

16 April 2025

Luke Farrell
Principal Environmental Scientist
Element Environment
Via email: luke@elementenvironment.com.au

RE: Response to Submissions – Woodlawn Bioreactor Modification 7

Dear Luke,

The following outlines additional information and clarification to address the New South Wales (NSW) Environmental Protection Authority (EPA) requests for further information and community submissions relating to the *Air Quality Assessment – Woodlawn Bioreactor Leachate Reverse Osmosis Plant and Irrigation Scheme (Modification 7)* (the AQA) (**Todoroski Air Sciences, 2024b**).

Each of the key comments is shown in grey italics and is followed by our response to the comment.

NSW EPA

Odour from concentrated brine

The modification report states that leachate generation from the landfill is currently approximately 345,600L per day and that after treatment through the leachate treatment plant and the reverse osmosis plant, approximately half of this will be treated permeate that can be applied to land through irrigation. The modification report states that the other half of this volume, approximately 172,800L per day, will become concentrated brine which will be pumped to the onsite storage dams.

The modification report has listed the anticipated average quality of brine following treatment at the ROP, but this assessment is inadequate. It has not included an assessment of many of the analytes that are known to be in landfill leachate. The range of analytes listed at the beginning of Tab 1 of this letter should also be assessed for brine output.

The EPA is concerned that the proponent has not considered the odour impacts that this concentrated brine may have on the local community. Nor has the proponent discussed any mitigation measures for controlling additional odours generated by the concentrated brine being stored in open air storage dams.

Analyte sampling of the brine solution was conducted by the Proponent and provided for analysis. The results are summarised in **Table 1**. The sampling data shows the concentration of analytes in the feed solution, the

reduction achieved during the treatment in the Reverse Osmosis Plant (ROP) (Pass 1 permeate and Pass 2 permeate) and the resulting concentrate solution (i.e. the brine).

The results indicate that the analyte concentrations are significantly reduced when through the ROP process, while the concentrate solution shows concentrations approximately double those of the feed solution. This aligns with the assumptions considered and assessed in the AQA.

Table 1: Summary of analyte sampling for brine solution

Analyte	Unit	Feed quality	Pass 1 permeate	Pass 2 permeate	Concentrate
pH	pH units	8.6	5.5	6.5-8.5	6.5-8.5
Chloride Cl	mg/L	2600	130	6.5	5070
Total Chlorine	mg/L	<10	1	0.1	195
Total Dissolved Solids	mg/L	19000	1000	50	38000
Fluoride as F	mg/L	1.4	0.07	0.0035	2.73
Total Organic Carbon	mg/L	1900	190	19	3705
Nitrate as N in water	mg/L	1500	375	93.75	0.975
Nitrite as N in water	mg/L	1	0.1	0.02	1.9
Ammonia as N in water	mg/L	20	2	0.4	38
Calcium - Dissolved	mg/L	52	2.6	0.13	101.4
Magnesium - Dissolved	mg/L	150	7.5	0.375	292.5
Antimony -Dissolved	ug/L	18	1.8	0.18	35.1
Aluminium-Dissolved	ug/L	2000	200	20	3900
Arsenic-Dissolved	ug/L	320	32	3.2	624
Barium-Dissolved	ug/L	150	15	1.5	292.5
Beryllium-Dissolved	ug/L	<5	0.5	0.05	9.75
Boron-Dissolved	ug/L	4600	460	0.4	8970
Cadmium-Dissolved	ug/L	3.4	0.34	0.034	6.63
Cobalt-Dissolved	ug/L	94	9.4	0.94	183.3
Copper-Dissolved	ug/L	12	1.2	0.12	23.4
Chromium-Dissolved	ug/L	620	62	6.2	1209
Iron-Dissolved	ug/L	15000	1500	150	29250
Lead-Dissolved	ug/L	24	2.4	0.24	46.8
Lithium-Dissolved	ug/L	230	23	2.3	448.5
Manganese-Dissolved	ug/L	250	25	2.5	487.5
Mercury - Dissolved	ug/L	<0.5	0.05	0.005	0.975
Molybdenum-Dissolved	ug/L	<10	1	0.1	19.5
Nickel-Dissolved	ug/L	290	29	2.9	565.5
Selenium-Dissolved	ug/L	<10	1	0.1	19.5
Tin-Dissolved	ug/L	54	5.4	0.54	105.3
Vanadium -Dissolved	ug/L	110	11	1.1	214.5
Zinc-Dissolved	ug/L	2100	210	21	4095
Total Positive PFHxS & pros	ug/L	0.25	0.025	0.0025	0.4875
Total Positive PFOS & PFOA	ug/L	0.24	0.024	0.0024	0.468
Total positive PEAS	ug/L	26	0.6	0.06	11.7

