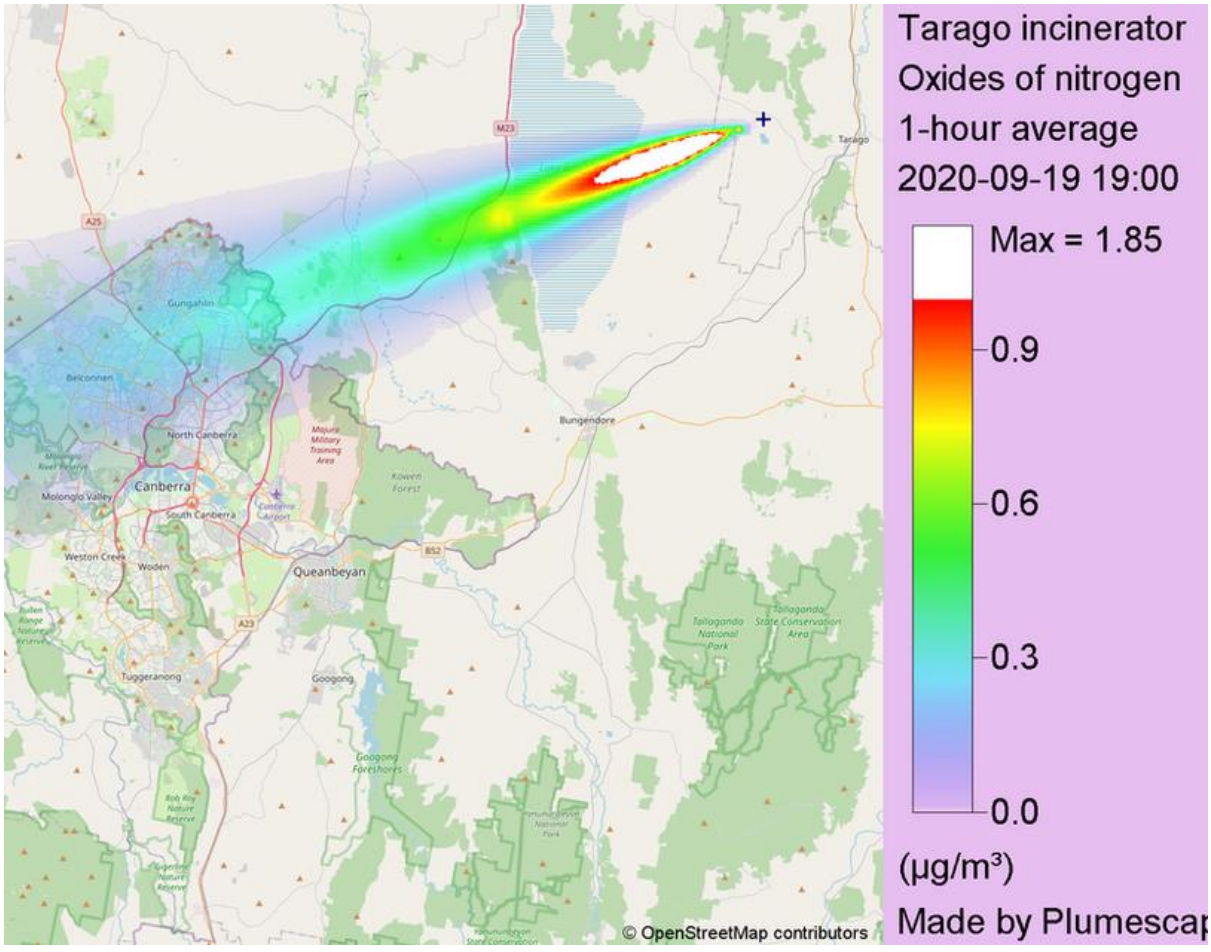
contamination in soil and an unusually high rate of cancer in residents.[27] The risk of direct inhalation of dioxin or through intake of locally grown food is unacceptable.

