



**VEOLIA (AUSTRALIA) PTY LTD**

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**Clyde Waste Transfer Terminal**

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**Odour Audit XXXVIII**

**Final Report**

**March 2022**

**THE ODOUR UNIT PTY LTD**

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**Project Number:** N1473L

Report Revision		
Revision Number	Date	Description
Draft report	21.02.2022	Issued for internal review
Final report	10.03.2022	Final report issued to the client
Report Preparation		
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<b>Report Title:</b> Veolia (Australia) Pty Ltd Clyde Waste Transfer Terminal – Odour Audit XXXVIII		

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**LIST OF ABBREVIATIONS AND DEFINITIONS**

<b>FAOA</b>	Field Ambient Odour Assessment
<b>HCS</b>	Hydrometric Consulting Services
<b>the Draft OEMP</b>	The draft version of the <i>Operational Environmental Management Plan</i> dated 6 November 2020
<b>the February 2010 OMP</b>	Odour Management Plan dated February 2010
<b>the Odour Audit</b>	Odour Audit XXXVII covering the six months between 14 May 2021 to 25 November 2021
<b>the September 2017 Container Preparation Document</b>	Waste container preparation requirements for the Site
<b>the September 2017 NSW RR Container Document</b>	<i>NSW Resource Recovery – Container Maintenance</i> dated 15 September 2017
<b>the Site</b>	Veolia Clyde Transfer Terminal
<b>TOU</b>	The Odour Unit Pty Ltd
<b>TTB</b>	Transfer Terminal Building
<b>Veolia</b>	Veolia (Australia) Pty Ltd

**UNITS OF MEASUREMENTS**

<b>°C</b>	degrees Celsius
<b>m/s</b>	metres per second

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# 1 INTRODUCTION

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The Odour Unit Pty Ltd (**TOU**) was commissioned by Veolia (Australia) Pty Ltd (**Veolia**) to undertake the thirty-eighth (**XXXVIII**) Odour Audit at the Clyde Transfer Terminal (**the Site**) on Thursday, 25 November 2021. The visit for this odour audit was undertaken by a TOU Odour Consultant and is the thirty-eighth (38<sup>th</sup>) to be carried out since the commissioning of the forced air extraction system within the waste transfer terminal.

## 1.1 ODOUR AUDIT PERIOD

Odour Audit XXXVIII covers the six months between 13 May 2021 and 25 November 2021 (**the Odour Audit**).

## 1.2 ODOUR AUDIT REQUIREMENTS

The Odour Audit requirements originate from the *Conditions of Consent – 48(f)* and are outlined below:

*“48. The Odour Management Plan must address, but is not necessarily limited to, the following issues:*

*(f) An odour audit program which provides for a comprehensive odour audit of the premises and nearby commercial and residential areas, by an independent, appropriately qualified and experienced person, to be conducted 3-monthly for the initial 24 months of receiving un-containerised waste at the terminal, 3-monthly for the 12 months following commissioning the odour control system subject to MOD-133-11-2006, and 6-monthly thereafter, unless otherwise approved in writing by the Director-General.”*

As with previous Odour Audits, Odour Audit XXXVIII focused on issues relating to general housekeeping, fugitive odour emissions from the transfer building, ground level odour impacts, meteorological monitoring, complaints handling, and actions on past odour audit recommendations. Specifically, the Odour Audit approach included:

- A general inspection and smoke testing of the transfer building;
- The inspection of the container packing area and site access roads;
- The examination of the complaint register;
- The review of the on-site meteorological data log and equipment maintenance/calibration;
- The analysis of relevant documentation relating to odour management; and
- The undertaking of an off-site downwind Field Ambient Odour Assessment (**FAOA**) survey.

### 1.3 PREVAILING WEATHER CONDITIONS

At the time of the Odour Audit visit, prevailing weather conditions were calm to light (< 2.0 metres per second (**m/s**)) wind speeds with the local wind direction blowing predominantly from the north. The skies were slightly overcast and the ambient temperature during the Odour Audit visit was approximately 25 degrees Celsius (**°C**).

No rainfall was observed during the Odour Audit visit.



## 2 ODOUR AUDIT FINDINGS

### 2.1 ASSESSMENT OF GENERAL HOUSEKEEPING

#### 2.1.1 Transfer Terminal Building

During the Odour Audit visit, there were approximately 120-150 tonnes of waste on the floor. This tonnage is considered to be within the normal operating range of the Transfer Terminal Building (TTB). The TTB floor area not covered by waste material was observed to be reasonably clean, with little evidence of leachate or aged material. General housekeeping procedures of the TTB were good, as found during several truck-unloading sequences. It was also observed that the TTB's front-end loaders cleared the floor area of waste on a regular basis, minimising the exposed area of waste.