The AQA conservatively assumed the odour associated with the storage of the brine would be double the measured odour of the feed solution. However, for most odours, a doubling of concentration does not result in a proportional increase in perceived odour intensity, as the relationship is typically sublinear. This effect is observed with compounds such as ammonia. Therefore, the approach in the AQA is considered conservative and is consistent with the concentration of analyte in the brine.

The odour of the brine is expected to be distinct from other odours at the site, characterised by a more metallically or salty quality due to concentrations of chlorine and other dissolved metals. As a result, it would be easily distinguishable from the other odour sources in the area. It is recommended that site specific odour sampling of the brine concentrate to validate the odour modelling assumptions.

The AQA originally assessed brine storage in open containment areas, including Cofferdam 1, Cofferdam 2 and ED4. It is now proposed that the brine solution will now be primarily stored in the Tank Farm 1 and Cofferdam 2. Brine may also be stored in Cofferdam 1 following repair of the liner. A subsequent modification proposed replacing the open ED4 dam with four fixed enclosed tanks at the same location. Each tank will have a nominal capacity of approximately 13.5 million litres and be fully enclosed to prevent any potential odour release.

Each tank will be fitted with six small vents on the roof to allow for pressure equalisation during filling. These vents will be equipped with carbon filters to treat and control any odorous air emissions. This enclosed tank design and odour control system will ensure any odour emissions remains negligible, serving as an active odour mitigation measure compared to the originally proposed open dam storage.

The modelling parameters associated with the operation of Tank Farm 1 have been presented the *Response to Submissions – Woodlawn Bioreactor Modification 6* (**Todoroski Air Sciences, 2024c**). The associated odour impacts from the operation of Tank Farm 1, Cofferdam 1 and Cofferdam 2, containing the brine solution, have been modelled using the same setup.

The predicted 99th percentile ground level odour concentrations due to the tanks at each receptor are presented in **Table 2**, alongside the approved levels as presented in **TOU (2016)** and the odour levels for the additional leachate dam at the MBTF.

The results in **Table 2** show that the odour associated with brine solution storage from the ROP has a negligible effect at the applicable sensitive receptor locations and remains below the applicable odour impact criterion of 6 OU. Compared to the modelling predictions in the AQA (**Todoroski Air Sciences, 2024b**), the predicted incremental odour levels are lower with the operation of Tank Farm 1.

It is noted that Veolia would retain the option to store excess brine in Cofferdam 1 and Cofferdam 2 if there is insufficient capacity within Tank Farm 1. The potential odour impacts from these operations are addressed in the AQA, which demonstrates negligible effects at the applicable sensitive receptor locations and confirms that levels would remain below the applicable air quality impact criteria of 6 OU.

Table 2: Comparison of predicted odour impact at privately-owned receptor locations

Receptors	Predicted odour concentration (OU)				
	Approved operations (TOU, 2016)	Additional MBTF leachate dam (Todoroski Air Sciences, 2024a)	Project – Tank Farm 1, Cofferdam 1 and Cofferdam 2	Total impact	Criteria
R2 (Veolia)	3.9	0.18	0.19	4.3	6
R3 (Veolia)	1.3	0.03	0.02	1.3	6
R4	1.4	0.05	0.03	1.5	6

Public submissions

Modification 7 stinks much like Veolia's Woodlawn facility - It became clear when speaking with Ms Sheelagh Laguna at the Department of Planning, Housing and Infrastructure (DPHI) that Veolia is selling their proposed reverse osmosis plant modification as a solution to the odour issues that have continued to plague our community. This is despite ongoing claims from Veolia that there is in fact no odour.