Toxic Plume from Plume plotter

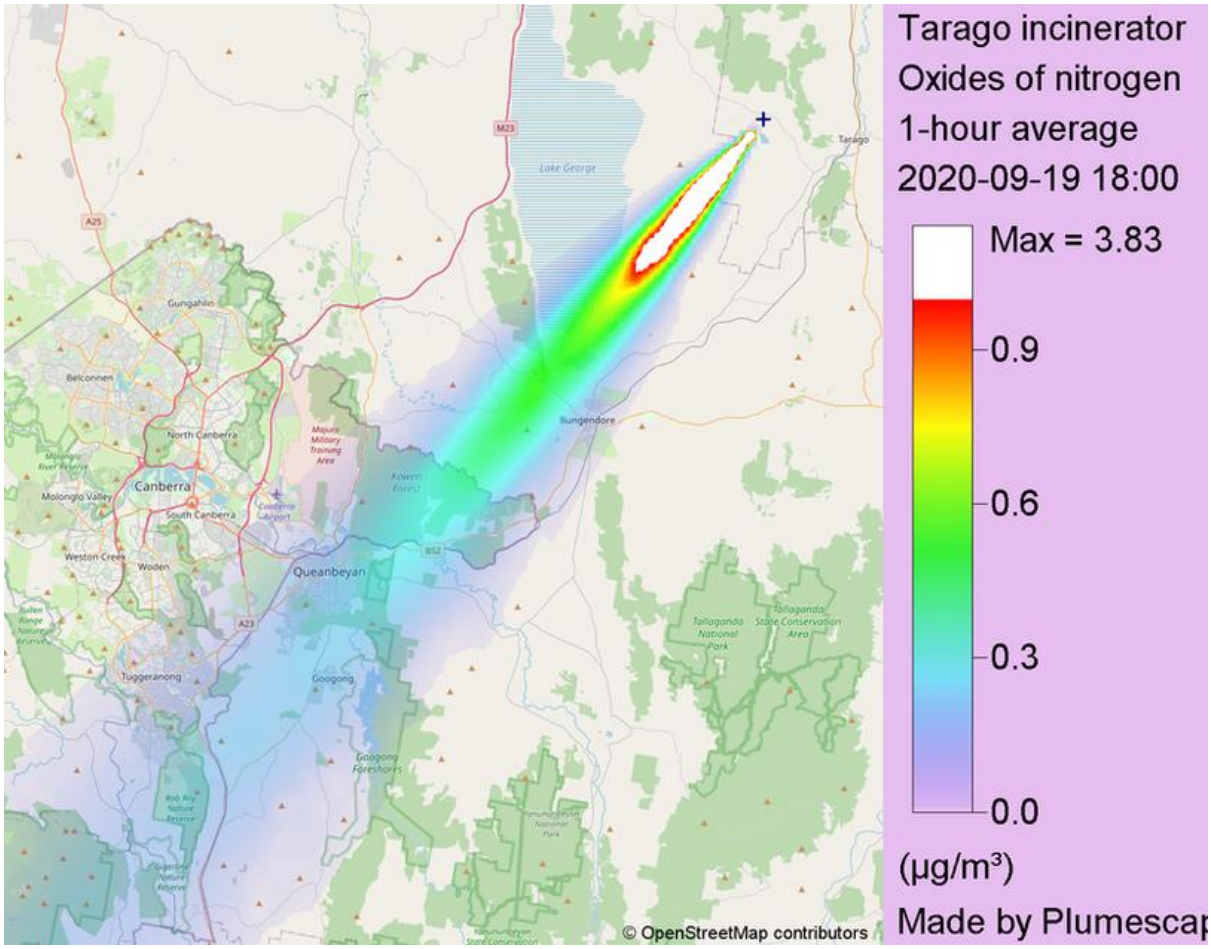
Plume modelling shows air pollution will spread throughout the region, from Canberra to Goulburn, Braidwood, Bungendore, Murrumbateman, Gunning, Marulan, Yass and beyond.[28] The visualisation below shows the (predicted) state of pollution over time from Veolia's planned ARC in the Goulburn Mulwaree council region near Tarago, NSW. The overlay shows the concentration of oxides of nitrogen at ground level across Goulburn Mulwaree, Canberra, Queanbeyan, Yass, Upper Lachlan and Bungendore.

