

Air Quality Management Plan - CTT

PURPOSE	<p>This Air Quality Management Plan (AQMP) incorporates the Odour Management Plan and Dust Management Plan for Clyde Transfer Terminal (CTT) and also incorporates the Ambient Air Quality Monitoring Plan.</p> <p>The AQMP has been prepared in accordance with the requirements of the Conditions of Development Consent (COCs) and Environment Protection Licence (EPL) issued for the CTT.</p>
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Scope	This AQMP has been prepared to provide the management measures implemented to minimise potential dust and odour related impacts during the operation stage of the CTT.
Review Frequency	Yearly

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Quality Information

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Line of Business:	Waste
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Rev	Revision Details	Issued to	Date
0.1	First draft for internal review	NSW Resource Recovery Technical Team ANZ People & Safety SHEQ Team	06 November 2020
0.2	Second draft for internal review	NSW Resource Recovery Technical Team ANZ People & Safety SHEQ Team	29 July 2021
0.3	Final draft	Department of Planning, Industry and Environment	30 July 2021

Definitions/Abbreviations

See definitions in the [BMS Dictionary](#) - Only definitions directly pertaining to this document are included.

Subject	Definition
AEMR	Annual Environmental Management Report
AQMP	Air Quality Management Plan
BMS	Business Management System
CCC	Community Consultative Committee
CTT	Clyde Transfer Terminal
COC	Conditions of Development Consent
DA	Development Application
DPIE	Department of Planning, Industry and Environment
DMP	Dust Management Plan
EIS	Environmental Impact Statement
EP&A	Environmental Planning and Assessment (Act and Regulations)
EPA	Environment Protection Authority
EPL	Environment Protection Licence
ERP	Emergency Response Plan
OEMP	Operational Environmental Management Plan
OMP	Odour Management Plan
PIRMP	Pollution Incident Response Management Plan
POEO	Protection of the Environment Operations Act 1997
TMP	Traffic Management Plan
TPA	Tonnes per annum
Veolia	Veolia Australia and New Zealand
WHS	Work Health and Safety (Act and Regulation)
WMP	Waste Management Plan

1. Introduction

1.1. Overview

Veolia Australia and New Zealand (Veolia) operates the Clyde Transfer Terminal (CTT), which is located within a portion of the Clyde Rail Yard, at 322 Parramatta Road, and forms part of Lot 201 of DP10076683 in the Cumberland Local Government Area. Refer to Site Layout Plan in **Appendix A** of the Operational Environmental Management Plan (OEMP).

The CTT facility has been approved to receive up to 600,000 tonnes per annum (TPA) of waste from within the Sydney Region. Waste is containerised and loaded onto rail wagons for transportation by rail to the Woodlawn Eco Precinct (owned and operated by Veolia) in the Southern Tablelands (approximately 250 kilometres southwest of Sydney) for treatment, recycling and energy recovery.

The CTT includes the following infrastructure:

- An access road for waste trucks entering and exiting the facility from Parramatta Road.
- Incoming and outgoing weighbridges to check the waste type and weight of the waste being delivered to the facility.
- An enclosed building for the unloading and handling of waste, with environmental controls such as dust suppression and odour control systems.
- A hardstand area for temporary storage and maneuvering of full and empty sealed shipping containers prior to loading on to trains.
- Rail sidings for the loading of containers onto trains for rail transport to Woodlawn.

The Minister of Planning approved the Development Application (DA) 205-08-01 on 29 August 2002, in accordance with section 89 (e) of the *Environmental Planning and Assessment Act 1979* (EP&A Act). A number of Conditions (COC) of Development Consent (Consent) were issued to stipulate regulatory requirements for the operation of the CTT.

There have been a number of modifications since to COC which have been approved by the Department of Planning, Industry and Environment (DPIE) in accordance with section 75W of the *Environmental Planning and Assessment Act 1979*. The review of this Air Quality Management Plan (AQMP) has been triggered by modification application (DA No. 205-08-01 MOD 5) to extend operations and increase waste acceptance to 600,000 TPA.

This AQMP has been prepared in compliance with COCs 48, 49, 70 to 83, 87, 88, 90 and 91 to 96 for the Clyde Transfer Terminal (CTT) and outlines procedures for odour and dust mitigation and monitoring.

In addition, an Environment Protection Licence (EPL) has been issued under the *Protection of the Environment Operations Act 1997* (POEO Act) by the NSW Environment Protection Authority (EPA).

The AQMP ensures that odour and dust impacts from the activities undertaken during the CTT's operational phase are suitably managed and details the relevant control strategies and monitoring procedures.