As with previous audits, and consistent with TOU's experience at other waste transfer stations, there was a weak to distinct level of odour observed within the TTB. A photo of the waste on the floor as found during the Odour Audit visit is shown in Photo 2.1.



**Photo 2.1** – TTB waste on-floor as found on 25 November 2021 (during a smoke test)



### **2.1.2 Container Packing Area and Site Roadways**

The container packing area and site roadways were found to be clean and well managed with no evidence of waste or exposed leachate. Like previous odour audits, the container compacting/train packing area had a weak to distinct odour that was intermittently detectable but was confined to this area only (see **Appendix B** for Field Ambient Odour Assessment Survey results). TOU was advised by a Veolia personnel that one of the two compactors were in operation at the time of the Odour Audit visit. The general housekeeping around this area was observed to be of high quality, with no evidence to suggest otherwise.

As with previous Odour Audits, the containers are cleaned off-site at Veolia's Woodlawn Bioreactor Facility before being returned to the Site. The weight of each container is monitored to determine if there is any waste that has not been removed completely from each container, which in turn reduces the likelihood of the containers contributing to the Site's odour levels.

#### **2.1.2.1 Container Management and Maintenance**

Based on previous verbal discussions with the Veolia team and observations made during the visit, the Odour Audit finds that Veolia continues to implement the policies and procedures as outlined in the following documents:

- The container management and maintenance procedures titled *NSW Resource Recovery – Container Maintenance* dated 15 September 2017 (**the September 2017 NSW RR Container Document**), which details the following:
  - The design of the containers;
  - The maintenance and management of the activated carbon filter retrofitted to the containers;
  - The container management procedure; and
  - The container maintenance procedure.
- The waste container preparation requirements for the Site (**the September 2017 Container Preparation Document**), which details the following:
  - The inspections and actions to be undertaken by operators to enable containers to be prepared to an acceptable standard;
  - The steps to be undertaken should a damaged container be identified; and
  - The steps to be undertaken should a leaking container be identified.

### **2.1.3 Odour Management Plan**

As per the Odour Management Plan dated February 2010 (**the February 2010 OMP**) for the Site, following the compaction of waste, all filled containers are entirely sealed

and remain so while at the Site. All containers used are required to be in good condition, and unused/returned containers adequately clean. The Odour Audit finds that this continues to be current practice at the Site. A view of the condition of the container area as found on 25 November 2021 is shown in **Photo 2.2**.



**Photo 2.2** – A view of the container area as found on 25 November 2021

#### **2.1.4 Odour Extraction System Maintenance**

The service documentation for the maintenance of the odour extraction system was supplied and reviewed as part of the Odour Audit (refer to **Appendix A**). The service logs were provided covering the period between 23 June 2021 to 5 November 2021.

Each service log provided to the Odour Audit indicated that the required inspection and maintenance works were taking place by a suitable service contractor, and the odour extraction system overall was operating efficiently. The service logs during this period noted that all the necessary support works such as checking the fan belts and unit operations, greasing bearings, and other routine preventative maintenance works were being inspected and undertaken.

Given the above and based on the positive results obtained for the smoke testing, odour complaints register, and the FAOA survey conducted as part of the Odour Audit visit, it appears that the current operation of the odour extraction system is satisfactory.

### **2.1.5 Odour Management Procedures/Plan**

The Odour Management Procedures (formerly known as the Odour Minimising Procedures) continue to be regularly reviewed at toolbox meetings, and contemporary issues/recommendations are raised with all staff members at these meetings.

Veolia has advised The Odour Audit that the February 2010 OMP is still in the process of being reviewed and updated. However, TOU was provided a copy of the draft *Operational Environmental Management Plan* for the Site dated 6 November 2020 (the **Draft OEMP**). Upon finalisation of the Draft OEMP and consolidation of all referenced documents, the Odour Audit will review this document in its entirety. Nevertheless, the annual review and commitment to continuous improvement to the operational and environmental management procedures and practices at the Site is endorsed by the Odour Audit.

### **2.1.6 Transfer Terminal Building**

The Odour Audit inspected the fixed metal plates retrofitted along the TTB breezeways in December 2013. All metal plates were found to be intact and in good condition around the TTB. All doors and roller shutters of the TTB were found to be shut at the time of the Odour Audit, reducing the likelihood of odour impacts detected off-site. The louvres on the end walls of the TTB were observed to be permanently shut.

### **2.1.7 Truck Entrance Plastic Strips**

The truck entrance plastic strips of the TTB, used to reduce odour escaping through the opening, were found to be intact and in good condition (refer to **Photo 2.3**).

