

The Proposed Woodlawn High Temperature Incinerator: Threats to Health & Sustainability

**SUBMISSION TO THE VEOLIA WOODLAWN
ARC PROJECT EIS**



Submission By:
**Long Water Agricultural
Association Incorporated**

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FOREWORD ...

The Long Water Agricultural Association Incorporated is made up of and represents local and regional citizens, residents and landowners whose properties are subject to potential impacts from the high temperature waste incineration facility proposed by Veolia at its Woodlawn site.

The Association is very broadly based, and represents 57 agricultural enterprises within a 40 kilometre radius of the proposed development, comprising a total of 63 966 hectares valued at approximately \$700 million - between \$4500 - \$5000 an acre. Our member's farming activities involve:

**220547 sheep
21206 cattle
20000 chickens
5000 bales of wool
7247 hectares of crop
143 employees.**

The Association was formed to represent the interests of our members, their families, their livelihoods and their employees.

All members of the Association strongly object to the high temperature waste incineration proposal.

This document presents a submission to the EIS that has been prepared by Veolia for the proposed development.

It raises a range of concerns regarding the proposed development; the adverse impacts to which local residents and agricultural practices will be exposed; the failure of the EIS to adequately address these concerns, and the inadequacy of proposed process and environmental controls.

The Association is very strongly of the view that the project as currently proposed should not proceed.

The Association would welcome the opportunity to provide any additional information that be required in support of this submission.

KEY SUBMISSIONS

Some of the key submissions presented in this document are;

High temperature incineration processes involve a range of known environmental and health risks. These issues have resulted in the rejection or abandonment of three similar projects in the Sydney urban area. While a possible solution to the waste issue, the use of high temperature incineration treats the “symptom” of excess waste generation, and not the “disease” which requires the minimisation of waste at its source.

High temperature waste incineration has been rejected on health and environmental grounds in three highly populated urban areas of Sydney. It is a mistake to assume that the same high risk technology is suitable for imposition on regional communities and activities. Rural and regional communities are vulnerable to the same health risks as urban communities. Importantly, and additionally, emissions generated by high temperature incineration can cause very real harm by entering and persisting in the life cycles of the various agricultural activities and processes potentially impacted. This technology, which has been repeatedly rejected in urban settings, should also be rejected in the regional setting applicable in this case.

We have demonstrated in this submission that the proposed high temperature incineration process should be rejected because of the health, environmental and agricultural risks involved. The EIS fails to address these issues, and fails to identify controls that might offset or manage the very serious potential impacts involved. Veolia has over the past twenty years repeatedly failed to demonstrate responsible environmental management of the existing waste management facility at Woodlawn. This record provides no confidence for the successful, safe and environmentally compliant management of the far more complex and far higher risk high temperature incineration process now proposed.

The proposed high temperature waste incineration plant runs counter to, and is inconsistent with, agreed local, state, national and international carbon reduction policies and commitments.

In relation to energy recovery, the proponent should (1) disclose, and fully assess the 66 kV line upgrades; (2) conduct and disclose dynamic grid studies demonstrating that the project will not be curtailed, and (3) Include sufficient storage such that the proposed development only exports energy at times when it is not displacing renewable energy and/or driving up the consumer's need to underwrite storage elsewhere in the grid.

As it stands, the proposed high temperature incineration plant must be rejected on the basis of the very serious potential impacts that it would have on community health and associated agricultural practices. Some (but by no means all) of the changes that would be required for a reconsideration of the project are provided.

It is our submission that the project as currently proposed should be rejected, for reasons outlined in this document. However, should the project be approved, we submit that appropriate indemnities should be put in place to cover all and any future harm and loss suffered by any individual or entity adversely impacted by the proposed development.

On the basis of reasonable prudence and precaution, the proposal as presented should be rejected.

**Long Water Agricultural Association Incorporated
December 2022**

1 INTRODUCTION

Veolia Environmental Services Australia Pty Ltd (Veolia) proposes to develop and operate the Woodlawn Advanced Energy Recovery Centre (ARC), an energy recovery facility that would produce up to 30 megawatts of electrical energy from approximately 380,000 tonnes of residual waste feedstock each year.

The facility would be integrated with the existing waste management operations owned and operated by Veolia at the Woodlawn Eco Precinct, located approximately 40km south of Goulburn in New South Wales.

The proposed facility is designed to recover energy from residual waste by a process of high temperature incineration.

The proposed facility is a state significant development, is designated as Application Number SSD-21184278 and is subject to the approval of the NSW Department of Planning and Environment, through either the Minister for Planning or the Independent Planning Commission.

An Environmental Impact Statement (EIS) for the proposed development has been prepared for Veolia by EMM Consulting (EMM), as follows:

Woodlawn Advanced Energy Recovery Centre Environmental Impact Statement (October 2022)

This document presents a submission to the EIS by the Long Water Agricultural Association, which represents local landowners and residents whose properties, lifestyles and livelihoods are subject to potential impacts from the high temperature waste incineration facility proposed by Veolia at its Woodlawn site.

The principal concerns expressed in this submission include:

- ❑ The adverse effects of emission from the high temperature combustion process
- ❑ The failure to assess the worst case waste feedstock composition
- ❑ The previous rejection of previous similar projects on health and environmental grounds
- ❑ Serious deficiencies in the treatment and monitoring of emissions from the process
- ❑ Ongoing environmental non-compliances associated with current site operations

2 CONCERNS RE HIGH TEMPERATURE INCINERATION

2.1 HIGH TEMPERATURE INCINERATION

High temperature incineration offers the advantage of reducing the bulk of waste that would otherwise be disposed of the landfill, and generating electrical energy through the combustion process.

This potential advantage is offset by the generation of harmful combustion by-products, and by perpetuating the use of what is in effect a hydrocarbon based fuel for energy generation, in circumstances of increasing momentum for carbon free energy generation processes.

High temperature waste incineration is a “two edged sword,” reflecting the balance between advantages and disadvantages. This submission explores this balance from the perspective of potentially impacted individuals, communities and activities.

2.2 PAST REJECTION OF SIMILAR PROJECTS

It is of concern to note that similar high temperature incineration processes have been rejected in the past. A high temperature waste disposal incinerator operated at Waterloo in the Sydney metropolitan area by Waverley Council was closed in the 1990's because of serious concerns regarding harmful combustion emissions, including carcinogenic dioxins.

More recently, in 2018, a proposed energy generating high temperature waste incinerator was proposed at Eastern Creek in western Sydney. The proposal was opposed by Blacktown City Council, the NSW EPA and the NSW Department of Health.

Like the current Veolia proposal, the Eastern Creek incinerator was a state significant development, and following assessment was rejected by Planning NSW's Independent Planning Panel. The Panel cited “uncertainty” over the project's human health risks, and adverse impacts on air and water quality. The three-member Independent Planning Commission said the project was not in the public interest and refused consent.

In 2021, a proposal for a waste-to-energy high temperature incineration project at Matraville in Sydney was withdrawn following similar concerns to those applicable to the Eastern Creek project. Again, this project was classified as state significant development.

The rejection of these projects in urban areas on health and environmental grounds raises very serious questions about the efficacy of the technology in a regional setting, where human health risks also apply, and where there are also serious risks to vital food chains and agricultural supply pathways.