Developed by the US EPA, which is one of the most famous modelling systems for air pollution. Plume plotter uses the regulatory default options of AERMOD. It takes account of the real terrain in the vicinity of the incinerator, current weather conditions, upper air data, as well as properties of the incinerator emissions and the shape of the incinerator buildings. Data about the incinerator and its emissions is taken from that provided by the incinerator promoters.

Screenshots taken from the plume plotter at different times demonstrate how far the toxic plume will travel. This means it will not just be Tarago that is impacted – when it is no longer a regional town issue, will Government care more about the health and wellbeing of the community?



[27] https://zerowasteoz.org.au/incineration/incineration-and-air-toxics/
[28] Tarago Plume Plot, www.plumeplotter.com/tarago/



Health authorities have raised concerns about plans to build a $500 million WTE plant in Western Sydney, saying the proposal goes against a century of environmental regulation to improve air quality by removing incinerators and power stations and other sources of pollutants from urban areas – how are they less of an environmental concern in regional areas, are the livelihoods, health, and wellbeing of the people in regional areas less important than urban areas?[29]

6. Food and agricultural impact

Agricultural land

Dioxins or persistent organic pollutants (POPs) take a long time to break down once they are in the environment, they are highly toxic and are accumulated in food chains, concentrating mainly in the fatty tissue of animals. Further, more than 90% of typical human exposure is estimated by EPA to be through intake of animal fats, mainly meant, diary, fish and shellfish. [30] Sheep also show elevated levels of toxic incinerator pollutants in the lanolin layers of their wool more than 60km from an incinerator![31] Tarago is an agricultural food producing area, primarily livestock meat. Our agricultural viability will be at risk if contamination occurs and accumulates in crops, pasture and livestock exceeding safety limits for human and livestock consumption. Many overseas communities can no

[29] https://www.abc.net.au/news/2017-03-22/western-sydney-waste-to-energy-incinerator-opposition-asthma/8375874

[30] Learn about dioxin, United States Environmental Protection Authority.

[31] Hidden emissions of dioxins from waste incineration, Arkenbout, ToxicWatch, 2020.

longer safely farm their land due to incinerator contamination.[32] Contamination can **reduce** access to clean water and feed; reduce crop yields and viability; impact saleable crops and farming options; impact biodiversity and pollinators; ability to attract farm workers and consumer demand for region produce. It can **damage** area reputation and image; farmland viability; crop and produce quality and property values. It can **prevent** control over farmland chemical inputs and management.

Water and produce consumption

Our water tanks will be contaminated by toxins washed in from the roof, with no alternative water source for drinking or household use.[33] In Europe, many towns can no longer safely eat garden produce, backyard poultry or eggs due to incinerator contamination with citizens advised to prevent children from being exposed to the soil (in effect Lausanne, Switzerland is now a massive contaminated site).[34] Further research cited by the NSW Chief Scientist states 'contamination of food and ingestion of pollutants is a significant risk pathway'; 'new incinerators should be located away from areas of food production' and 'food grown near an incinerator should be avoided' – Tarago is a significant food producing area![35] Tarago's viability as a food producing region should not be jeopardised as we continue to lose significant farmland to residential subdivisions, with less and less agricultural land for food production.

WTE incinerator toxins (dioxins) infiltrate food production, impacting agriculture viability and water quality. In a rural area of abundant food production with reliance on groundwater for food production and stock water, and rainwater as the only source of water for human consumption, Tarago is not a suitable location for Veolia's expanded ARC incinerator.

Dioxins accumulate in fly ash (which accumulates in air pollution filters) and are released into soil, water and carried with dust in the air. 'Globally, the amount of dioxin produced by incineration each year is enough to put every person on Earth at 20 times the WHO health safety threshold.[36]

WTE incineration or Veolia's proposed ARC is not a solution, it only transfers toxic chemicals to release them into the air.' Burning one metric ton of solid waste generates approximately 330kg of WTE residues containing chlorinated and brominated dioxins – what happens to this residue?