### **2.1.8 Smoke Testing**

As per previous audits, smoke testing was carried out within the TTB to assist in determining the effectiveness of the forced air extraction system, as well as the extent to which the TTB has been sealed from leaks. As per previous audits, smoke was released from within the TTB at three points within the TTB. **Figure 2.1** shows the three points where the smoke was released within the TTB. **Photo 2.4** shows smoke testing at the truck entrance of the TTB, which reflects an additional test location to the normal smoke testing release points shown in **Figure 2.1**.



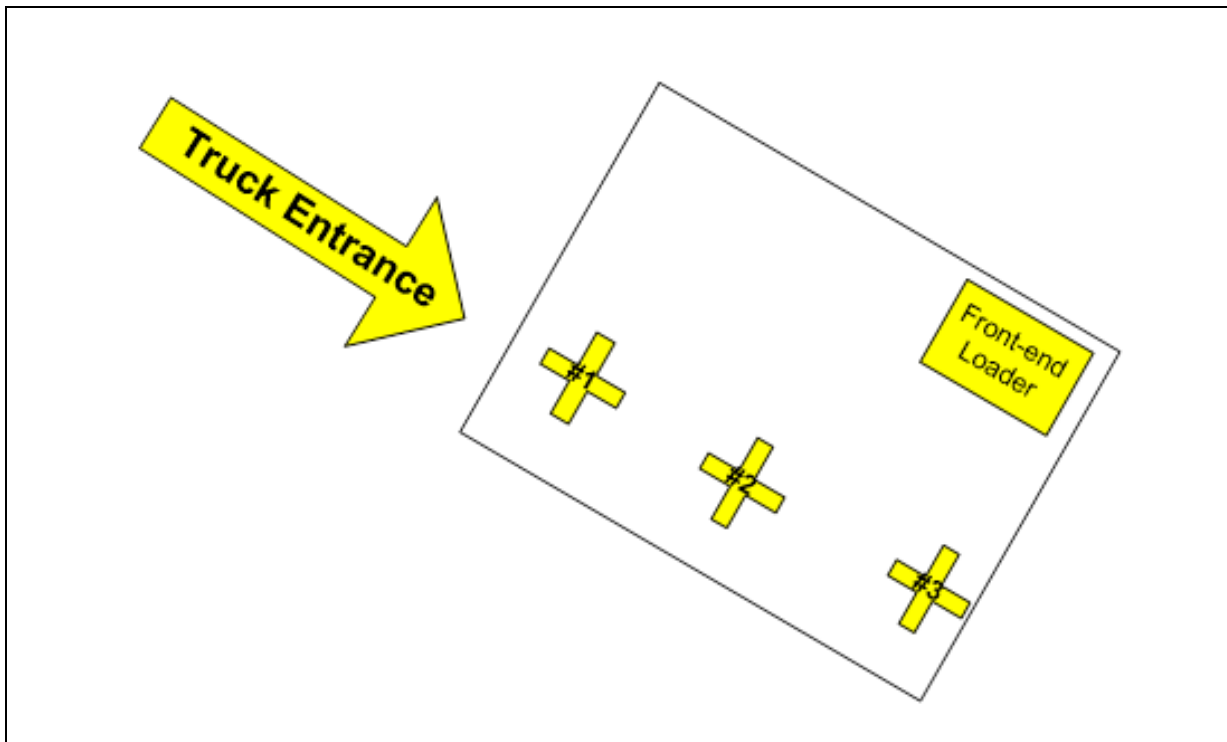


**Photo 2.3** – A view of the truck entrance plastic strips as found on 25 November 2021





**Photo 2.4** – A view of the truck entrance plastic strips during smoke testing on 25 November 2021



**Figure 2.1 – Smoke testing release points within the TTB on 25 November 2021**

### 2.1.8.1 Smoke Testing Results

#### **Smoke Testing Point #1**

The smoke released at this point initially rose gradually moving towards the truck entrance before rising to the roof and moving slowly towards the extraction system. Visible smoke extraction at the overhead capture points was evident during the smoke testing at this point. Any smoke that continued towards the truck entrance was drawn back into the building (see shown in **Photo 2.4**).

#### **Smoke Testing Point #2**

The smoke released at this point revealed a similar result to that documented for smoke testing point #1.

#### **Smoke Testing Point #3**

The smoke released at this point revealed a similar result to that documented for smoke testing point #1.

## 2.2 ODOUR COMPLAINTS HANDLING AND METEOROLOGICAL DATA

### 2.2.1 **Odour Complaints Handling**

As advised by Veolia personnel, there have been no complaints recorded in the Site's complaints register since March 2012.



### 2.2.2 Meteorological Data

The meteorological data provided to the Odour Audit, covering the period of between June 2021 and November 2021, was inspected and found to be in good order. As found in previous Odour Audits, the observations were provided in daily 15-minute intervals and included all parameters necessary to develop a meteorological dataset for odour dispersion modelling.