1.2. Scope and Objectives

The purpose of this AQMP is to provide, in accordance with the COCs, EPL, relevant legislation and as part of Veolia's Business Management System (BMS), odour and dust management procedures to form part of the CTT Operational Environmental Management Plan (OEMP).

The OEMP is the working environmental management tool for the operation of the CTT, concentrating on key environmental issues, including supporting detailed plans for the management of water quality, waste, traffic, air quality, noise, contamination, pest and vermin and emergency response.

This AQMP provides information on key odour and dust issues, as follows:

- Assessment of the potential dust and odour impacts for the CTT, in accordance with relevant guidelines and requirements;
- Detailed emission control techniques/practices to be employed;
- Details of ongoing management and monitoring measures for preventing and/or minimising fugitive emissions; and
- Systems for measuring and reporting the effectiveness of the adopted odour control measures demonstrating compliance with relevant regulatory framework.

The objectives of the AQMP include documenting strategies to minimise potential dust and odour emissions, as well as providing details of ongoing odour and dust management of the CTT whilst it remains in operation.

1.3. Legal and Other Requirements

The following regulatory framework applies to this AQMP:

- Development Application (DA 205-08-01) issued under the *Environmental Planning and Assessment Act 1979*, in accordance with section 89 (e) of the *Environmental Planning and Assessment Act 1979* (EP&A Act)
- Environment Protection Licence (EPL 11763) issued under the *Protection of the Environment Operations Act 1997* (POEO Act) and particularly the *POEO (Clean Air) Regulation 2002*.
- Standards and guidelines (refer **Section 5.15**.)

1.3.1. Conditions of Development Consent

The COCs related to the AQMP are detailed in **Table 1.1** below.

Table 1.1 Condition of Consent Requirements

Relevant Conditions	Requirement	AQMP Reference
48	The Odour Management Plan shall address, but not necessarily limited to, the following issues; (a) Detailed description of the odour control system subject to MOD-133-11-2006, including (but not necessarily limited to)	Noted and addressed in the following sections:

	<p>scaled drawings of the system and its location, technical specifications and operational methods;</p> <p>(b) procedures for the management of waste at the premises at all times to minimise the generation of odours</p> <p>(c) protocols for the operation of the odour control mechanisms for the terminal building, including the forced air extraction system, to minimise the risk of any adverse impact on surrounding commercial and residential areas</p> <p>(d) procedures for the maintenance and repair of the forced air extraction system on the terminal building</p> <p>(e) an emission monitoring program designed to determine compliance with the EPA's odour goal of less than 2OU at the nearest sensitive receiver and to establish the efficiency of the forced air extraction system and appropriate equipment maintenance schedules. The program is to include odour emission monitoring using dynamic olfactometry in such a way as to allow determination of the performance of the odour control system.</p> <p>(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 experience person, to be conducted 3-monthly for the initial 24 months of receiving uncontainerised 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 Planning Secretary</p> <p>(g) An operational contingency plan to be initiated in the event of equipment failure, industrial action or any other situation that prevents the containerisation of any waste that has been in the terminal building in excess of 18 hours. Such a plan shall include suspending the acceptance of further uncontainerised waste at the premises</p> <p>(h) A testing program designed to determine appropriate maintenance schedules for replacement of odour adsorption material in the pressure relief vents of the waste containers</p> <p>(i) procedures for the maintenance and repair of the odour adsorption and pressure relief vents of the waste containers, including the replacement of the odour adsorption material, and;</p> <p>(j) a community consultation program on odour. The community consultation program may include a community survey, to be developed in conjunction with the community consultative committee</p>	<p>a) Section 4.1.4 (Odour Control System)</p> <p>b) Section 4 (Air Quality Management Measures)</p> <p>c) Section 4.1.4.3 (Odour Control System Operation Protocol)</p> <p>d) Section 4.1.2 (Maintenance and Repair)</p> <p>e) Section 5.1.1 (Air Emissions Monitoring Program)</p> <p>f) Section 3.2 (Predicted Air Quality Impacts)</p> <p>g) Section 4.1.3 (Additional Measures)</p> <p>h) Section 4.1.2 (Maintenance and Repair)</p> <p>i) Section 4.1.2 (Maintenance and Repair)</p> <p>j) Section 5.2.3 (Community Consultation Program)</p>
<p>49</p>	<p>The Dust Management Plan shall include but not necessarily limited to, control strategies to achieve compliance with any dust emission limits in this consent and any applicable environment protection license. The Dust Management Plan shall adopt the recommendations made by Turnkey Environmental Services Pty Ltd (dated 13 Feb 2006) and provided in Appendix D of the Statement of Environmental Effects, Modification to the Termination Building Forced Ventilation System Clyde Waste Transfer Station (Environ, Oct 2006) in relation to the dust suppression spray system at the terminal. The Dust Management Plan shall provide for the monitoring of the performance of the dust suppression system and for improving its performance as it may be necessary. Following the receipt of any dust related</p>	<p>Noted and addressed throughout AQMP</p>