7. Transport and Infrastructure

I implore you to review the impacts of transporting large volumes of waste to regional sites. The smell of transporting waste along the rail corridor cannot be underestimated and the impact on trucking on our roads degrades the roads, which are poorly maintained making them unsafe. Almost a million tonnes of waste could be trucked/railed through NSW annually. Tarago already takes 40% FORTY-PERCENT of Sydney's waste via landfill adding incineration to the even worsening oduor, noise and spillage that is being produced by Veolia. I regularly drive behind slow moving waste filled trucks and see the impact of these trucks on road degradation, the smell travels for miles. More

[32] Hidden emissions of dioxins from waste incineration, Arkenbout, ToxicWatch, 2020; After incineration: The Toxic Ash Problem, IPEN, 2005; National Toxics Network Australia and Zero Waste Australia, Goulburn Waste to Energy Incineration threat, 30 April 2022.
[33] www.epa.gov/dioin USA Environmental Protection Agency; The health impacts of waste incineration: a systematic review, Tait et al. Australian & NZ Journal of Public Health, 2022.
[34] Hidden emissions of dioxins from waste incineration, Arkenbout, ToxicWatch, 2020; The true toxic toll – Biomonitoring research results, Czech Republic, Lithuania, Spain 2021, Zero Waste Europe.
[35] The health impacts of waste incineration; a systematic review, Tait et al, Australia & NZ Journal of Public Health, 2020.
[36] Toxic Ash poisons our food chain, Jindrich Petrlik and Lee Bell, IPEN, February 2020, https://ipen.org/sites/default/files/documents/ipen-toxic-fly-ash-in-food-v2_3-en.pdf, 6

freight means more emissions as well as rail and road wear, traffic accidents and safety risks for regional towns not designed for such heavy and frequent road use.

Residents of Tarago, Goulburn and ACT were never meaningfully consulted on the scale or risks of these projects and expansions. Past issue at Woodland landfill (odour, spills, EPA breaches) demonstrate that licencing is ineffective and they cannot be trusted to comply with regulations currently, let alone a more serious incineration operation wish bigger health consequences when they breach regulations, or during periods of maintenance when they are not required to comply with health standards. What happens when the incinerator is in maintenance to all the pollution during that time? Local regional communities deserve to know and have a bigger say in what happens in their backyard and not be dictated to by Sydney who has rejected a waste-to-energy facility in their backyard – If it was fine for Western Sydney to reject these projects, why are they acceptable for regional communities – why are regional communities less important?

8. Lack of social license to operate and lack of public interest

Social Licence trust and support

The NSW Energy from Waste Policy says proposals are **only valid** where '***community acceptance to operate such a process has been obtained'***.[37] Social License is the acceptance granted to a company by the community, with three components:

1. Legitimacy – do they play by the rules?
2. Credibility – do they provide honest information?
3. Trust – can the community be confident that they will do what they say?

Veolia has demonstrated that they do not have legitimacy, credibility or trust within the Tarago district and surrounds and the community has not accepted or supported the proposed expansion.

Legitimacy – they have demonstrated they do not play by the rules

Veolia has demonstrated that it does not uphold its licence obligations and sees the fines related to breaches as a cost of doing business, with the EPA powerless to enforce any further action and unwilling to revoke their licences. Veolia was recently fined for exposing workers and local communities to asbestos in Sydney.[38] Veolia continuously fails to meet reporting requirements, with the EPA describing the most recent Tarago landfill odour report as '*not measurable, trackable or auditable*'.[39] Veolia told the community when they started their landfill it would not impact the town, however the Tarago community and surrounding district have suffered regular offensive odour that are dismissed stating with high rainfall ' the management of liquid on site continues to be a challenge…unfortunately when it's raining, evaporation is not effective'.[40] Essentially Veolia is blaming high rainfall, which they can neither control nor mitigate – what will happen with more waste and more extreme rain events? The EPA fined Veolia $8,000 for the 'unbearable smell' and there were approx. 500 complaints in the last year alone – this does not account for the numerous people that do not report it (like me), as it has become futile with Veolia and the EPA dismissive of complaints which result in inaction.