2.3 KNOWN & UNACCEPTABLE IMPACTS

The established and acknowledged risks associated with high temperature waste incineration, which were among the many considerations leading to the closure of the Waterloo incinerator three decades ago, and the more recent rejection of similar proposals at Eastern Creek and Matraville include:

- ❑ The ongoing generation of complex chemicals, including polyaromatic hydrocarbons, dioxins, furans and PFAS (refer Appendices B & C) during the combustion process, that can have very harmful impacts on human health and the short, medium and long term integrity and viability of agricultural processes;
- ❑ The difficulties that exist, and are known to exist, regarding the management and control of these chemicals in the combustion exhaust emission process;
- ❑ The long-term persistence of these chemicals in the environment, and in the agricultural food chain, and the resulting potential harm that can be caused throughout the community; and
- ❑ The uncertainty introduced by the variable nature of the wastes that will be processed by the proposed high temperature combustion process, and the uncertainty that this variability introduces to types of chemicals that will be generated by the process, and any strategy for their control and management.

2.4 TREATING THE SYMPTOM AND NOT THE DISEASE

An argument presented in support of high temperature incineration is that it provides a solution to the very real and significant challenge posed worldwide, particularly in more developed countries, by the vast bulk of waste generated.

In the absence of the health, environmental and agricultural impacts and downsides highlighted in this submission, there may be some merit to this argument.

But in reality, high temperature incineration in this context is being used to treat the “symptom,” and not the “disease.”

The core issue is the vast quantum of waste generated and the tsunami of packaging and non-recyclable and non-reusable packaging and other materials that generate the vast quantities of wastes in question.

The solution is not to use a highly questionable high temperature combustion process to dispose of the waste, but to avoid or at least very significantly minimise its generation at source.

If as a community, we continue to fail in the core challenge of reducing the quantity of waste at source, then disposal to landfill remains preferable to the introduction of a high risk waste incineration system.

New South Wales is a very big state, which must have suitable areas – including old mine sites – for the disposal of waste, in the unfortunate event that we choose to continue to produce that waste in accordance with current trends.

Landfill may be an imperfect solution to the waste “problem”, but a high temperature incineration process that involves very real risks to human health and the viability of agricultural processes is far more imperfect.

The only real solution, albeit challenging, is to reduce non-recyclable waste at source.

Our Submission

High temperature incineration processes involve a range of known environmental and health risks. These issues have resulted in the rejection or abandonment of three similar projects in the Sydney metropolitan area. While a possible solution to the waste issue, the use of high temperature incineration treats the “symptom” of excess waste generation, and not the “disease” which requires the minimisation of waste at its source.

3 SPECIFIC ISSUES OF CONCERN

3.1 INTRODUCTION

Section 2 of this submission has addressed a number of very important issues that apply to the proposed high temperature “waste to energy” incineration facility.

Some more specific issues of great concern regarding the proposed process are summarised below.

3.2 PROCESS EMISSIONS

The assessment and rejection of similar high temperature incineration projects reviewed in Section 2.2 above has established the fact that extremely dangerous chemicals will be generated by the process, including in particular harmful chemicals including known carcinogenic and mutagenic materials.

A careful review of the EIS has identified the following very serious issues:

- ❑ The approach to harmful emissions adopted in the EIS assumes a “minimalist” pathway in terms of the generation of harmful chemicals, and does not take account of more severe or “worst case” operating scenarios;
- ❑ The dispersion modelling in relation to combustion emissions presented in the EIS is based on the same “minimalist” pathway in terms of harmful chemical generation, and as a consequence understates the distribution and deposition of harmful combustion emission chemicals;
- ❑ The likelihood is that as a consequence, and contrary to the assertion presented in the EIS, harmful chemicals generated by the high temperature combustion process will impact areas outside the project site, and therefore have impacts on human health and on the integrity of surrounding agricultural processes significantly greater than that acknowledged in the EIS
- ❑ That no adequate mechanism has been identified for the capture and removal of these chemicals from high temperature combustion exhaust streams. This challenge has proved very problematic in the past;
- ❑ It is known and acknowledged that very significant human health risks are associated with the release of many high temperature combustion by-products to the environment, but this fundamental issue is inadequately addressed in the EIS because combustion emissions have been assessed in a very “optimistic” manner.
- ❑ The very real potential harm that can be done by chemicals of this type entering and persisting the life cycles of the various agricultural activities and processes potentially impacted has not

been adequately addressed in the EIS, once again because the understatement of potential “worst case” or more likely “real case” waste mix and combustion emission scenarios than those upon which the EIS has been based.

Our Submission

High temperature waste incineration has been rejected on health and environmental grounds in three highly populated urban areas of Sydney. It is a mistake to assume that the same high risk technology is suitable for imposition on regional communities and activities. Rural and regional communities are vulnerable to the same health risks as urban communities. Importantly, and additionally, emissions generated by high temperature incineration can cause very real harm by entering and persisting in the life cycles of the various agricultural activities and processes potentially impacted. This technology, which has been repeatedly rejected in urban settings, should also be rejected in the regional setting applicable in this case.

4 SPECIFIC DEFICIENCIES IN THE EIS

Our review of the EIS for the project has identified the following deficiencies:

- The EIS is based on optimistic or “minimalist” assumptions regarding the nature and extent of harmful chemical emissions likely to be experienced, and to impact the local area. As a consequence the modelling presented in the EIS does not adequately or properly address peak or “worst case” emission impact scenarios.

The EIS describes the approach as follows (Woodlawn Advanced Energy Recovery Centre Air Quality Impact Assessment):

This report presents a quantitative modelling assessment of potential air quality impacts for the operation of the project, prepared in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (NSW EPA 2022).

In order to provide a reference source of real-world operational emissions for the estimation of emissions from the project, Veolia has obtained air pollution emissions monitoring data from the Veolia United Kingdom & Ireland (Veolia UKI) ERF in Staffordshire, located approximately 25 km north-west of Birmingham in the United Kingdom (hereafter referred to as the Staffordshire ERF).

Emissions from the ARC building stack were quantified for three scenarios:

- *Scenario 1 – reference case emissions – expected emissions (based on Staffordshire ERF emissions monitoring data);*
- *Scenario 2 – reference case emissions – maximum emissions (based on Staffordshire ERF emissions monitoring data); and*
- *Scenario 3 – regulatory case scenario, adopting emission standards presented in NSW EPA 2021 document NSW Energy from Waste Policy Statement (hereafter referred to as the NSW EfW Policy).*

Scenario 1 is considered to be representative of likely emissions and impacts from the normal operations of the project. The calculated emissions from the ARC building stack for Scenario 2 and Scenario 3 are considered to be highly conservative for the following reasons

:

- *Scenario 2 adopts the maximum (100th percentile) measured concentrations from the Staffordshire ERF and applies emission upscaling factors to account*

for potential inter-annual variability. Hence this scenario assumes that the ARC would emit at the single highest concentration from the Staffordshire data, for every hour of its operations.

- *Scenario 3 adopts the NSW EfW Policy emission standards as the emission concentration for each pollutant, thereby assuming that the plant is emitting the maximum allowed under the NSW policy during every hour of operation.*

Both Scenario 2 and 3 adopt maximum projected flow rates for all hours and applies the calculated maximum emission rates for every hour of the modelling period.

The nature of the waste mix to be processed by the proposed high temperature incinerator is uncertain.

In these circumstances, the adoption of a “minimalist” emissions scenario is inappropriate.