Modification 7 involves the construction and operation of a ROP and an associated irrigation scheme as part of the Woodlawn Bioreactor (WBR) at the Woodlawn Eco Precinct (WEP). The purpose of the ROP and irrigation scheme is to further reduce the volume of treated leachate stored at the site.

The AQA includes detailed air quality modelling, using on-site meteorology to assess the potential for odour associated with the operation of Modification 7. The modelling results in the AQA indicate that odour from with the storage of concentrated brine in the cofferdams and ED4 dam has a negligible impact on applicable sensitive receptor locations, with odour levels remaining below the applicable air quality impact criterion of 6 OU.

Based on the model's predictions for nearby receptor locations, the predicted odour level at Tarago Village, approximately 9km away, can be inferred as less than 0 OU, meaning odour associated with Modification 7 would be undetectable.

A review of potential best practice mitigation measures for the proposed storage of concentrated brine determined that the installation of aerators is the most suitable mitigation measure and will be applied. It is noted that the brine is not expected to significantly alter odour levels, as prior to processing through the ROP, the leachate is already treated to remove organic compounds, which are the primary contributors to odour from these sources.

Since the preparation of the AQA, Veolia has proposed replacing the open ED4 dam with four fixed, enclosed tanks at the same location. These enclosed tanks would prevent any potential odour release during storage, and with carbon filters fitted to the vents on the tank roofs, this would ensure odour emissions from this source would remain negligible.

Revised modelling predictions are presented in **Table 2** and demonstrate that the operation of Tank Farm 1 will reduce the predicted incremental odour associated with the Project, keeping it below the applicable odour criterion.

The lived experience of the community is that all of Veolia's apparent attempts to deal with the ongoing stink from their Woodlawn facility have failed. The dodgy details and mixed messaging within this modification application do nothing to convince us that this modification will have any real benefit for our community. In fact, it just appears to be another way for Veolia to facilitate their ambition of bringing even more of Sydney's rubbish into our town.

The need for Modification 7 arises from the necessity to manage excess water at the site. The AQA demonstrates that aspects of Modification 7 are only a minor source odour and would not be detectable at Tarago Village. Mitigation measures to minimise odour from sources associated with Modification 7 have been considered and will be implemented. Improved management of excess water at the site is also expected to reduce improve odour emissions from the other odour sources.

The Conditions of Consent and the EPL for the Woodlawn Bioreactor are both explicit in relation to the odour emissions from Woodlawn, that there must not be any offensive odour emitted from the premises. However, Veolia's appears to have misread, or simply ignored this requirement, as this modification application continues to talk of 6 OU being an acceptable limit. The only acceptable odour limit is zero OU. On this detail alone their modification application should be denied. It is difficult not to see this as a blatant attempt to normalise their continued licence breaches in relation to odour.

Odour in a regulatory context needs to be considered in two similar, but different ways depending on the situation.

NSW legislation (*Protection of the Environment Operations Act, 1997*) prohibits emissions that cause offensive odour to occur at any off-site receptor. Offensive odour is evaluated in the field by authorised officers, who are obliged to consider the odour in the context of its receiving environment, frequency, duration, character and so on and to determine whether the odour would interfere with the comfort and repose of the normal person unreasonably. In this context, the concept of offensive odour is applied to operational facilities and relates to actual emissions in the air.

However, in the approval and planning process for proposed new operations or modifications to existing projects, no actual odour exists, and it is necessary to consider hypothetical odour. In this context, odour concentrations are used and are defined in odour units. The number of odour units represents the number of times that the odour would need to be diluted to reach a level that is just detectable to the human nose. Thus, by definition, odour less than one odour unit (1 OU), would not be detectable to most people.

The range of a person's ability to detect odour varies greatly in the population, as does their sensitivity to the type of odour. The wide ranging response in how any particular odour is perceived by any individual poses specific challenges in the assessment of odour impacts and the application of specific air quality goals related to odour. The NSW Odour Policy (**NSW DEC, 2006**) sets out a framework specifically to determine a suitable air quality goal based on the population density of a location. The NSW criteria for acceptable levels of odour range from 2 to 7 OU, with the more stringent 2 OU criteria applicable to densely populated urban areas and the 7 OU criteria applicable to sparsely populated rural areas.