	<p>complaints, the Planning Secretary may require the Applicant to undertake further investigations, monitoring or implement measures aimed to mitigate identified dust impacts on residential areas associated with the operation of the terminal.</p>															
<p>70</p>	<p>The Applicant shall install a forced ventilation system in the Terminal Building in accordance with MOD-133-11-2006, the design specified in the report Addendum to Final Report – Odour Mitigation Study – Clyde Waste Transfer Terminal – Collex Pty Ltd prepared by the Odour Unit Ltd and dated July 2006, and drawing N3630/100 tilted Clyde Transfer Terminal Roof and Gallery Level Proposed Ducting Layout Details prepared by Turnkey Environmental Systems Pty Ltd. The system shall include a single air exhaust stack to discharge all air from the waste receival and compaction/loading building, in accordance with the following specifications;</p> <table border="1" data-bbox="360 734 1153 983"> <thead> <tr> <th>Minimum Stack Height (metres above existing ground level)</th> <th>Minimum Stack Height above the tip of the roof (metres)</th> <th>Minimum Stack Diameter (metres)</th> <th>Minimum Stack Exit Velocity (m/s)</th> <th>Minimum Stack Exit Volumetric Flow rate (m3/s)</th> <th>Location (X Coordinate)</th> <th>Location (Y Coordinate)</th> </tr> </thead> <tbody> <tr> <td>21</td> <td>4</td> <td>2.64</td> <td>20</td> <td>109.48</td> <td>317145</td> <td>6254129</td> </tr> </tbody> </table> <p>Minimum Stack Height (meters above existing ground level) Minimum Stack Height above the top of the roof (meters) Minimum Stack Diameter (meters) Minimum Stack Exit Velocity (m/s) Minimum Stack Exit Volumetric Flowrate (m3/s) Location (X coordinate) Location (Y coordinate) 21 4 2.64 20 109.48 317145 6254129</p> <p>The six original fans drawing air from the building through the odour control system shall be replaced with six fans of at least 18kW capacity (each) as per MOD-133-11-2006. The forced air extraction system installed under MOD-133-11-2006 shall be capable of operating in a proper and efficient manner under continuous duty</p> <p>Any variations of the design and specifications indicated above resulting from the detailed design of the odour control system shall be approved by the Planning Secretary, in consultation with the EPA, prior to the commencement of construction. As part of such approval, the Planning Secretary may require the Applicant to provide information demonstrating that the final design will not result in increased impacts as those predicted in the documents referred to under condition 1(e)</p>	Minimum Stack Height (metres above existing ground level)	Minimum Stack Height above the tip of the roof (metres)	Minimum Stack Diameter (metres)	Minimum Stack Exit Velocity (m/s)	Minimum Stack Exit Volumetric Flow rate (m3/s)	Location (X Coordinate)	Location (Y Coordinate)	21	4	2.64	20	109.48	317145	6254129	<p>Noted in Section 4.1.4 (Odour Control System)</p>
Minimum Stack Height (metres above existing ground level)	Minimum Stack Height above the tip of the roof (metres)	Minimum Stack Diameter (metres)	Minimum Stack Exit Velocity (m/s)	Minimum Stack Exit Volumetric Flow rate (m3/s)	Location (X Coordinate)	Location (Y Coordinate)										
21	4	2.64	20	109.48	317145	6254129										
<p>71</p>	<p>Construction of the Terminal Building force ventilation system in accordance with MOD-133-11-2006 shall be undertaken under continuous operation of the original forced ventilation system (as per design approved by the Planning Secretary in correspondence to Collex dated 5 January 2003). Forced ventilation in the Terminal Building, by the operation of the original system or the new system subject to MOD-133-11-2006, shall not be interrupted at any time during the period of transferring odour control systems, unless otherwise approved by the Planning Secretary following a written</p>	<p>Noted and addressed in Section 4.1.3 (Additional Measures)</p>														