- ❑ The EIS does not include substantial processes to ensure the management and control of harmful chemical emissions, for example the EIS refers to:
 - the “injection of lime” to control acid gas generation, but provides no details of how this will work, what emission chemicals will be addressed, and how effectively;
 - the injection of activated carbon to control harmful (and in many cases carcinogenic) organic chemicals such as polyaromatic hydrocarbons and dioxins, but again provides no details of how this will work, what chemicals will be addressed, and how effectively;
 - the use of “bag filters” to manage and control dust emissions, including harmful chemicals that may have been adsorbed onto the surface of any activated carbon particle injected into the exhaust stream – but “bag filtration” does not work at all in the case of the types of fine particulates (PM_{2.5} and smaller) that are of primary concern.
 - These ultrafine particulate emissions will be discharged at high temperatures, with the potential to be distributed far more widely than is indicated in the EIS.
 - These ultrafine particulate emissions will have adsorbed onto their surfaces the very harmful emission products from the incineration process, and because of their very small size have the capability to by-pass the natural “filters” of both humans and animals, and to deliver adsorbed chemicals including dioxins and furans into the respiratory systems humans and livestock.

- ❑ In effect the EIS presents simplistic concepts rather than specific strategies to control and manage the generation and spread of what are known from past experience to be very dangerous chemicals – without identifying the full range of the chemicals involved;
- ❑ The EIS does not include adequate provision for the adequate on-going monitoring of the emission chemicals of most concern in relation to harmful impacts on human health and on the integrity of surrounding agricultural processes;
- ❑ As a consequence of these deficiencies, the EIS does not adequately or thoroughly consider the full extent of the likely impacts of the proposed high temperature combustion process, and on this basis the proposed incineration process cannot be accepted as safe or appropriate.

Our Submission

We have previously demonstrated, and submitted, that proposed high temperature incineration process should be rejected because of the health, environmental and agricultural risks involved. The EIS fails to address these issues, and fails to identify controls that might offset or manage the very serious potential impacts involved.

5 INADEQUACIES IN THE MANAGEMENT OF THE CURRENT FACILITY

The proposed high temperature incineration facility will be additional to the extensive existing waste management processes operated by Veolia at Woodlawn.

The following issues in relation to the performance and compliance of the existing waste facilities at Woodlawn are noted:

- ❑ A review of compliance failures over the past twenty years has been undertaken.
- ❑ This review has identified a significant number of environmental non-compliance issues in relation to the management and control of the current waste facility during that period (refer Appendix D).
- ❑ There has been a progressive loss of trust between Veolia and the local community over many aspects of the management and control of the current facility, and this loss of trust has implications for any confidence the community might otherwise have for the effective management of the far more complex and sensitive process now proposed;
- ❑ Performance over the past twenty years gives rise to very reasonable doubts that those who have failed to manage and control a less complex operation in the past can be expected to effectively, safely and responsibly manage and control the far more complex and higher risk high temperature waste incineration process now proposed.

Our Submission

We have demonstrated in this submission that the proposed high temperature incineration process should be rejected because of the health, environmental and agricultural risks involved. The EIS fails to address these issues, and fails to identify controls that might offset or manage the very serious potential impacts involved.

Veolia has over the past twenty years repeatedly failed to demonstrate responsible environmental management of the existing waste management facility at Woodlawn.

This record provides no confidence for the successful, safe and environmentally compliant management of the far more complex and far higher risk high temperature incineration process now proposed.

6 CLIMATE CHANGE IMPLICATIONS

Most countries, most communities and most individuals accept the reality of climate change, and the need to address this reality in order to preserve the viability of life systems on this planet.

These issues are vital to regional communities and associated agricultural activities.

While absolute consensus is often clouded by conflict of interest issues, a general view has emerged that a net zero carbon economy will need to emerge by 2050 to maintain some sort of climate stability, and to sustain agricultural practices into the future.

This process will be complex and no doubt difficult, but it will certainly involve the progressive decarbonization of energy generation.

This process has begun, and will proceed in the short and medium term.

It is no longer a “can” that can be kicked further down the road.

High temperature waste incineration runs counter to this reality:

Waste is in effect a hydrocarbon based fuel.

Plastic wastes, which constitute a very significant proportion of the waste feedstock proposed for the Woodlawn high temperature incineration plant, are produced from petroleum hydrocarbons.

To introduce a “waste to energy” high temperature incineration project is to introduce a carbon fuel based energy generation mechanism – which runs counter to where the rational majority of humanity see the world heading.

Given the time frames involved, the economics and commercial viability of such an investment must be questionable.

Our Submission

The proposed high temperature waste incineration plant runs counter to, and is inconsistent with, agreed local, state, national and international carbon reduction policies and commitments.

7 CONCERNS ABOUT ENERGY RECOVERY

7.1 BACKGROUND

The proponent justifies the proposal on three grounds: that insufficient landfill is available, that incineration is more sustainable and finally that it is “recovering energy” from the waste stream. This section deals with concerns about the latter justification.

Energy recovery is deemed necessary for public acceptance of waste incineration. The NSW Energy from Waste Policy requires proponents to reach a certain efficiency. The fact that energy recovery needs regulation in this way strongly hints that the economics of this recovery process are questionable, and that the public cannot rely on market forces to drive behaviour. Indeed, the public must rely on the scrutiny of consent authorities to ensure that the electricity promised can actually be delivered to the NSW grid at times when it is required. This section raises concerns that the project may not be able to meet these expectations.

7.2 CONCERNS ABOUT THE ABILITY TO EXPORT ENERGY

The EPA policy implies that the public can expect that a minimum of 25% of the energy embodied in the waste stream is delivered in a useful manner to the NSW grid. Based on the information provided in the EIS, this is far from certain for two reasons. Firstly, the proponent admits in vague terms that Essential Energy’s 66 kV cannot export its energy, strongly hinting at restringing and the need for larger poles, and secondly, deeper constraints in the network have not been considered. Without resolution of these two issues, the public cannot be certain that it will in fact receive the energy promised by the project.

The project’s SEARS also require

- “identification of any infrastructure upgrades required off-site to facilitate the development;” and
- “details of existing transmission infrastructure constraints.... and all required mitigation measures.”

The EIS is seriously deficient in the following respects:

1. The public have not been provided with sufficient detail about the off-site impacts of the electrical plant required for the project. The transmission line analysis report attempts to leave this detail to Essential Energy rather than disclosing this important information at this time. If the 66 kV system is to be substantially upgraded (particularly with larger towers) then these upgrades should be included in the EIS, with full consultation for impacted landholders, with visual biodiversity and heritage impacts considered by field survey, rather than in a desktop survey.

2. The EIS should, if it is to be justified on energy grounds, include dynamic electricity modelling showing that the project can in fact dispatch even after the local grid upgrades are made. Many energy projects are routinely curtailed as a result of grid congestion and if these curtailments are sufficiently common then the public will not receive the energy promised by the project.

At the present time, the public cannot be satisfied that the project will meet the basic requirements of the Waste to Energy policy nor the SEARS.

7.3 CONCERNS OVER THE TIMING OF EXPORTS

The NSW electricity grid is transitioning to renewables under the Government's Electricity Infrastructure Roadmap. This roadmap emphasises that NSW will need to overbuild wind and solar assets, creating times of excess and times of shortage.

Two gigawatts of long duration storage and considerable shorter-term storage is required to balance the system; moving energy from times of excess to times of shortage.

Consumers will underwrite these storage investments via Long Term Energy Service Agreements.