As indicated via service records completed by Hydrometric Consulting Services (**HCS**) supplied by Veolia to the Odour Audit, the weather station continues to remain located in an accessible area with the solar panel and components regularly cleaned, and installation sprayed periodically for insects and trimming of nearby vegetation as required to ensure no overgrowth immediately around the weather station pole. Overall, HCS indicated that the weather stations were operating well, and any identified issues were rectified.

The weather data calibration and service reports by HCS are appended as **Appendix B**.

### 2.3 FIELD AMBIENT ODOUR ASSESSMENT METHODOLOGY

At present, no Australian Standard exists for field-based ambient odour assessment surveys. Consequently, TOU utilises a method for assessing the ground-level impacts of odour emissions using a modified version of the German Standard VDI 3940 (1993) – *‘Determination of Odorants in Ambient Air by Field Inspections’*.

Field-based ambient odour surveys are considered a valuable odour impact assessment tool as previous experience with ambient odour sampling and subsequent olfactometry testing suggests that accurate and useful ambient odour concentration data is difficult to obtain. Therefore, TOU has adopted a more practical approach based on the field measurement of odour intensity. With this method, calibrated and experienced odour specialists traverse the downwind surrounds of odour sources in a strategically mapped pattern, assessing the presence, character and intensity of any odours encountered and recording these observations along with wind speed and direction.

An ambient odour assessment was performed on 25 November 2021 between 1230 hrs and 1315 hrs. The FAOA survey was undertaken at strategic locations, both on-site and off-site. The ambient odour assessment focus was off-site, as required by the Conditions of Consent on “.....*nearby commercial and residential areas*.....” (Section 48 (f)). The TOU assessor firstly determined the wind direction using a Kestrel 4500 Pocket Weather Tracker Anemometer and then assessed locations of the TTB downwind.

The assessors spent approximately five minutes at each assessment location to gauge the effects of any odour impact. If an odour was detected at a location, the assessors attempted to characterise it. The general aim was to determine the extent of the impact of odours off-site and rank their intensity. The ranking scale for the German Standard VDI 3940 *‘Determination of Odorants in Ambient Air by Field Inspections’* was used for the intensity assessments. The standard’s ranking system is based on the following seven-point intensity scale, as shown in Table 2.1 below.

**Table 2.1 – VDI 3882 Odour Intensity Categories**

Odour Strength	Intensity Rank (code)	TOU Interpretation (meaning)
Not detectable	0	No odour detected
Very weak	1	Odour detected but not strong enough to be characterised
Weak	2	Odour is weak but just able to be characterised
Distinct	3	Odour is distinct and easily characterised
Strong	4	Strong odour detectable
Very Strong	5	If offensive, the observer may consider moving from the area
Extremely Strong	6	Odour is sufficiently over-powering that assessor moves from the area

### **2.3.1 Field Ambient Odour Assessment - Results**

The results of the FAOA survey conducted during the Odour Audit found that whilst intermittent odours were detected on-site, no odours were detectable off-site that could be linked back to the Site and its activities. This is a good outcome and reflects the findings from previous odour audits.

The field log sheets and visual survey plot are appended as **Appendix C**.

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## 3 RECOMMENDATIONS/FOLLOW-UP ACTIONS

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### 3.1 PREVIOUS AUDIT ACTIONS

The following list provides an outline of the last November 2020 odour audit actions and status as of the Odour Audit:

- **Previous Audit Action 1:** *Action 1 – Continue with the on-going review and commitment to continuous improvement of the Draft OEMP and referenced documents*
- **Status:** On-going and will be reassessed in the next audit.

### 3.2 TRANSFER TERMINAL BUILDING

All metal plates were found to be intact and in good condition around the TTB. All doors and roller shutters of the TTB were found to be shut at the time of the Odour Audit, reducing the likelihood of odour impacts detected off-site. The louvres on the end walls of the TTB were observed to be permanently shut. Overall, the TTB was found to be well managed.

Based on the findings in the Odour Audit, the following action is recommended:

- **No further action is required at this stage.**

### 3.3 COMPACTOR AREA

The general housekeeping around the compactor area was observed to be of high quality, with no evidence to suggest otherwise. As with previous Odour Audits, the container compacting/train packing area had a weak to distinct odour that was intermittently detectable but was found to be confined to this area only.

Based on the findings in this Odour Audit, the following action is recommended:

- **No further action is required at this stage.**

### 3.4 ODOUR EXTRACTION SYSTEM

The service logs indicate that all required maintenance works on the odour extraction system since the previous November 2020 odour audit have been adequately undertaken, and the odour extraction system is operating in a satisfactory condition.

Based on the findings in the Odour Audit, the following action is recommended:

- **No further action is required at this stage.**

### 3.5 WEATHER STATION

The dataset obtained from the weather station was found to be adequate. Moreover, the calibration and service reports from HCS indicate that all maintenance to the weather station and required calibrations were carried out as needed.