[37] NSW Energy from Waste Policy Statement, NSW EPA, 2021
[38] $59,000 financial undertaking secured after asbestos find, 7 October 2022, NSW EPA.
[39] EPA Comments on the Odour Audit, DOC22/350839-1, 10/5/22, NSW EPA
[40] Tarago Times, http://taragosportingassociation.org.au/wp/, November 2022, page 14

Credibility – Veolia does not provide honest information

A review, by academics from the Australian National University Medical School, the Public Health Association of Australia, and Council of Academic Public Health Institutions Australia, was published in the *Australian and New Zealand Journal of Public Health* in 2020, and referenced by the NSW Government Chief Scientist and Engineer in his report to the NSW Minister for Environment that same year stated that 'there is insufficient evidence to conclude that any incinerator is safe' and that 'contamination of food and ingestion of pollutants is a significant risk pathway for both nearby and distant residents'. If a WTE proposal is not safe for Sydney and Canberra, it is not safe for Tarago.

Trust – Veolia does not have community confidence or trust

Veolia says it will communicate with the local community about project-related emissions with transparency, however it does not have the trust of the community with community representatives resigning due to their lack of legitimacy and credibility. Further, Goulburn Malwaree Council last year opposed WTE incineration/ARC facilities in the local government area including Tarago, this resolution was made in September 2021 and reaffirmed on 15 March 2022. Veolia 'greenwashes' their proposal by claiming energy recovery is not incineration, however four out of five links to 'independent research about energy recovery, define the process as 'incineration''.[41]

Existing Veolia Woodland landfill and bioreactor breaches

Odour Management: There is already an ongoing odour issues which, while a requirement of the licence to operate, they have been unable and unwilling to appropriately manage, ignoring, or dismissing complaints when made either directly to Veolia or via the Environmental Protection Agency. Further they skewed statistics recording multiple complaints/occurrences as a single complaint/occurrence, if reported together. As someone who has a full-time day-job and an agricultural farm, I am not able to report all the odour breaches while driving to/from work, however if I report multiple instances together, they are counted as a single complaint – this is simply inaccurate and misleading. Further the EPA has done little and has no real power to enforce breaches, with monetary fines insignificant for any real deterrent effect. This leaves the community unable to trust that the EPA will enforce any new compliance requirements of it's expanded operating licence.

Leak into Tarago Crips Creek and Malwaree River: While I am not permitted to spray chemicals in our paddock through which the Malwaree River runs due to it being Sydney Water Catchment, Veolia is permitted to breach its condition of licence and operation. In October 2022, the EPA issued a prevention notice to Veolia: leachate had seeped out of an evaporation dam, in a manner that could pollute groundwater entering Crips Creek, which ultimately drains through Tarago and to Lake Bathurst. The EPA found that the dam had not been maintained or operated in a proper and efficient manner. Veolia dismissed this blaming 'significant rainfall'. If you believe the climate change argument, we will continue to see extreme weather, and it appears Veolia has no means to manage their facility with 'significant rainfall' enough to disable their emergency measures and allow pollution to enter our land and waterways.

9. Policy and Alternatives

Sydney's waste should be Sydney's responsibility – educate the Sydney population about responsible waste minimisation and circular economy, introduce regulations to prevent this waste from coming into the system in the first place – waste should be managed near where its produced, not shifted where you can't see the problem and can ignore it while continuing to produce excessive waste.

[41] Frequently Asked Questions, www.veolia.com/anz/TheArc, 23 October 2022.

Sydney's behaviour around waste needs to change. Incineration undermines recycling and contradicts NSW's circular economy goals. Better alternatives do exist and more energy needs to be invested into these more appropriate and sustainable solutions along with making Sydney more responsible and conscious of their waste production:

- Introduce a plastics plan with mandatory recycling content and charging Sydneysiders for non-compliant waste to encourage their responsibility in reduction of waste
- Ban unnecessary single-use packaging, ensuring packaging is recyclable, reusable or compostable
- Improve recycling and food/green waste recovery
- Implement a waste minimisation programme

Alternatives to burning waste include redesigning processes, reuse, recycling, recovery, composting. When you burn waste you are losing a potential resource and you also risk causing air, land and water pollution. You should find alternative methods of waste management wherever possible.