Veolia's project is conceived as a "must run" plant, meaning for a good proportion of its operating time it will be pushing electricity into a market which is saturated with renewable energy, driving up the need for the public to invest in storage to shift its output into higher demand intervals. It will also displace renewable energy at this time, driving up emissions.

As a small but current demonstration of this, Figure 1 shows the seven days leading up to this submission.

The NSW grid was at zero or negative pricing on numerous occasions. Pushing electricity into these periods, when the market is over supplied, is detrimental to the objects of both the Net Zero policy and the Electricity Infrastructure roadmap.

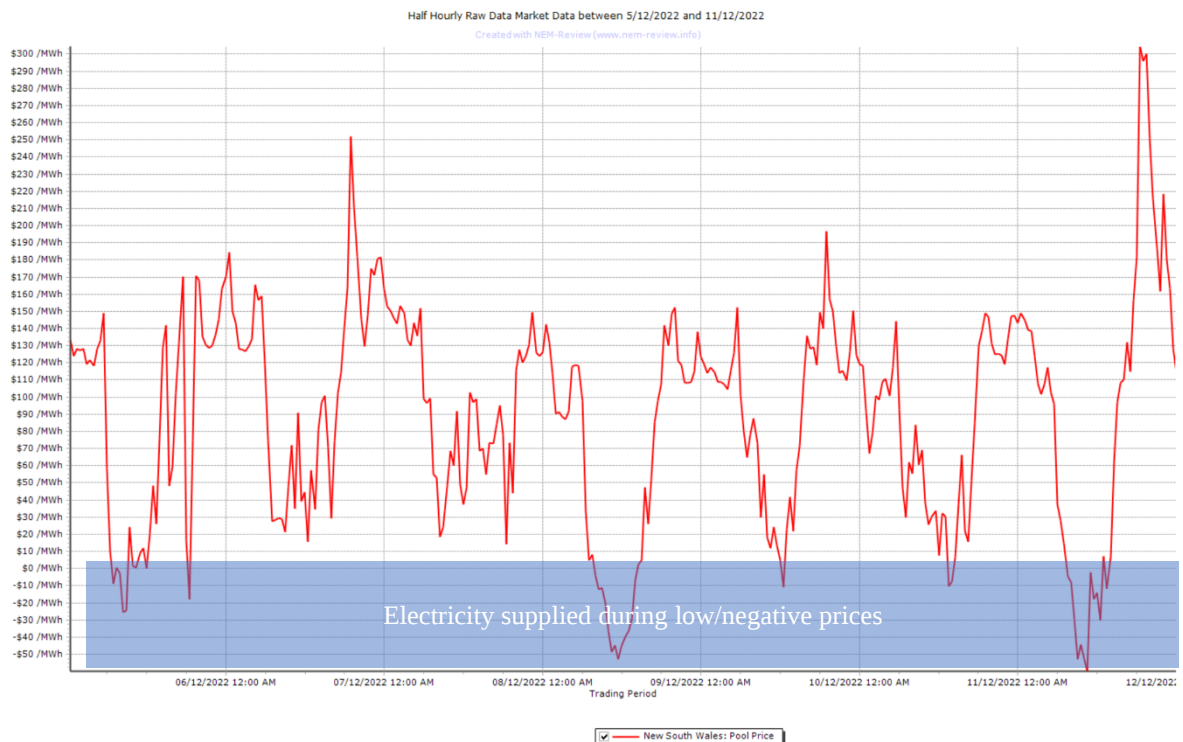


Figure 1 A sample of NSW electricity prices showing that had the project been operational in the week before this submission, it would have been supplying energy at times of zero or negative prices, displacing renewable energy and increasing the consumer's need to underwrite storage.

This project should, in order to give the public confidence that it will not have adverse consequences in the market, be required to store all energy during times of low and negative pricing in the electricity market, and then make this energy available at times of genuine demand.

Our Submission

The proponent should

Disclose, and fully assess the 66 kV line upgrades.

Conduct and disclose dynamic grid studies demonstrating that the project will not be curtailed.

Include sufficient storage such that the proposed development only exports energy at times when it is not displacing renewable energy and/or driving up the consumer's need to underwrite storage elsewhere in the grid.

8 CHANGES REQUIRED FOR BASIC VIABILITY

The Long Water Agricultural Association Incorporated opposes the proposed high temperature waste incineration project because of the very serious risks to health, environmental and agricultural process identified in this submission.

However, the Association is not simply opposing the proposed development for the sake of opposition.

If the issues raised in this submission could be resolved, although we believe that the history of similar projects suggests that many of the problems identified are intractable, then the Association would reconsider its position.

Some of the actions that would be required to establish a basis for reconsideration would include, but not be limited to, the following:

- ❑ The EIS must include more detailed information on the sources and nature of the waste material to be processed by high temperature incineration, so that more realistic assessments of the combustion process and the emissions generated by that process could be undertaken.
- ❑ The EIS must identify the chemicals that will be generated by the high temperature combustion of these wastes, based on conservative rather than “optimistic” assessments of the waste mix.
- ❑ In effect, it must be demonstrated with total confidence that the proposed facility would be able to perform under “worst case” conditions without harmful impact on community health, the environment, or agricultural processes.
- ❑ The proposed development and therefore the EIS must identify and include “international best practice” treatment technologies to ensure the management and control of harmful emissions, and demonstrate that such technologies are available and efficacious.
- ❑ The EIS must include provision for the appropriate and on-going monitoring of all of the chemicals likely to be generated by the high temperature combustion process, including on-going and publicly available stack monitoring for all emissions of potential concern.
- ❑ This monitoring must be undertaken both on the site where the project is to be based, and on adjoining land subject to adverse impacts.

- ❑ Monitoring on adjoining land must be undertaken on an independent basis, and affected landowners and stakeholders must be given the opportunity to be involved in the monitoring process.
- ❑ All monitoring results, both on and off-site, must be made public in a timely manner.

Our Submission

As it stands, the proposed high temperature incineration plant must be rejected on the basis of the very serious potential impacts that it would have on community health and associated agricultural practices. Some (but by no means all) of the changes that would be required for a reconsideration of the project are provided.

9 REQUIREMENT FOR INDEMNITY

This submission has raised very serious concerns regarding the potential adverse impacts that the proposed high temperature waste incineration project would have on affected communities and agricultural processes.

For this reason it is our submission that the project should be rejected.

However we accept the unfortunate reality that the project may be approved.

If the project is approved, and given the very serious issues that we have raised in this submission, it is our very clear contention that:

- ❑ If the project is approved, appropriate indemnities must be offered to all potentially affected landowners and other stakeholders; and
- ❑ These indemnities must adequately cover all human health impacts, and all impacts on the viability, integrity and economics of agricultural processes undertaken on surrounding land, both currently and in the future.

Our Submission

It is our submission that the project as currently proposed should be rejected, for reasons outlined in this document. However, should the project be approved, we submit that appropriate indemnities should be put in place to cover all and any future harm and loss suffered by any individual or entity adversely impacted by the proposed development.

10 PRECAUTIONARY APPROACH REQUIRED

A long established principle of sound environmental management is that in all circumstances, and in particular in the uncertain circumstances such as those that apply in this case, a precautionary approach should be adopted.

This is the so-called “Precautionary Principle.”

In this case, given the submission presented in this document, precaution and prudence demand that the proposal is rejected.