Based on the findings in the Odour Audit, the following action is recommended:

- **No further action is required at this stage.**

The results of the FAOA survey conducted during the Odour Audit found that no odours were detectable off-site that could be linked back to the Site and its activities.

### 3.6 ODOUR MANAGEMENT PROCEDURES/PLAN

At the timing of the writing of the Odour Audit, the February 2010 OMP was last updated over seven years ago. Given the previous update, it is suggested that as part of good practice that Veolia reviews and update the February 2010 OMP to ensure it continues to reflect the odour management procedures implemented and followed at the Site. TOU was provided a copy of the Draft OEMP. Upon finalisation of the Draft OEMP and consolidation of all referenced documents, the Odour Audit will review this document in its entirety. Nevertheless, the annual review and commitment to continuous improvement to the operational and environmental management procedures and practices at the Site is endorsed by the Odour Audit.

Based on the findings in this Odour Audit, the following action/s is recommended:

- **Action 1 – Continue with the on-going review and commitment to continuous improvement of the Draft OEMP and referenced documents.**

### 3.7 CONCLUDING REMARK

Overall, this Odour Audit found that the operation and maintenance of the odour management system at the Site was satisfactory. There was no evidence to suggest that significant fugitive odour emission release from the Site is occurring.

The next Odour Audit is due in **May 2022**.



**VEOLIA (AUSTRALIA) PTY LTD**

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**Clyde Waste Transfer Terminal**

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**Odour Audit XXXVIII**

**Appendices**

**March 2022**



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**APPENDIX A:**

**ODOUR EXTRACTION SYSTEM SERVICE REPORTS**

**(JUNE 2021 – NOVEMBER 2021)**

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## Service Docket: 00138415

<b>Customer</b>	VEOLIA ENVIRONMENTAL SERVICES
<b>Contract</b>	124-001
<b>Property</b>	CLYDE - MAINTENANCE
<b>Property Address</b>	322 Parramatta Rd, CLYDE, NSW, 2142
<b>Activity Description</b>	Whole of Site Mechanical   Monthly   1/6/2021
<b>Activity Notes</b>	23-Jun-21 - Zachary Brown - SA-170095 - Attended site, signed in and complete permit to work. Gained access to plant room, isolated fans and began routine works went through checking belts and pullies. Dusted down all lights and dampers. Signed out of site.
<b>Log Book ID</b>	
<b>Completion Date</b>	23-Jun-21

Equipment Type	Barcode	Level	Location	Result	Defect ID	Defect Description	Defect Type
Whole of Site - Mechanical	124-001			Passed			

Safety Date	Safety Questions	Service Appointment	Service Resource	Result
25-May-2021	Hold induction & PPE for contract?	SA-170095	Zachary Brown	
25-May-2021	Hold induction & PPE Notes	SA-170095	Zachary Brown	
25-May-2021	Performing Electrical Work?	SA-170095	Zachary Brown	No
25-May-2021	Performing Electrical Work Notes	SA-170095	Zachary Brown	
25-May-2021	Clear access to work area and equipment?	SA-170095	Zachary Brown	Yes
25-May-2021	Clear access Notes	SA-170095	Zachary Brown	
25-May-2021	Weather appropriate to commence work?	SA-170095	Zachary Brown	Yes
25-May-2021	Weather appropriate Notes	SA-170095	Zachary Brown	
25-May-2021	Potential risk of disturbing asbestos?	SA-170095	Zachary Brown	No
25-May-2021	Risk of disturbing asbestos Notes	SA-170095	Zachary Brown	
25-May-2021	Tasks involves working at heights?	SA-170095	Zachary Brown	No
25-May-2021	Involves working at heights Notes	SA-170095	Zachary Brown	
25-May-2021	Task involves mobile Plant & Equipment?	SA-170095	Zachary Brown	
25-May-2021	Mobile Plant & Equipment Notes	SA-170095	Zachary Brown	
25-May-2021	Will work impact Pedestrians/Vehicle?	SA-170095	Zachary Brown	No
25-May-2021	Work impact Pedestrians/Vehicle Notes	SA-170095	Zachary Brown	
25-May-2021	Involves contact with energy source?	SA-170095	Zachary Brown	No
25-May-2021	Contact with energy source Notes	SA-170095	Zachary Brown	
25-May-2021	Task involves using Chemical/Substances?	SA-170095	Zachary Brown	No
25-May-2021	Chemical/Substances Notes	SA-170095	Zachary Brown	
25-May-2021	Will your task involve Manual Handling?	SA-170095	Zachary Brown	No
25-May-2021	Task involve Manual Handling Notes	SA-170095	Zachary Brown	
25-May-2021	Necessary permits obtained/approved?	SA-170095	Zachary Brown	N/A
25-May-2021	Necessary permits obtained/approved Note	SA-170095	Zachary Brown	
25-May-2021	Equipped for Hygiene & Social Distancing	SA-170095	Zachary Brown	N/A
25-May-2021	Hygiene & Social Distancing Notes	SA-170095	Zachary Brown	
25-May-2021	Reviewed task/environment? Is it Safe?	SA-170095	Zachary Brown	Yes
25-May-2021	Task/environment Safety Notes	SA-170095	Zachary Brown	

