



17 October 2019

Quentin Cooke
Team Leader - Approvals
Development Assessments
EPA Victoria
GPO Box 4395
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Dear Quentin

**Meatworks Australia - Works Approval Application 1003441
Response to AOC Independent Assessors Report**

EPA has provided us with a report by Mr Jim Demetriou (Air, Odour and Compliance Specialist, "AOCS") dated 9 October 2019, which was prepared by AOCS in response to the 20B Conference Chair Report Recommendation 4.2.1.

The AOCS report is an independent expert assessment of the nature and extent of potential odour, dust and other air emissions from the proposed Gillieston meatworks. EPA has requested that Meatworks Australia consider the AOCS report, and in particular provide responses to the recommendations contained in the following sections of the AOCS report:

- Section 3.4 (Case studies) – provide evidence that the buffer to sensitive receptors is in line with other operations
- Section 4.2 (Best practice design and management) – provide a response to the recommendations

The table attached provides our responses to the AOCS report. We generally agree with the odour monitoring and management recommendations, subject to the qualifications and other comments as detailed in the response table.

I would be happy to discuss and clarify any element of our response.

Yours sincerely,

Adam Elmasri
Director
Meatworks Australia Pty Ltd

Odour report recommendations	Response and actions
<p>Our responses to the recommendations detailed in the AOC report are summarised below. Our responses are a collation of advice from our expert consulting team comprising:</p> <ul style="list-style-type: none"> • Rohan Ash (OTE, Principal Environmental and Agricultural Engineer), • Anthony Hosri (Lean Projects, Principal, Abattoir building and process designer), • Sam Wong (ANE, Senior Environmental Engineer, odour expert), • Jim Agverinos (ETS, WWTP design and operations expert). 	
<p><u>AOC Report – Section 3.4 Recommendations</u></p> <p><i>Due to this inaccuracy in measuring and modelling odour emissions from this type of facility I do not recommend that any further modelling be undertaken. My recommendation is that prior to EPA’s final assessment and decision, proof of performance is established. Rather than relying on modelling, the proponent should undertake a case study at a similar operational facility. The focus should be on demonstrating the extent of potential odour emissions given the design and management practices. This need to be supported by providing details regarding size, capacity, distance to nearest receptors, best practice design, management and monitoring practices for both facilities for comparison. This will ensure the assessment is made based on real data, rather than relying on predictive odour modelling. The management of the settling pond sludge is in my opinion a high risk of odour impact. Given that this is outside my area of expertise EPA need to assess the applicability of the proposed design and management practises prior to EPA’s final assessment and decision.</i></p>	<p>Meatworks Australia disagrees with this recommendation as it is impracticable due to industry confidentiality and sensitivity issues. We would oppose this recommendation becoming a works approval condition.</p> <p>Private meat industry operators would be unwilling to provide odour emission data and licence compliance information to a potential competitor. Such confidential information about industry licence compliance is (by definition) not publicly available. We also could be subject to legal action if we were to write negative reviews about specific sites or the industry sector in general.</p> <p>The recommendation 3.4 to conduct a cases study is suggesting that we benchmark our proposal against existing abattoir projects including those with lesser separation distances (potentially not complying with EPA publication 1518), older technology and potential poor track record with EPA. On the contrary, we only seek to benchmark our project against compliant operations. We reiterate that we are seeking works approval for what we have proposed in great detail in the WAA: i.e. a new state of the art sheep/lamb only processing, employing environmental best practice design and operation that complies with <u>all</u> of EPA’s Works Approval Application, Best Practice and separation distance Guidelines, as well as SEPP and meat industry best practice guidelines.</p> <p>The meat industry continues to upgrade existing facilities and improve performance to be more operationally efficient and compliant with EPA licences. However, many long-standing abattoirs still employ >20-30-year-old plant and technology, including anaerobic wastewater treatment technology, and are located in areas which do not provide 500m setback distances to sensitive land uses. Even so, many older abattoirs are expected to be operating successfully in compliance with EPA licences without complaint from the local community. These successful businesses are also recognised by local communities as a critical employer, providing significant economic benefits to the local area.</p> <p>Notwithstanding the impracticable nature of recommendation 3.4, we have (in the spirit of co-operation) looked exhaustively for publicly available information about operating abattoirs across Victoria, which is extremely limited and of questionable reliability. We carried out extensive searches of EPA’s public licence search portal for licensed abattoirs, and cross referenced these against public lists of abattoirs that can be found on meat industry association websites such as MSA, MLA, AMPC, AUS-MEAT and PRIMESAFE. There are also other lists of abattoirs that can be found on various websites such as “australianabattoirs.com”, but the reliability of these websites is questionable and often out of date.</p> <p>From our extensive search it was not possible to find “like for like” small stock sheep only abattoirs with all of the exact same operational features, planning scheme zoning, environmental setting, separation distances, wastewater treatment and irrigation facilities. Every abattoir facility is unique and even if we were able to procure reliable data on the status of odour compliance for these facilities the interpretation of this data requires full context to be intimately understood.</p> <p>Note that there are many abattoirs (including some that may be sheep only) that are connected to sewer and are therefore not required to be licensed by EPA. We were not able to find published information on these sites because there is no register of them on EPA’s website.</p> <p>Notwithstanding the limitations of public information about abattoirs as discussed above, we were able to identify meatworks sites that might be sheep only or have sheep with goats, pigs and/or cattle processing and are in a similar rural setting with onsite WWTP pondage and irrigation systems. We would consider any sites processing beef and pigs would have higher odour potential than a small stock sheep processing facility. Because sheep only odour emission data is extremely limited, our odour modelling used odour emission rates from</p>