A range of adverse health effects have been identified, including significant associations with some neoplasia, congenital anomalies, infant deaths and miscarriage, but not for other diseases - YET. While ingestion was the dominant exposure pathway for the public and newer incinerator technologies may reduce impacts, diverse chemicals, poor study methodologies and inconsistent reporting of incinerator technology specifications precludes firmer conclusions about safety. Older incinerator technology and infrequent maintenance schedules have been strongly linked with adverse health effects. While newer incinerators have fewer reported ill effects, this is perhaps because of inadequate time for adverse effects to emerge. A precautionary approach is required with a focus on waste minimisation and not incineration – this is the only safe option to protect our health, air, waterways and soil for the future of our agricultural production, children futures and food security. If incineration is the only option, put is in Sydney or the desert where it does not impact people's health, livelihoods or agricultural food production. Diverse health outcomes in populations near waste incinerators, including cancers and reproductive dysfunction, have been demonstrated in primary studies.[42] [43] [44] [45] [46] [47]

Conclusion

I urge you to consider the above and reject Veolia's ARC proposal noting it transforms garbage into more toxic forms of waste. The current Veolia operation of landfill with methane-gas capture is a safer option for human health and the environment, however it is also not without air pollution

[42] M Allsopp, P Costner, P Johnston, Incineration and human health: State of knowledge of the impacts of waste incinerators on human health, Environ Sci Pollut Res Int, 8 (2) (2001), pp. 141-145

[43] M Federico, M Pirani, I Rashid, N Caranci, C Cirilli, Cancer incidence in people with residential exposure to a municipal waste incinerator: An ecological study in Modena (Italy), 1991–2005, Waste Manag, 30 (2010), pp. 1362-1370

[44] Y Fukuda, K Nakamura, T Takano, Dioxins released from incineration plants and mortality from major diseases: An analysis of statistical data by municipalities, J Med Dent Sci, 50 (4) (2003), pp. 249-255

[45] S Goria, Risk of cancer in the vicinity of municipal solid waste incinerators: Importance of using a flexible modelling strategy Int J Health Geogr, 8 (2009), p. 31

[46] S Candela, L Bonvicini, A Ranzi, F Baldacchini, S Broccoli, M Cordioli, *et al.* Exposure to emissions from municipal solid waste incinerators and miscarriages: A multisite study of the MONITER project Environ Int, 78 (2015), pp. 51-60

[47] M Santoro, F Minichilli, N Linzalone, A Coi, MT Maurello, D Sallese, *et al.* Adverse reproductive outcomes associated with exposure to a municipal solid waste incinerator Ann Ist Super Sanita, 52 (4) (2016), pp. 576-581

issues.[48] If burning waste is your answer to the waste issue, you're asking the wrong questions. The focus should be on resource recovery rather than losing the resource entirely, focus should be on re-purposing, re-manufacturing and recycling materials before they end up at a WTE facility.

The Veolia ARC proposal or any waste-to-energy proposal in Tarago (or Australia):

- is not aligned with the circular economy to recycle and reuse
- is not in the public interest and Veolia does not have a social licence to operate
- is not the most efficient or viable waste management infrastructure as it is costly to establish for what is a very short operating timeframe of 30 years – then what?
- is not suitable to be built in an agricultural food producing area
- does not consider or mitigate the numerous environment irreversible impact to our land, air and water
- does not consider or mitigate the economic implications, should agriculture production and food grown in the area no longer be saleable and impact on land values for those areas
- does not consider or mitigate the seen and unforeseen significant human health risks from proximity to polluted air, land and water from emissions and landfill.

I urge you to be environmentally and socially conscious by rejecting the waste-to-energy proposal and consider alternatives or a location that is not near any agriculture or community areas - particularly noting Woodland are unable to adhere to current regulations, how can they in good conscious be trusted or approved for expansion that would leak more pollution into our air, land and waterways for generations to come, impact the health of regional Australians with pollution plums reaching Goulburn and Canberra, impact the future of agricultural food producing land and food security.

[48] Greenhouse Gas and Air Quality Impacts of incineration and Landfill, Eunomia, 2022.