Equilibrium Air Conditioning Services Pty Ltd  
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[service@eqac.com.au](mailto:service@eqac.com.au)

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Norwest NSW 2153



## CUSTOMER JOB NO. 32098 - 2271 - Kyle Dempsey Preventative Maintenance

Project Name Monthly Maintenance

Date Created 29/09/2021

PO # 7100323420

### Site Details

**Name** Veolia Clyde  
**Address** Clyde Transfer Terminal  
322 Parramatta road  
Clyde NSW 2142  
**Contact** Rod Jones  
**Telephone**  
**Mobile** 0437 167 211  
**Email** [rod.jones@veolia.com](mailto:rod.jones@veolia.com)

### Customer Details

**Name** Veolia Environmental Services P/L  
**Address** Level 4, 65 Pirrama Road  
Pyrmont NSW 2009  
**Contact** Bob Manevski  
**Telephone** (02) 9841 2802  
**Mobile** 0412 275 133  
**Email** [bob.manevski@veolia.com](mailto:bob.manevski@veolia.com)

### Work Requested

Attend Site and carry out maintenance for the month of October

Programmed maintenance service for the HVAC (Heating, Ventilation and Air-conditioning) system onsite.

- Extraction Fans x 02
- Variable Speed Drives x 02
- AC Units Serving Admin Office x 08 (3 ducted and 5 splits)
- Air balancing / Air flow testing 2 times per year
- Cleaning of Fans and Plenum 2 times per year

### Kyle Dempsey (01/10/2021) - Work Note

- Arrived on site, conducted maintenance on 2 extraction fans, checking belts, greasing the bearings, clearing up as much dust as possible, tested the run, all tested okay.

(wear and tear is showing on the belts of extraction fan 2, have put forward a request for a change in new belts.) Quote forwarded to Veolia Clyde

- Conducted maintenance on the AC systems in the main office and the weighbridge office. This involved 8 split systems and Room Air Conditioners. Filters have been cleaned, have flushed the condensate drains, have tested operations of each system in full cooling mode, have checked electrical components, have checked the outdoor units, have checked for faults and/or damage. All have tested okay.

# Equilibrium Air Conditioning Services Pty Ltd

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[service@eqac.com.au](mailto:service@eqac.com.au)

PO Box 7996

Norwest NSW 2153



## CUSTOMER JOB NO. 32200 - Steve Hortis

**Project Name** Monthly Maintenance

**Date Created** 03/11/2021

**PO #** SS00025

### Site Details

**Name** Veolia Clyde  
**Address** Clyde Transfer Terminal  
322 Parramatta road  
Clyde NSW 2142  
**Contact** Rod Jones  
**Telephone**  
**Mobile** 0437 167 211  
**Email** rod.jones@veolia.com

### Customer Details

**Name** Veolia Environmental Services P/L  
**Address** Level 4, 65 Pirrama Road  
Pyrmont NSW 2009  
**Contact** Adele Rachkide  
**Telephone** 9841 2508  
**Mobile**  
**Email** adele.rachkidi@veolia.com

### Work Requested

Attend Site and carry out maintenance for the month of November

Programmed maintenance service for the HVAC (Heating, Ventilation and Air-conditioning) system onsite.

- Extraction Fans x 02
- Variable Speed Drives x 02
- AC Units Serving Admin Office x 08 (3 ducted and 5 splits)
- Air balancing / Air flow testing 2 times per year
- Cleaning of Fans and Plenum 2 times per year

### Kyle Dempsey (05/11/2021) - Work Note

Arrived on site

Conducted maintenance on odour extraction fans serving the pit

Conducted maintenance on all split system units in the general office and weigh bridge office.

Isolated the power to extraction fans 1 and 2 in pit

Isolated alarms to the fan sensor.

Took off the covers to inspect the conditions of the belts, pulleys and bearings, all looked okay.

Greased the fan motor and bearings for both fans.

Inspected the conditions of both VSDs, all tested okay.

Turned the main power back on and tested the fans in run, then powered the fan sensor alarms back on.

Conducted maintenance on all split systems (Mitsubishi electric) serving the general office, including the managers offices, the comms room, lunchroom and meeting.

Also checked the Room Air conditioners serving the changeroom and back lunchroom.