Our Submission

**On the basis of reasonable prudence and precaution, the proposal as presented
should be rejected.**

11 CONCLUSIONS

The key scope, findings and conclusions of this submission are:

- ❑ This submission deals primarily with the effects of chemicals released in the high temperature combustion exhaust stream, and energy recovery issues;
- ❑ It is noted that there may well be many other risks associated with the project, and inadequacies in the assessment of those risks presented in the EIS;
- ❑ The EIS in its current form does not adequately address the very serious concerns raised in this submission;
- ❑ The potential impacts identified in this submission are unacceptable to both the communities and populations immediately affected, but also to the wider community on the basis that significant harm may be imposed upon the integrity and viability of affected agricultural operations and processes.
- ❑ As such, on the basis of the information provided in the EIS, the proposed development is fundamentally flawed;
- ❑ Accordingly, the proposed high temperature incineration process cannot reasonably be approved, or proceed, on the basis of the information currently provided;
- ❑ For the proposed process to be approved and proceed the concerns and issues described in this submission would need to be fully and effectively addressed, which based on the assessment and rejection of similar projects and processes in the past is something that we doubt very much can be achieved.

12 AUTHORISATION

The Long Water Agricultural Association Incorporated has based this submission on the best information available to it at the date of preparation, and to the very best of our knowledge and understanding this submission presents the deficiencies, risks and important circumstances described in this document in a candid, objective and factual manner.

Austin McLennan
Chair

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Felicity Reynolds
Secretary

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The Long Water Agricultural Association Incorporated

13 December 2022

13 TECHNICAL ASSISTANCE & ADVICE

Technical assistance and advice in the preparation of this submission has been provided by Noel Child of NG Child & Associates'

Contact details are:

NG Child & Associates
22 Britannia Road
Castle Hill NSW 2154

Contact: **Noel Child**
 Principal
 Phone: (02) 9899 1968
 Mobile 0409 393 024
 Email: ngchild@canda.com.au



Noel Child is a successful and respected business and technical professional with over 40 years' experience in a variety of senior public and private sector appointments and assignments.

He has particular expertise in energy, air quality, environmental and sustainability issues.

He has had extensive experience with both the engineering and economic aspects of stack emission and cleaning technologies.

He has post graduate qualifications in chemical engineering, air science and commercial disciplines; has been involved in the evaluation of air cleaning technologies in Australia and internationally for both the public and private sectors, and has provided input on these applications to the NSW Government and a number of public and private sector stakeholders.

Noel has extensive experience in the risks posed to human health, agricultural and natural ecosystems by airborne and other contaminants.

He has lived and worked in regional communities, and understands the vital importance of agricultural viability and sustainability to the broader community.

APPENDIX A

The Long Water Agricultural Association Incorporated



Certificate of Incorporation as an Association

This is to certify

LONG WATER AGRICULTURAL ASSOCIATION INCORPORATED

is registered as an incorporated association in New South Wales
under the *Associations Incorporation Act 2009*

Registration Number **INC2201112**

Date of Incorporation **4 November 2022**

Issued by NSW Fair Trading on 4 November 2022.

Natasha Mann
Fair Trading Commissioner
NSW Fair Trading

Page 1 of 1

APPENDIX B
Harmful Chemicals Present in Waste
US EPA Advice On PFAS

PER- AND POLYFLUOROALKYL SUBSTANCES – KNOWN AS PFAS

EPA is committed to providing meaningful, understandable, and actionable information on per- and polyfluoroalkyl substances – known as PFAS.

The information provided here is intended to explain some of the important background information needed to understand the details of specific actions EPA takes to address PFAS, and other emerging events related to PFAS. It covers the following topics:

What EPA Has Learned So Far:

- ❑ PFAS are widely used, long lasting chemicals, components of which break down very slowly over time.
- ❑ Because of their widespread use and their persistence in the environment, many PFAS are found in the blood of people and animals all over the world and are present at low levels in a variety of food products and in the environment.
- ❑ PFAS are found in water, air, fish, and soil at locations across the nation and the globe.
- ❑ Scientific studies have shown that exposure to some PFAS in the environment may be linked to harmful health effects in humans and animals.
- ❑ There are thousands of PFAS chemicals, and they are found in many different consumer, commercial, and industrial products. This makes it challenging to study and assess the potential human health and environmental risks.

What We Don't Fully Understand Yet:

- ❑ How to better and more efficiently detect and measure PFAS in our air, water, soil, and fish and wildlife
- ❑ How much people are exposed to PFAS
- ❑ How harmful PFAS are to people and the environment
- ❑ How to remove PFAS from drinking water
- ❑ How to manage and dispose of PFAS
- ❑ This information will help EPA and state, local, and tribal partners make more informed decisions on how best to protect human health and the environment.

US EPA
April 28, 2022

APPENDIX C
Sone High Temperature Combustion Products
Dioxins & Furans

Dioxins and Furans

What are dioxins and furans?

Dioxins and furans is the abbreviated or short name for a family of toxic substances that all share a similar chemical structure. Dioxins, in their purest form, look like crystals or a colorless solid. Most dioxins and furans are not man-made or produced intentionally, but are created when other chemicals or products are made. Of all of the dioxins and furans, one, 2,3,7,8-tetrachloro-p-dibenzo-dioxin (2,3,7,8 TCDD) is considered the most toxic.

What are dioxins and furans used for?

Dioxins and furans are not made for any specific purpose; however, they are created when products like herbicides are made. They are also created in the pulp and paper industry, from a process that bleaches the wood pulp. In addition, they can be produced when products are burned.

How can dioxins and furans enter and leave your body?

Dioxins and furans can enter your body through breathing contaminated air, drinking contaminated water or eating contaminated food. About 90% of exposure to dioxins and furans is from eating contaminated food. Dioxins and furans can build up in the fatty tissues of animals.

How can you be exposed to dioxins and furans?

You can be exposed to dioxins and furans by eating contaminated food. Dioxins and furans typically stay and build up in the fatty tissues of animals. This means that eating beef, pork, poultry, fish as well as dairy products can be a

source of exposure.

There are several sources of exposure to dioxins and furans. If you work in or near a municipal solid waste incinerator, copper smelter, cement kiln or coal fired power plant you can be exposed to dioxins and furans. Individuals who burn their household waste or burn wood can be exposed as well. Even forest fires can contribute to the creation of small amounts of dioxins and furans.

Dioxins and furans have been found in the air, soil, and food. Dioxins and furans are mainly distributed through the air. However, only a small percentage of exposure is from air. Eating contaminated food is the primary source of exposure.

What are the health effects of exposure to dioxins and furans?

Dioxins and furans can cause a number of health effects. The most well known member of the dioxins/furans family is 2,3,7,8 TCDD. The U.S. Environmental Protection Agency (EPA) has said that it is likely to be a cancer causing substance to humans. In addition, people exposed to dioxins and furans have experienced changes in hormone levels. High doses of dioxin have caused a skin disease called chloracne. Animal studies show that animals exposed to dioxins and furans experienced changes in their hormone systems, changes in the development of the fetus, decreased ability to reproduce and suppressed immune system.

What levels of exposure have resulted in harmful health effects?