Odour report recommendations	Response and actions
	<p>mixed meatworks facilities (i.e. with cattle and pigs in the mix). Despite the AOCS report not accepting our odour modelling as being representative of sheep only abattoirs, our modelling assumed conservatively high odour emission rates than sheep only facilities and would therefore forecast higher odour levels at sensitive receptors than would be expected from the Gillieston meatworks.</p> <p>From our analyses, we found that almost all the abattoirs (many of these with rendering) in Victoria do not meet EPA's Separation Distance guidelines (500m for abattoir only) or 1000m with rendering). Several EPA licensed sites have setbacks as close as 100-200m to sensitive land uses. Note that a large proportion of abattoir sites have open/uncovered anaerobic pondage systems, which are well known to cause offensive odour for some distance. Note our WWTP will incorporate pre-screening and DAF treatment prior to discharge in a fully aerobic state to the aerated lagoons. Our proposed WWTP is best practice for the meat industry and will therefore be less odorous than that employed at almost all other existing abattoirs with onsite pondage systems.</p>
<p><u>AOC Report – Section 4.2 Recommendations for improving Best practice Design and Management</u></p>	
<ul style="list-style-type: none"> • <i>Dry scrapping livestock delivery trucks prior to wash down and using high pressure water cleaners to minimise wastewater generation.</i> 	<p>Agreed – this is standard practice.</p>
<ul style="list-style-type: none"> • <i>Using high pressure trigger, with adjustable water jet cleaners across the site.</i> 	<p>Agreed – standard practice. We will use high pressure hoses for washdown of plant, equipment, floors and walls, and high-pressure cleaners in-machines (water saving measure). This will ensure cleaning and hygiene standards are met, which can also help minimise odour.</p>
<ul style="list-style-type: none"> • <i>Diverting all emissions from paunch and tripe washing activities within the processing building through appropriately designed ventilation to stacks rather than roof/wall vents to improve dilution.</i> 	<p>Agreed – Ventilation arrangements will be determined as part of detailed design. We can provide further information to EPA at detailed design phase, prior to construction.</p>
<ul style="list-style-type: none"> • <i>Planting trees around the boundary, holding pens and overflow pens.</i> 	<p>Agreed – this is required for landscaping purposes anyway (likely council requirement) with safe setbacks to meet fire safety requirements. We need to have trees well setback from pens to maintain effective ventilation and animal welfare as per pen design and AQIS guidelines.</p> <p>There is expected to be a landscape plan (for visual screening purposes) as a condition of the planning permit for subsequent council endorsement. Trees can also be a fire hazard, therefore CFA fire restrictions will dictate setbacks from trees to pens and other buildings. The landscape plan will be determined during detailed design phase, and can be provided to EPA prior to construction phase.</p>
<ul style="list-style-type: none"> • <i>Covered overflow backup pens to maintain dry conditions preventing odour generation from wet litter and livestock</i> 	<p>Agreed</p> <p>The overflow yards will be a contingency use only. The original WAA and Response to EPA Notice 26 August 2019 explained that the overflow yards would be provided with sun-shading at its northern end as standard practice as required by AQIS to protect sheep from exposure. Covering 100% of overflow yards is <u>not</u> standard industry practice given most of the yard area is rarely used. Almost all other abattoirs including those licensed by EPA, processing cattle and with non-compliant buffers (therefore higher odour potential) have uncovered, compacted earth overflow yards.</p> <p>The overflow yards will only be intermittently used, contain very low sheep numbers, sheep will have empty stomachs (as required by AQIS) and therefore will only produce minor quantities of droppings. Each time we would only use a small area (i.e. the northern end) that matches the sheep numbers temporarily held in these yards, with the balance of the yards closed off. The yards will be regularly cleaned out by dry scraping (bobcat) methods. Given that the overflow yards are considered the lowest odour source onsite, covering all of the yards will provide negligible overall odour reduction. Therefore, covering all the yards is considered overly prescriptive.</p> <p>Notwithstanding the above, the overflow yard design including roof structure and overall surface area will be subject to detailed design and subsequently provided to EPA prior to construction. The yards are likely to be built in stages starting with a small roofed yard (for a few hundred sheep) located at the northern end closest to the elevated pens. The need for expanded overflow yards will be determined after commencement of operations, with subsequent yard sections to be constructed with roofing to exclude rainfall.</p>