All filters have been cleaned, flushed water through the condensate drains, checked operations of all systems in full cooling mode to prepare for warmer temperatures

Checked electrical components

Checked outdoor units

Checked for faults and/or damage to systems.

All tested okay.

Equilibrium Air Conditioning Services Pty Ltd  
ABN 51 844 035 531

Telephone: (02) 9439 4822  
[service@egac.com.au](mailto:service@egac.com.au)

PO Box 7996  
Norwest NSW 2153



**CUSTOMER JOB NO. 32200 - Steve Hortis**

Conducted maintenance on wall split system serving the weigh bridge office.  
Cleaned the filters  
Flushed out the condensate drain  
Checked operations in full cooling mode to prepare for warmer temperatures  
Adjusted the time and setpoints in cooling and heating on the controller  
Checked the outdoor unit  
Checked the electrical components  
Checked for faults and/or damage to system.  
All tested okay.

**For my safety and well-being during COVID-19, I cannot provide my signature, however, I confirm that the technician was onsite to carry out the above mentioned works.**

**Customer:**

_____	_____
Print Name	Signature

**Technician:**

_____	_____
Print Name	Signature



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**APPENDIX B:**  
WEATHER DATA CALIBRATION REPORTS  
(JUNE 2021 – NOVEMBER 2021)

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# Hydrometric Consulting Services Pty Ltd

ABN 16 091 437 071

27 May 2021

Mary Wong  
Veolia Environmental Services (Australia) Pty Ltd

## Re – Quarterly service of weather stations

Dear Mary,

As per our service agreement, on the 26/05/21 HCS undertook the service, calibration and maintenance of the weather stations located at the Horsley Park and Clyde sites. Field readings were obtained by a combination of a Kestral 3500, compass, Monitor Solar Radiation field unit and HS TBRG calibration device. Details are as follows:

### [Horsley Park 26/05/21](#)

Sensor	Actual (field)	Logger
Temperature – 10m*	13.4	14.1
2m*	13.4	13.2
Relative Humidity*	78.7	79.1
Wind Speed	0.9 m/s at ground	1.6 m/s at 10 metres
Wind Direction	170	170
Solar Radiation	21	20
TBRG	10mm	20 tips
Battery/Solar	12.9	

\* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 0720 EST as these were testing.

### Additional Items

1. Solar panel and components cleaned. All components were very dirty.
2. Installation sprayed for insects.
3. Guy wires checked.

### [Clyde 26/05/21](#)

Sensor	Actual (field)	Logger
Temperature – 10m*	17.0	17.7
2m*	17.0	16.7
Relative Humidity*	58	52
Wind Speed	1.3 m/s at ground (poor exposure at ground)	1.5 m/s at 10 metres
Wind Direction	190	195 Fluctuating
Solar Radiation	340	355
TBRG	10mm	21 tips
Battery/Solar	13.2	

\* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 0845 EST as these were testing.

Additional Items

1. All components cleaned.
2. Installation sprayed for insects.

Both sites are now polled weekly by HCS and data is downloaded and available on the HCS website.

Should you require any further information on this report please do not hesitate to contact me on 0402 134 092.

A handwritten signature in black ink, appearing to read 'Glen Murphy'.

Glen Murphy

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**Hydrometric Consulting Services Pty Ltd**

PO Box 3332

Putney NSW 2112

Mob 0402 134 092

Email [glenmurf@ozemail.com.au](mailto:glenmurf@ozemail.com.au)

**[www.hydrometric.com.au](http://www.hydrometric.com.au)**

# Hydrometric Consulting Services Pty Ltd

ABN 16 091 437 071

28 October 2021

Mary Wong  
Veolia Environmental Services (Australia) Pty Ltd

## Re – Quarterly service of weather stations

Dear Mary,

As per our service agreement, on the 27/10/21 HCS undertook the service, calibration and maintenance of the weather stations located at the Horsley Park and Clyde sites. Field readings were obtained by a combination of a Kestral 3500, compass, Monitor Solar Radiation field unit and HS TBRG calibration device. Details are as follows:

### Horsley Park 27/10/21

Sensor	Actual (field)	Logger
Temperature – 10m*	16.8	16.1
2m*	16.8	16.1
Relative Humidity*	75	77
Wind Speed	1.8 m/s at ground	1.85 m/s at 10 metres
Wind Direction	190	190
Solar Radiation	280	280
TBRG	10mm	20 tips
Battery/Solar	14.3	

\* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 0640 EST as these were testing.

### Additional Items

1. Solar panel and components cleaned. All components were very dirty.
2. Installation sprayed for insects.
3. Guy wires checked.

### Clyde 27/10/21

Sensor	Actual (field)	Logger
Temperature – 10m*	17.0	18.8
2m*	17.0	19.2
Relative Humidity*	58.9	59.3
Wind Speed	0.5 m/s at ground (poor exposure at ground)	0 m/s at 10 metres. New bearings required.
Wind Direction	220	220
Solar Radiation	500	530
TBRG	10mm	21 tips
Battery/Solar	12.9	

\* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 0730 EST as these were testing.