The U.S. EPA has set a limit of 0.00003 micrograms of 2,3,7,8-TCDD per liter of

APPENDIX D

Environmental Non-Compliance: 2002 - 2022

Veolia - Woodlawn Landfill Tarago: License No: 11436 Non-Compliance Details 2002 to 2021

2002:

Summary

Licence number: 11436
Annual Return Start: 06 Sep 2002
Annual Return End: 05 Sep 2003
Date Received: 31 Oct 2003

<u>Licence Condition number</u>	<u>Type of non-compliance</u>	<u>EPA actions</u>	<u>No. of times occurred</u>
M2.1	LDP1 - organochlorine pesticides and organophosphorus pesticides not analysed due to admin error during construction period	N/A	N/A
M2.1	LDP16: Lead, PM(10) and TSP not monitored at frequency of licence during construction period	N/A	N/A

2003:

Summary

Licence number: 11436
Annual Return Start: 06 Sep 2003
Annual Return End: 05 Sep 2004
Date Received: 26 Oct 2004

<u>Licence Condition number</u>	<u>Type of non-compliance</u>	<u>EPA actions</u>	<u>No. of times occurred</u>
M2.1	September 2004 - monitoring for pH and conductivity for surface and groundwaters were carried out for 3 out of 4 events	N/A	1

2004:

Summary

Licence number: 11436
Annual Return Start: 06 Sep 2004
Annual Return End: 05 Sep 2005
Date Received: 04 Nov 2005

<u>Licence Condition number</u>	<u>Type of non-compliance</u>	<u>EPA actions</u>	<u>No. of times occurred</u>
O6.5	O6.5 - The water pumped to ED3 shows levels of PRP to address non-compliance(s) organic compounds inconsistent with storm waterbeing negotiated quality - Woodlawn Bioreactor Facility - Monitoring Point 8		1

2005:

Summary

Licence number: 11436
Annual Return Start: 06 Sep 2005
Annual Return End: 05 Sep 2006
Date Received: 03 Nov 2006

<u>Licence Condition number</u>	<u>Type of non-compliance</u>	<u>EPA actions</u>	<u>No. of times occurred</u>
M2.1	Did not meet the requirement for frequency of sampling or full analysis during the reporting period.	EPA has written to licensee regarding non-compliance and relevant action	6

2006:

Summary

Licence number: 11436
Annual Return Start: 06 Sep 2006
Annual Return End: 05 Sep 2007
Date Received: 05 Nov 2007

<u>Licence Condition number</u>	<u>Type of non-compliance</u>	<u>EPA actions</u>	<u>No. of times occurred</u>
M2.1	MP1 - 7 pollutants removed as result of review: Alkalinity, As, HCO ₃ ⁻ , Cd, Ca, CO ₃ (2-), Cl, Cr, Cu, with this condition F-, Fe, Pb, Mg, Mn, NO ₃ ⁻ , NO ₂ ⁻ , Total N ₂ , Oil&Grease, OCl & OP pesticides, PO ₄ (3-), Na, SO ₄ (2-), Zn, Total Kjeldahl & Phenolics	EPA to monitor future compliance with this condition	1
M2.1	MP1, 2 & 3 - did not meet sampling frequency for Total Organic Carbon during reporting period.	EPA to monitor future compliance with this condition	1
M2.1	MP 4 did not meet sampling frequency for Total Dissolved Solids during the reporting period.	EPA to monitor future compliance with this condition	1
M2.1	MP 5 did not meet sampling frequency for pH, conductivity, NH ₃ , Total organic C ₂ , BOD, Total dissolved solids, and K, due to insufficient rainfall events.	EPA to monitor future compliance with this condition	1
M2.1	MP9 & 10 pollutants removed as result of review: BOD, Fe, Total N ₂ , Oil&Grease & total Kjeldahl N ₂ . Redox potential, Al, Ba, Cr(VI), Co, Hg, Benzene, Toluene, Ethyl benzene, Xylene, Total Petroleum hydrocarbons, PAHs. MP10 Cl not analysed.	EPA to monitor future compliance with this condition	1
M2.1	MP9 sampling frequency not achieved for WM6 (1 of 10 locations) for Total dissolved solids, pH, conductivity, SWL, NH ₃ , Ca, Mg, K, Na, Cl-, SO ₄ (2-), alkalinity & total organic C ₂ . sampling frequency for SO ₄ (2-) not achieved for MB4.	EPA to monitor future compliance with this condition	1
M2.1	MP11 sampling frequency not met for WM6 (1 in 29 locations) due to damage of monitoring well by earthworks.	EPA to monitor future compliance with this condition	1
M2.1	MP12 - only 3 out of 4 locations were recorded during reporting period.	EPA to monitor future compliance with this condition	1
M2.1	MP16 - High Volume Spacer ceased operations as per advice from EPA during 05/06 reporting period.	Appropriate Action taken by licensee	1

2007:

Summary

Licence number: 11436
Annual Return Start: 06 Sep 2007
Annual Return End: 05 Sep 2008
Date Received: 10 Nov 2008

<u>Licence Condition number</u>	<u>Type of non-compliance</u>	<u>EPA actions</u>	<u>No. of times occurred</u>
M2.1	Monitoring point 5 did not meet the sampling frequency for VOC, Molecular Weight of Stack Gases, and Dry Gas Density.	EPA to monitor future compliance with this condition	1
M2.1	Monitoring point 8 did not meet the sampling frequency for Sulfuric Acid Mist and Sulfur Trioxides,	EPA to monitor future compliance with this condition	1
M2.1	Monitoring points 13, 14, 15, 16, 17, 18, 19, 21 and 22 did not meet the sampling frequency for Redox Potential during the reporting period.	EPA to monitor future compliance with this condition	1
M2.1	Monitoring points 23 and 24 did not meet the sampling frequency for Flouride during the reporting period.	EPA to monitor future compliance with this condition	1
M2.1	MP 26-27, 29, 31-40 did not meet sampling requirements for numerous pollutants.	EPA to monitor future compliance with this condition	1
M2.1	MP 55, 56 and 57 did not meet sampling requirements for Calcium, Chloride, Magnesium, pH, Sodium, Su	EPA to monitor future compliance with this condition	1
M2.1	MP 58 did not meet the sampling requirements for all pollutants during the reporting period.	EPA to monitor future compliance with this condition	1

2008:

Summary

Licence number: 11436
Annual Return Start: 06 Sep 2008
Annual Return End: 05 Sep 2009
Date Received: 04 Nov 2009

<u>Licence Condition number</u>	<u>Type of non-compliance</u>	<u>EPA actions</u>	<u>No. of times occurred</u>
M2.1	MP 13, 15, 17 sampling frequency not met due to lack of precipitation.	Appropriate Action taken by licensee	1
M2.1	MP 26-27, 29, 31-40 did not meet the sampling frequency requirements.	EPA to monitor future compliance with this condition	1
M2.1	MP 55 and 58 sampling frequency requirements not met due to the monitoring points being dry.	EPA to monitor future compliance with this condition	1

2009:

Summary

Licence number: 11436
Annual Return Start: 06 Sep 2009
Annual Return End: 05 Sep 2010
Date Received: 05 Nov 2010

<u>Licence Condition number</u>	<u>Type of non-compliance</u>	<u>EPA actions</u>	<u>No. of times occurred</u>
M2.1	MP 25, 28, 30, 41-46, 56-57 did not meet the sampling frequency requirements for PAH or BTEX during the reporting period.	EPA to monitor future compliance with this condition	1
M2.1	MP 47 sampling frequency requirements were not achieved due to decommissioning of MP.	Appropriate Action taken by licensee	1
M2.1	MP 48 did not meet the sampling frequency requirements as the location of the MP is unsafe.	Appropriate Action taken by licensee	1
M2.1	MP 55 and 58 did not meet the sampling frequency requirements during the reporting period due to a lack of precipitation.	Appropriate Action taken by licensee	1