For the WEP an odour goal of 6 OU has been determined as acceptable for the location based on the surrounding population. The AQA has predicted odour levels associated with Modification 7 would comply with this odour goal.

In the most recent reporting period ending November 2023, 339 odour complaints were received. Each one of these complaints is a breach of Veolia's current licence conditions. There is nothing in this application that guarantees that this modification will ensure that they will finally comply with their licence requirements of zero odour leaving their premises.

The Woodlawn Bioreactor Expansion Project Independent Odour Audit #11 (**TOU, 2023**) analysis of the odour complaints received for the April 2022 to April 2023 period indicate a trend appears to reflect the operational challenges associated with the previous high rainfall conditions and wet weather conditions in the preceding period.

It is noted that during November 2023, most of NSW experienced above average to very much above average rainfall. These conditions likely contributed the number of odour complaints received and highlight the need for Modification 7 to help manage excess water at the site.

Ongoing failures by Veolia at the Woodlawn Bioreactor - Over the past two years alone Veolia has been breached by Government departments at least ten times for issues at Woodlawn. This is on top of the hundreds of odour complaints made during the same period. This is not a company that appears to take their environmental responsibilities seriously. How can the community have any faith that Veolia would do any better running a reverse osmosis unit?

Veolia implements a range of measures to manage and minimise odour generation. These measures continue to evolve with the operations and as new technologies become available. One such advancement is the proposed ROP, designed to manage the excess leachate at the site.

Since the completion of the AQA, additional improvements have been proposed, including the installation of fixed enclosed tanks in place of a previously proposed open dam. These enclosed tanks prevent potential odour release during the storage, and the carbon filters fitted to the tank vents ensure odour emissions remain negligible from this source.

Overall, the AQA demonstrates that odour emissions from the ROP are unlikely to have any tangible impact, consistent with the currently approved operational impacts.

Veolia needs to provide an appropriate odour modelling report based on fact. This includes re-examining the current odour sensors, ensuring that they are appropriately calibrated for the terrain and the environment, the actual source of odour, as well as locating them in actual locations found to be regularly called out in community odour reports.

The air quality modelling in the AQA is conducted in general accordance with the requirements in the NSW EPA documents *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (NSW EPA, 2022)* and *Generic Guidance and Optimum Model Setting for the CALPUFF Modeling System for Inclusion into the 'Approved Methods for the Modeling and Assessments of Air Pollutants in NSW, Australia' (TRC, 2011)*.

Local land use and detailed topographical information were included in the modelling simulation, along with data from the on-site weather station at the WEP. An evaluation of the modelling data is presented in the AQA and is considered to show sensible trends representative of the area.

The air quality modelling incorporates odour measurements from sources at the WEP, as reported in the most recent *Independent Odour Audit #11 (TOU, 2023)*. Overall, the air quality modelling presented in the AQA is considered to be a realistic representation of the likely conditions associated with the Modification 7.

Veolia needs to re-draft their application in light of them misunderstanding their own existing licence conditions. It must clarify that the approved odour level coming from their premises is in fact zero.

As discussed in an earlier response, odour in a regulatory context is considered in two different ways; that is, the concept of offensive odour is applied to operational facilities, and in the approval and planning process for proposed new operations or modifications.

The approval and planning process predicts the likely odour impact that may arise by using air dispersion modelling which can calculate the level of dilution of odours emitted from the source at the point to where odour reaches surrounding receptors to produce results in terms of odour units (OU). The applicable criteria is based on the population density and the receiving environment, which for the WEP is 6 OU.

Offensive odour is evaluated in the field by authorised officers who consider a range of factor to determine if the odour is "offensive". This does not guarantee that no odour would be emitted from an operation, just that the odour is not deemed offensive and that they are managing odour emissions.

Veolia has done NO community consultation with regards to this reverse osmosis unit. I have had to interpret their intent from their mistake ridden, lack lustre document. Where is the information about green house gas production? Where is the information about how they intend to power the unit? Where is the information about active real time monitoring? Where is the information about how this plan fits with their toxic waste incinerator plans? Where is the detailed and accurate odour monitoring report?