Odour report recommendations	Response and actions
<ul style="list-style-type: none"> Develop an Environmental improvement plan incorporating monitoring program. This must include a risk assessment, monitoring, mitigation measures and procedure for managing odour reports. 	<p>Agreed</p> <p>Our environmental risk and EIP framework was discussed and mapped out in the WAA and Response to EPA Notice 26 August 2019. This will be developed during detailed design phase and submitted prior to commissioning. Monitoring odour will be by daily surveillance by supervising staff. Any increase in odour levels will be detected by management and staff and corrective actions will be taken in accordance with operational environmental management procedures (OEMP).</p>
<ul style="list-style-type: none"> EPA to assess the adequacies of monitoring as well as the Environment Improvement Plan, prior to commencement of any operations. 	<p>Agreed.</p> <p>We will submit a risk-based monitoring program to EPA during detailed design phase and prior to commissioning.</p>
<ul style="list-style-type: none"> Undertake an offsite odour monitoring program during implementation using EN 16841-2:2016 Ambient air - Determination of Odour in Ambient air by Using Field Inspection Part 2: Plume Method, or EPA Victoria approved modified odour plume method. 	<p>Agreed – but we will only agree to an EPA approved odour monitoring program based on EPA’s Licence Management Guidelines (Publication 1322.9, Dec. 2017) – in particular Section A1 Odour (see pages 14 – 15). There is no requirement or reference in EPA publication 1322.9 to undertake method EN 16841-2:2016 as an odour monitoring program.</p> <p>We do not agree to conduct any monitoring program based on EN 16841-2:2016 because it only provides snap-shot data and is statistically inaccurate for assessing ongoing licence compliance. It is the experience of Rohan Ash (including in the role of an EPA Appointed Auditor) that this method is almost never used – even at high risk sites. It might be occasionally used for research and for “calibrating” EPA approved odour modelling results. It may be useful to employ in hilly/valley terrain and for complex meteorological conditions, which in Gillieston we do not have. Reliance on EN 16841-2:2016 is only one of many options and there are more simple, rapid, effective and industry accepted odour surveillance methods that are EPA endorsed at other licensed sites.</p> <p>As per EPA Publication 1322.9, we propose daily preventative inspection and surveillance programs as part of the risk-based environmental monitoring program to ensure licence compliance. So that we can respond straight away, we will be providing a 24hr contact line for local community to call in the event of odour, dust, noise or other potential amenity issues. If there are any complaints, we would promptly implement our incident plans and carry out additional inspections and investigations to determine root cause and mitigation as appropriate and report back to EPA and complainants.</p>
<ul style="list-style-type: none"> Have a qualified person responsible for training and management of monitoring program. 	<p>Agree</p> <p>Meatworks Australia will be hiring experienced operators prior to project construction and commissioning. We will be developing and implementing an environmental training and awareness program, details of which can be provided to EPA prior to commissioning.</p>