2010:

Summary

Licence number: 11436
Annual Return Start: 06 Sep 2010
Annual Return End: 05 Sep 2011
Date Received: 04 Nov 2011

<u>Licence Condition number</u>	<u>Type of non-compliance</u>	<u>EPA actions</u>	<u>No. of times occurred</u>
M2.1	MP5 - Sampling for dry gas density, moisture content and volatile organic compounds not undertaken.	EPA to monitor future compliance with this condition	1
M2.1	MP21 - Sampling frequency not met due to decommissioning of monitoring point.	Appropriate Action taken by licensee	1
M2.1	MP 44, 55 and 58 - Sampling frequency not met due to dry bore holes.	Appropriate Action taken by licensee	1
M2.1	MP 47 - sampling frequency not met due to decommissioning of monitoring point.	Appropriate Action taken by licensee	1
M2.1	MP 48 - monitoring not undertaken due to unsafe access.	Appropriate Action taken by licensee	1
M2.1	MP32 - monitoring point 32 did not meet sampling frequency required due to a duplicate sample being	EPA to monitor future compliance with this condition	1

2011:

Summary

Licence number: 11436
Annual Return Start: 06 Sep 2011
Annual Return End: 05 Sep 2012
Date Received: 02 Nov 2012

<u>Licence Condition number</u>	<u>Type of non-compliance</u>	<u>EPA actions</u>	<u>No. of times occurred</u>
M2.1	MP17 - sampling frequency requirements not met due to lack of rainfall.	Appropriate Action taken by licensee	1
M2.1	MP19 - Sampling frequency not met for potassium due to an oversight by the laboratory.	EPA to monitor future compliance with this condition	1
M2.1	MP21 and 47 - Sampling requirements not met due to decommissioning of these monitoring points.	Appropriate Action taken by licensee	1
M2.1	MP44, 55 and 58 - Sampling frequency not met due to insufficient sample water for analysis.	Appropriate Action taken by licensee	1
M2.1	MP48 Sampling requirements not met due to unsafe access to the monitoring point.	Appropriate Action taken by licensee	1

2012:

Summary

Licence number: 11436
Annual Return Start: 06 Sep 2012
Annual Return End: 05 Sep 2013
Date Received: 04 Nov 2013

<u>Licence Condition number</u>	<u>Type of non-compliance</u>	<u>EPA actions</u>	<u>No. of times occurred</u>
M2.1	Monitoring not undertaken in accordance with licence conditions. Licensee did not comply with required monitoring frequencies or analyse all required parameters at some monitoring locations.	Appropriate Action taken by licensee	1
U2.1	Licensee failed to remove all untreated leachate from evaporation dam ED3N-1 by 30 June 2013.	Penalty Notice issued	1
O2.1	Licensee failed to operate landfill gas management system in a proper and efficient manner.	Penalty Notice issued	1

2013:

Summary

Licence number: 11436
Annual Return Start: 06 Sep 2013
Annual Return End: 05 Sep 2014
Date Received: 31 Oct 2014

<u>Licence Condition number</u>	<u>Type of non-compliance</u>	<u>EPA actions</u>	<u>No. of times occurred</u>
M2.1	Monitoring points 8, 10,11,12,13,14,15,17,21,22,43,47,48,54 and 58 with this condition did not meet the sampling frequency requirements during the monitoring period.	EPA to monitor future compliance	1

2014:

Summary

Licence number: 11436
Annual Return Start: 06 Sep 2014
Annual Return End: 05 Sep 2015
Date Received: 05 Nov 2015

<u>Licence Condition number</u>	<u>Type of non-compliance</u>	<u>EPA actions</u>	<u>No. of times occurred</u>
M2,1	Monitoring Points 8, 13, 15, 17, 21, 43, 47, 48 & 58 did not meet sampling frequency requirements during monitoring period.	Non-compliance(s) under investigation	1
L6	Potentially offensive odour due to gas extraction system blockage. Capture treatment abilities to manage liquid in waste to improve gas capture and mitigate odour. Additional communication system implemented onsite as preventative.	Penalty Notice issued	1

2015:

No report available,

2016:

Summary

Licence number: 11436
Annual Return Start: 06 Sep 2016
Annual Return End: 05 Sep 2017
Date Received: 09 Nov 2017

<u>Licence Condition number</u>	<u>Type of non-compliance</u>	<u>EPA actions</u>	<u>No. of times occurred</u>
U2	Late submission of the ED1 and ED2 Dam integrity report.	Penalty Notice issued	1
M2	Monitoring Point 44 did not meet the sampling frequency requirements during the monitoring period.	EPA has written to licensee regarding non-compliance and relevant action	2

2017:

Summary

Licence number: 11436
Annual Return Start: 06 Sep 2017
Annual Return End: 05 Sep 2018
Date Received: 30 Oct 2018

<u>Licence Condition number</u>	<u>Type of non-compliance</u>	<u>EPA actions</u>	<u>No. of times occurred</u>
M2.3	Monitoring Points 13, 15, 17 & 22 did not meet the sampling frequency requirements during the monitoring period.	Appropriate Action taken by licensee	2

2018:

Summary

Licence number: 11436
Annual Return Start: 06 Sep 2018
Annual Return End: 05 Sep 2019
Date Received: 04 Nov 2019

<u>Licence Condition number</u>	<u>Type of non-compliance</u>	<u>EPA actions</u>	<u>No. of times occurred</u>
U1.1	The new Leachate Treatment Plant was commissioned on the 4 October 2018, four days after the stipulated completion date of 30 September 2018.	Appropriate Action taken by licensee	1
M2.3	Monitoring Points 13, 15, 17, 22, 62, 63, 64, 65 did not meet the sampling frequency requirements during the monitoring period.	Appropriate Action taken by licensee	14

2019:

Summary

Licence number: 11436
Annual Return Start: 06 Sep 2019
Annual Return End: 05 Sep 2020
Date Received: 03 Nov 2020

<u>Licence Condition number</u>	<u>Type of non-compliance</u>	<u>EPA actions</u>	<u>No. of times occurred</u>
M2.1	Monitoring did not meet the sampling frequency requirements during the reporting period.	EPA to monitor future compliance with this condition	10

2020:

Summary

Licence number: 11436
Annual Return Start: 06 Sep 2020
Annual Return End: 05 Sep 2021
Date Received: 30 Aug 2022

<u>Licence Condition number</u>	<u>Type of non-compliance</u>	<u>EPA actions</u>	<u>No. of times occurred</u>
M2.1	Monitoring did not meet the sampling frequency requirements during the reporting period.	EPA has written to licensee regarding non-compliance and relevant action	10
L6.1	Emission of potentially offensive odour impacting on the community.	Non-compliance(s) under investigation	302
M8.1	A log was not maintained, for a part of the reporting period, to record the run-times of all mechanical evaporators used at the premises.	Non-compliance(s) under investigation	1
R4.2	Within 24 hours of receipt of an odour complaint, the Licensee must provide the EPA with a written report.	EPA has written to licensee regarding non-compliance and relevant action	20
U1.2	The leachate treatment plant (LTP) was not able to meet its design capacity for continuously treating at least 4 L/s of leachate.	Non-compliance(s) under investigation	1

2021:

Summary

Licence number: 11436
Annual Return Start: 06 Sep 2021
Annual Return End: 05 Sep 2022
Date Received: 04 Nov 2022