The AQA and this subsequent response provide a detailed odour modelling assessment of the potential odour impacts. Odour Audits for the WEP are prepared annually and made available on the Veolia website.

Power for the ROP would be sourced from the renewable energy sources on-site at the WEP, including a bioenergy plant, a wind farm and a solar farm. The estimated electricity consumption of the ROP would be offset by renewable energy generated at the WEP, still resulting in a surplus of electricity.

Need more details on the power and green house gases this new plant will generate. This modification must be rejected until Veolia are able to provide full details of how much power will be required to run this reverse osmosis plant and how they will source this power. Then clear details of the green house impact of this power is required. They must also then make changes to their Incinerator proposal to incorporate this detail.

The WEP relies on multiple processes that require electricity and has integrated various on-site renewable energy sources, including a bioenergy plant, a wind farm and a solar farm. The electricity generated from these sources helps offset the site's electricity consumption while also supplying power to the grid.

The electricity demand of the ROP would be fully offset by renewable energy generated at the WEP, still resulting in a net surplus. As a result, the ROP would not contribute to additional greenhouse gas (GHG) emissions from electricity generation during its operation.

The odour modelling is incorrect. Why are Veolia assuming 6 OU outside the boundaries of their property when their licence conditions clearly state odour is not permitted outside their property boundary? This appears to be an attempt to normalise and gain acceptance for the continuous odour problems arising from their operations that affect local areas around Woodlawn for more than a 20km radius. All odour modelling should be redone using the basis of 0 OU beyond the boundaries of the property and the proposal re-exhibited with the correct information.

As discussed in a previous response, the applicable criteria of 6 OU were determined based on the population density and the receiving environment surrounding the WEP. The air quality modelling in the AQA demonstrates that the Modification 7 would comply with this criterion. The licence condition does not preclude odour entirely, but instead does not permit the emission of offensive odour beyond the boundary of the premise. Veolia would continue to implement various odour mitigation and management measures to minimise the generation of odour at the WEP. Modification 7 intends to assist with the management of treated leachate at the site, which is considered to be a cause of the odour impacts and subsequent complaints.

I object to this proposal for the following reasons: The odour levels assessed within the document do not align with or consider complaints of odour issues in the area. The assessment on odour levels state an expectation that

odour levels will increase. Yet there is no mention within the report on odour issues that are present within the community. The odour is being assessed at a level of 6OU which aligns with less than 10 affected people. The people in Tarago Town and surrounds have been putting up with and complaining of odour from locations up to 20km away from the Veolia Woodlawn facility. The odour assessments are clearly not considering the correct information and the setting of the OU limit for the area should be reconsidered. The report states that the population in the area is approx 1000 people in Tarago, Lake Bathurst, Currawang and Mount Fairy. With the odour issues All of these should be considered affected people and from table 6.10 this would lead to an OU limit of 2.0 or 3.0. If these levels were utilised within the report then Veolia would exceed the OU limit for the receptor 1 location and be extremely close for others. This would be a much more appropriate assessment based on the number of complaints that are regularly made from the community.

The NSW odour goals are based on the risk of odour impact within the general population of a given area. In sparsely populated regions, the criteria assume a lower risk that individuals within the community will find odour levels unacceptable, therefore higher criteria apply. Given the low population density in the area surrounding the WEP, the higher odour criteria have been applied accordingly.

Modelling predictions in the AQA have been extrapolated to estimate the odour levels at Tarago Village, where they were found to be <0 OU, meaning that odour from the ROP is undetectable and would have no tangible odour impact at this location.

Incomplete Data There is no information on the expected energy consumption of the plan and if there is any impact on the energy requirement on site and any additional impacts on energy supply infrastructure. There is no information on the amount of water that the LTP currently processes nor the expected amount of water that may be required to pump out of the WBR in the future. While there are statements that the LTP and ROP can be upscaled by about 1.5 and 2 times respectively there is no indication if this would be sufficient to achieve the goals set out in the future.