Note 3: New bearings required in wind speed sensor.

Additional Items

1. All components cleaned.
2. Installation sprayed for insects.

Both sites are now polled weekly by HCS and data is downloaded and available on the HCS website.

Should you require any further information on this report please do not hesitate to contact me on 0402 134 092.

A handwritten signature in black ink, appearing to read 'Glen Murphy'.

Glen Murphy

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**Hydrometric Consulting Services Pty Ltd**

PO Box 3332

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Email [glenmurf@ozemail.com.au](mailto:glenmurf@ozemail.com.au)

**[www.hydrometric.com.au](http://www.hydrometric.com.au)**

# *Hydrometric Consulting Services Pty Ltd*

ABN 16 091 437 071

26 November 2021

Mary Wong  
Graduate Environmental Engineer  
Veolia Environmental Services Australia Pty Ltd

## **Re – Replacement of Bearings in the Wind Sensor at Clyde Weather Station**

Dear Mary,

On 25 November 2021 Hydrometric Consulting Services (HCS) carried out the following work at the Clyde Weather Station:

- Supplied and installed new bearings in the wind sensor at 10 metres
- Serviced and cleaned the sensors at 10 metres.

The system is fully operational.

Should you require any further information please do not hesitate to contact me on 0402 134 092.



Glen Murphy





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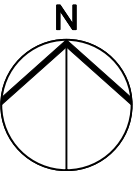
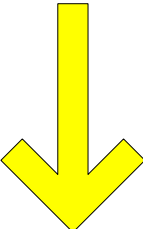
## **APPENDIX C:**

### **FIELD AMBIENT ODOUR ASSESSMENT PLOT AND FIELD SHEETS**

**(25 NOVEMBER 2021)**

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<b>DESCRIPTION</b>  Field Ambient Odour Assessment Survey Modified German Standard VDI 3940		<b>LEGEND</b> German Intensity Scale VDI3882 0 Not detectable 1 Very weak 2 Weak 3 Distinct 4 Strong 5 Very strong 6 Extremely strong		 <b>Veolia (Australia) Pty Ltd</b> Clyde Transfer Terminal, Clyde, NSW Field Ambient Odour Assessment Survey  Survey Date: 25 November 2021 Survey Time Period: 1230 hrs to 1310 hrs		
	<b>THE ODOUR UNIT PTY LTD</b> Level 3, 12/56 Church Avenue MASCOT, NSW 2020 Phone: (02) 9209 4420 <a href="http://www.odourunit.com.au">www.odourunit.com.au</a>		<b>DRAWN BY</b>	I.FARRUGIA 06/12/2021	<b><u>Odour Audit XXXVI</u></b>  Field Ambient Odour Assessment Survey	<b><u>Plot No.</u></b> N1473-XXXVIII
			<b>CHECKED</b>	J.SCHULZ 06/12/2021		<b><u>Job No.</u></b>
			<b>APPROVED</b>	J.SCHULZ 06/12/2021		N1473L
		<b>Local wind direction</b> 		<b>Local wind conditions</b>  Calm to Light, with winds blowing from the north. No rainfall observed.  Refer to <b>FAOA Logsheet N1473L-XXXVIII</b> for details on recorded odour detections		



# THE ODOUR UNIT PTY LTD

Level 3, 12/56 Church Avenue  
MASCOT NSW 2020

Phone: +61 2 9209 4420  
Facsimile: +61 2 9209 4421  
Email: [info@odourunit.com.au](mailto:info@odourunit.com.au)  
Internet: [www.odourunit.com.au](http://www.odourunit.com.au)  
ABN: 53 091 165 061

## Field Ambient Odour Assessment Log Sheet

**Date:** 25 November 2021

**Assessor:** J. Schulz

**Weather Conditions:** Light wind speeds blowing from the north.  
No rainfall observed.

**Survey Reference Plot No:** N1473L-XXXVIII

GRIF REF. POSITION	MEASUREMENT TIME PERIOD (hrs)	WIND DIRECTION	WIND SPEED (m/s)	ODOUR PRESNT (Y/N)	ODOUR CHARACTER	VDI 3940 INTENSITY SCALE 0-6	COMMENTS
1	1230 – 1235	N	1.0 – 2.0	N	--	0	--
2	1237 – 1242	N	1.0 – 2.0	N	--	0	--
3	1245 – 1250	N	< 1.0	N	--	0	--
4	1255 – 1300	N	1.0 – 2.0	N	--	0	--
5	1303 – 1308	N	0.5 – 2.0	N	--	0	--
6	1310 – 1315	N	0.5 – 2.0	N	--	0	--