<u>Licence Condition number</u>	<u>Type of non-compliance</u>	<u>EPA actions</u>	<u>No. of times occurred</u>
M2.1	Monitoring did not meet the sampling frequency requirements of M2.4	EPA action determined as part of scheduled inspection program	4
M2.1	Monitoring did not meet the sampling frequency requirements of M2.2 for one monitoring point on one occasion	EPA action determined as part of scheduled inspection program	1
R4.2	Veolia did provide all reports required by this condition. Not all were provided within 24 hours	EPA action determined as part of scheduled inspection program	1
O6.28	Treated leachate from the Leachate Treatment Plan (LTP) diverted from Coffey Dam 1 into the outer section of ED1 as an emergency contingency measure to ensure the Premises remains a zero discharge site.	EPA action determined as part of scheduled inspection program	1
O6.4	Leachate dams have exceeded 0.5m freeboard during this reporting period.	EPA action determined as part of scheduled inspection program	3
O5.2	Stormwater from ED3S has been diverted to ED1 during this reporting period	EPA action determined as part of scheduled inspection program	1
L6.1	292 Odour complaints were received during this reporting period.	EPA action determined as part of scheduled inspection program	292

Section 96 Protection of the Environment Operations Act 1997

Prevention Notice



VEOLIA ENVIRONMENTAL SERVICES (AUSTRALIA) PTY LTD
20 051 316 584
LEVEL 4, 65 PIRRAMA ROAD
PYRMONT NSW 2009

Attention: The Proper Officer

Notice Number 3503885
Reference Number REG-3326
Date 24-10-2022

Prevention Notice

Why is the EPA writing to you?

The Environment Protection Authority (EPA) reasonably suspects that an activity has been or is being carried on in an environmentally unsatisfactory manner at COLLECTOR ROAD TARAGO 2580 (Premises). The EPA has issued you with this Prevention Notice. Further information is set out in the notice below.

What are you required to do?

Please read this notice carefully and carry out the preventative action specified in this notice by the date required. If you have any queries about this matter, please contact Carlie Armstrong on (02) 6229 7002.

BACKGROUND

- A. The EPA has responsibility for the administration and enforcement of the *Protection of the Environment Operations Act 1997* (Act).
- B. VEOLIA ENVIRONMENTAL SERVICES (AUSTRALIA) PTY LTD (Veolia; the Licensee) is the holder of environment protection licence no. 11436 (Licence) issued under the Act in respect of the Premises. The Licence authorises the carrying out of waste disposal (*application to land*). As the holder of the Licence, the Licensee is the occupier of the Premises for the purposes of s 96(2)(a) of the Act.
- C. The EPA is the appropriate regulatory authority for licensed premises under section 6 of the Act.
- D. The Premises contains a series of evaporation dams (ED1, ED2 and ED3) which historically captured polluted water from licensed activities. The EPA captured Pollution Reduction Programs (PRP) on the Licence in 2016 and 2018 which required Veolia to
 - i. investigate the integrity of the liners in the evaporation dams
 - ii. assess the nature and extent of any leakage from the evaporation dams

Phone 131 555
Phone 02 9995 5555
(from outside NSW)

TTY 133 677, then
ask for 131 555

Locked Bag 5022,
PARRAMATTA
NSW 2124

6 Parramatta Square
10 Darcy Street
Parramatta NSW 2150

info@epa.nsw.gov.au
www.epa.nsw.gov.au
ABN 43 692 283 758

APPENDIX E

**UK Department of Health
Arguments Against High Temperature Waste Incineration**

UK Department of Health Arguments Against High Temperature Waste Incineration

- ❑ The highly toxic fly ash must be safely disposed of. This usually involves additional waste miles and the need for specialist toxic waste landfill elsewhere. If not done properly, it may cause concerns for local residents.
- ❑ The health effects of dioxin and furan emissions especially during start up and shut down, or where filter bypass is required continue to be a problem.
- ❑ Incinerators emit varying levels of heavy metals such as vanadium, manganese, chromium, nickel, arsenic, mercury, lead and cadmium, which can be toxic at very minute levels.
- ❑ Incinerator Bottom Ash (IBA) has elevated levels of heavy metals with ecotoxicity concerns if not reused properly. Some people have the opinion that IBA reuse is still in its infancy and is still not considered to be a mature or desirable product, despite additional engineering treatments. Concerns of IBA use in Foam Concrete have been expressed by the UK Health and Safety Executive in 2010 following several construction and demolition explosions. In its guidance document, IBA is currently banned from use by the UK Highway Authority in concrete work until these incidents have been investigated.
- ❑ Alternative technologies are available or in development such as mechanical biological treatment, anaerobic digestion (MBT/AD), autoclaving or mechanical heat treatment (MHT) using steam or plasma arc gasification (PGP), which is incineration using electrically produced extreme high temperatures, or combinations of these treatments.
- ❑ Building and operating waste processing plants such as incinerators requires long contract periods to recover initial investment costs, causing a long-term lock-in. Incinerator lifetimes normally range from 25 to 30 years.
- ❑ Incinerators produce fine particles in the furnace. Even with modern particle filtering of the flue gases, a small part of these is emitted to the atmosphere. PM2.5 is not separately regulated in the European Waste Incineration Directive, even though they are repeatedly correlated spatially to infant mortality in the UK (M. Ryan's ONS data based maps around the EfW/CHP waste incinerators at Edmonton, Coventry, Chineham, Kirklees and Sheffield). Under WID there is no requirement to monitor stack top or downwind incinerator PM2.5. Several European doctors associations (including cross discipline experts such as physicians, environmental chemists and toxicologists) representing over 33,000 doctors wrote a keynote statement directly to the European Parliament citing widespread concerns on incinerator particle emissions and the absence of specific fine and ultrafine particle size monitoring or in depth industry/government epidemiological studies of these minute and invisible incinerator particle size emissions.
- ❑ Local communities are often opposed to the idea of locating waste processing plants such as incinerators in their vicinity (the Not in My Back Yard phenomenon). Studies in Andover, Massachusetts correlated 10% property devaluations with close incinerator proximity.

- ❑ Prevention, waste minimisation, reuse and recycling of waste should all be preferred to incineration according to the waste hierarchy. Supporters of zero waste consider incinerators and other waste treatment technologies as barriers to recycling and separation beyond particular levels, and that waste resources are sacrificed for energy production.
- ❑ A Eunomia report found that under some circumstances and assumptions, incineration causes less CO₂ reduction than other emerging EfW and CHP technology combinations for treating residual mixed waste.[26] The authors found that CHP incinerator technology without waste recycling ranked 19 out of 24 combinations (where all alternatives to incineration were combined with advanced waste recycling plants); being 228% less efficient than the ranked 1 Advanced MBT maturation technology; or 211% less efficient than plasma gasification/autoclaving combination ranked 2.
- ❑ If reusable waste fractions are handled in waste processing plants such as incinerators in developing nations, it would cut out viable work for local economies. It is estimated that there are 1 million people making a livelihood off collecting waste.
- ❑ The reduced levels of emissions from municipal waste incinerators and waste to energy plants from historical peaks are largely the product of the proficient use of emission control technology. Emission controls add to the initial and operational expenses. It should not be assumed that all new plants will employ the best available control technology if not required by law.
- ❑ Waste that has been deposited on a landfill can be mined even decades and centuries later and recycled with future technologies – which is not the case with incineration.