The electricity requirements of the ROP would be fully offset by the renewable energy sources on-site at the WEP. Additionally, the surplus electricity generated from these renewable energy sources is sufficient to accommodate a doubling of the ROP's electricity demand.

I object to the proposal due to concerns regarding biodiversity impact & air quality including dust & odour.

The AQA demonstrates that the Modification 7 would comply with the applicable air quality criteria (odour) in the surrounding environment.

As nearby residents, we have noticed an increase in odour over the past 12 to 18 months & worry that this will continue to get worse with the modification now proposed.

As discussed in an earlier response, the increase in odour (complaints) is likely attributed to elevated rainfall and an excess of water at the site. Modification 7 proposes a method to manage the water at the site which is expected to result in lower odour generation.

Reverse osmosis is and inherently energy intensive process – Research from 2023 on treating leachate from landfill indicates 35.3kWh per m3 treated leachate. At the proposed rate of 4L/s (250s to process 1m3) this would equate to 8.472kW/hr. Assuming 99% uptime, this equates to 73.472MWh a year in energy consumption. Veolia's submission provides no detail on the power consumption or the related greenhouse gas emissions. Veolia's submission also includes references to a second ROP. Veolia must update the proposed modification to

indicate the expected power consumption and greenhouse gas impact. The modification should also include details of the second ROP and potential cumulative impact of both ROP plants. Further, to demonstrate Veolia is serious about climate change, they must be able to demonstrate the emissions generated as a result of the two ROPs are offset by construction of additional renewable infrastructure such as a solar array. Veolia must include in the proposal a solar array to offset the additional energy consumption of the ROPs. The solar array must be sufficient to cover all power requirements of both proposed ROPs plus 50%. This will provide assurance Veolia are serious about addressing climate change.

In terms of electricity use associated with the operation of the ROP, the annual electricity requirement is 1,200 megawatt hours (MWh). For irrigation, two 5.5 kilowatt (kW) motors would be used, with an annual requirement of 96MWh, conservatively assuming continuous operation at 100%.

The WEP includes numerous processes that require electricity and has integrated various renewable energy sources on-site, including a bioenergy plant, a wind farm and a solar farm. The electricity generated from these sources helps offset the site's electricity consumption and supplies power to the grid.

Table 3 presents a summary of the estimated electricity use at WEP, incorporating the ROP. Despite the addition of the ROP, the WEP would continue to generate surplus electricity.

Veolia is committed to sustainable solutions that address climate change and environmental challenges. The ROP aligns with this commitment, supporting the WEP operations by effectively managing excess leachate and mitigating odour generation at the site.

Table 3: Summary of estimated electricity use at WEP incorporating the ROP

	Electricity (MWh)
ROP	1,200
ROP irrigation	96
WEP electricity	3,025
WEP Generated / used	-975
WEP Generated / grid	-51,464
WEP Generated / solar	-2,942
Total	-51,061

Veolia must update the Air Quality Impact Assessment to remove references to the 6 OU limit. The assessment must also clearly indicate the approved odour emissions limit is ZERO. Veolia must update the Air Quality Impact Assessment to ensure it represents factual information including the current (and long running) odour issues being experienced up to 20kms from the Woodlawn site. The modelling used by Veolia for air quality is incorrect (large numbers of odour complaints are detected in the Tarago Village). Modelling used in the Air Quality Impact Assessment must be updated to ensure it accurately represents the fact that there are significant odour reports in specific conditions. If the modelling does not align with the real world conditions, then it must be dismissed and the modification must be rejected. Veolia's proposed ROP fails to conclusively demonstrate a net positive improvement in odour as a result of the modification. This modification should be rejected until accurate modelling can demonstrate a net-positive improvement. Veolia's Air Quality Impact Assessment must be updated to demonstrate the longer term cumulative impact on the community. The currently modification could be one of many instances where the air quality is incrementally affected – each modification may in of itself be "negligible", however the sum total could be even more significant odour issues.

The AQA has been assessed in accordance with the New South Wales (NSW) Environment Protection Authority (EPA) *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales*

(Approved Methods) (**NSW EPA, 2022**). The Approved Methods includes guidelines for the acceptable odour criteria to apply and appropriate level for assessment at the 99th percentile for odours. This can result in different in real world conditions and used as a planning tool for the assessment of impacts.

The existing approved operations (**TOU, 2016**) show the potential odour impact for the cumulative impacts for all activities at the site against the applicable odour criterion. For the AQA, as the proposed modifications only result in a minor change in odour, relative to the approved operations, the assessment focused on the potential change in odour impact associated with the ROP.

The change demonstrates the impact due to the odour associated with the storage of concentrated stream from the ROP has a negligible effect at the applicable sensitive receptor locations and would continue to be below the applicable air quality impact criteria of 6 OU.

Furthermore, operating the ROP and associated irrigation scheme enhances the site's capacity to manage excess water, preventing potential odour generation from overflow into drainage lines and off-site areas. This modification thus also serves as an effective odour mitigation measure for the current activities.

As nearby residents, we have noticed an increase in odour over the past 12 to 18 months & worry that this will continue to get worse with the modification now proposed.

As discussed in an earlier response, the increase in odour (complaints) is likely attributed to elevated rainfall and an excess of water at the site. Modification 7 proposes a method to manage the water at the site which is expected to result in lower odour generation.

We are also concerned regarding the negative impact the smell has on our personal comfort & property value & request that less waste be received for land filling at the Woodlawn Bioreactor.

The AQA demonstrates compliance with the applicable odour criterion. Modelling predictions in the AQA have been extrapolated to estimate the odour levels at Tarago Village, where they were found to be <0 OU, meaning that odour from the ROP is undetectable and would have no tangible odour impact at this location.

Odour Levels - The assessment on odour levels state an expectation that odour levels will increase. Yet there is no mention within the report on odour issues that are present within the community. The odour is being assessed at a level of 6OU which aligns with less than 10 affected people. The people in Tarago Town and surrounds have been putting up with and complaining of odour from locations up to 20km away from the Veolia Woodlawn facility. The odour assessments are clearly not considering the correct information and the setting of the OU limit for the area should be reconsidered. The report states that the population in the area is approx 1000 people in Tarago, Lake Bathurst, Currawang and Mount Fairy. With the odour issues All of these should be considered affected people and from table 6.10 this would lead to an OU limit of 2.0 or 3.0. If these levels were utilised within the report then Veolia would exceed the OU limit for the receptor 1 location and be extremely close for others. This would be a much more appropriate assessment based on the number of complaints that are regularly made from the community.

See response above.

5. The odour modelling is incorrect. Why are Veolia assuming 6 OU outside the boundaries of their property when their licence conditions clearly state odour is not permitted outside their property boundary? This appears to be an attempt to normalise and gain acceptance for the continuous odour problems arising from their operations that affect local areas around Woodlawn for more than a 20km radius. All odour modelling should

be redone using the basis of 0 OU beyond the boundaries of the property and the proposal re-exhibited with the correct information.

See response above.

Please feel free to contact us if you would like to clarify any aspect of this report.

Yours faithfully,
Todoroski Air Sciences



Philip Henschke

References

NSW DEC (2006)

"Technical framework – Assessment and management of odour from stationary sources in NSW", November 2006

NSW EPA (2022)

"Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales", August 2022

TRC (2011)

"Generic Guidance and Optimum Model Settings for the CALPUFF Modeling System for Inclusion into the 'Approved Methods for the Modeling and Assessments of Air Pollutants in NSW, Australia'", Prepared for the NSW Office of Environment and Heritage by TRC Environmental Corporation.

Todoroski Air Sciences (2024a)

"Response to Submissions – Proposed Modifications to Woodlawn Mechanical Biological Treatment Facility", prepared for Element Environment by Todoroski Air Sciences, January 2024.

Todoroski Air Sciences (2024b)

"Air Quality Assessment – Woodlawn Bioreactor Leachate Reverse Osmosis Plant and Irrigation Scheme (Modification 7)", prepared for Element Environment by Todoroski Air Sciences, May 2024.

Todoroski Air Sciences (2024c)

"Response to Submissions – Woodlawn Bioreactor Modification 6", prepared for Element Environment by Todoroski Air Sciences, November 2024.