	application for temporary stoppage of the ventilation system during that period. Such application shall provide details of stoppage time required, impacts predicted, and proposed mitigation measures and notification requirements. This condition does not apply at times when waste is not contained within the building.	
72	Prior to commencement of construction of the works required under MOD-133-11-2006, the Applicant shall notify the Planning Secretary, Auburn Council, the EPA and the Community Consultative Committee in writing of the date of commencement of construction, details of the main construction activities and anticipated duration of construction and times of the main construction activities.	Noted and addressed in Section 4.1.4 (Odour Control System)
73	The Applicant shall implement the approved Odour Management Plan to the satisfaction of the Planning Secretary.	Noted
74	The Applicant must not cause or permit the emission of offensive odours from the premises, as defined under section 129 of the <i>Protection of the Environment Operations Act 1997</i> .	Noted
75	The Applicant is not permitted to use deodorisers for odour control at the premises, unless otherwise approved by the Planning Secretary.	Noted and addressed in Section 4.1 (Dust and Odour Control Measures)
76	The Applicant shall continuously operate the forced ventilation system subject to MOD-133-11-2006 (and the original forced ventilation system until the system subject to MOD-133-11-2006 becomes operational) whenever waste is contained within the building, unless otherwise approved by the Planning Secretary. As part of such approval, the Planning Secretary may require the Applicant to carry out additional investigations and implement additional measures to mitigation any off-site impacts that may be anticipated or identified from such investigations	Noted and addressed in Section 4.1.3 (Additional Measures)
77	<p>Within three months of the commissioning of the forced ventilation system subject to MOD-133-11-2006, the Applicant shall conduct;</p> <p>(a) odour emission rate sampling and analysis from the single stack (conducted in accordance with Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (EPA, January 2007); and</p> <p>(b) odour dispersion modelling for the stack odour discharge conducted in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA, August 2005) and the Technical Framework – Assessment and Management of Odour from Stationary Sources in NSW (EPA, November 2006).</p> <p>to confirm whether the operation of the modified stack design meets the DEC's odour goal of less than 2 OU at the nearest sensitive receiver.</p>	Noted and addressed in Section 4.1.3 (Additional Measures) and Section 5.1.1 (Air Emissions Monitoring Program)
78	The results of any odour performance testing and modelling conducted in accordance with the conditions of this consent,	Noted and addressed in

	including those required under condition 77, shall be submitted to the Community Consultative Committee, the EPA, the Planning Secretary and shall be made publicly available, within eight weeks of the testing and modelling having been completed.	Section 4.1.3 (Additional Measures)
79	Following the review of the investigations required under condition 77, or any other odour related investigations and documentation required under this consent, the Planning Secretary in consultation with the EPA may require the Applicant to carry out additional investigations and implement additional measures to mitigate any identified off-site odour impacts.	Noted
80	All odour monitoring and management plans shall be made available to the public on request to the Applicant.	Noted in Section 5.4 (Publishing of Monitoring Data)
81	Any containerised waste shall not be exposed to the atmosphere at the site, except via a pressure release mechanism and odour filtration system on a container maintained and operated in accordance with the Conditions of this Consent.	Noted and addressed in Section 4 (Air Quality Management Measures) and 4.1.2 (Maintenance and Repair)
82	The design of the pressure release mechanism and odour filtration system on the waste containers shall be approved by the Planning Secretary prior to the acceptance of any uncontainerised waste at the premises.	Noted and addressed in Section 4.1.2 (Maintenance and Repair)
83	Any waste that has been packed into containers on the site, shall not be re-exposed to the atmosphere at the site, except via a pressure release mechanism and odour filtration system on a container maintained and operated in accordance with the Conditions of this Consent.	Noted and addressed in Section 4.1.2 (Maintenance and Repair)
87	The Applicant shall carry out monitoring the forced ventilation system subject to MOD-133-11-2006 (including air emissions monitoring or other) as may be required under any Environment Protection License. The monitoring results shall be reported in the Annual Environmental Management report required under condition 59.	Noted and addressed in Section 5.2.1 (Odour Reporting)
88	Monitoring for the concentration of a pollutant emitted to the air must be done in accordance with: (a) any methodology which is required by or under the Protection of the <i>Environment Operations Act 1997</i> to be used for the testing of the concentration of the pollutant; or (b) if no such requirement is imposed by or under the Protection of the <i>Environment Operations Act 1997</i> , any methodology which the general terms of approval or a condition of the licence (as the case may be required to be used for that testing; or (c) if no such requirement is imposed by or under the Protection of	Noted in Section 5 (Air Quality Monitoring and Reporting)

	<p>the <i>Environment Operations Act 1997</i> or by the general terms of approval or a condition of the licence (as the case may be), any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place</p> <p>Note: <i>The Clean Air (Plant and Equipment) Regulation 1997</i> requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".</p>																																																													
<p>90</p>	<p>Prior to the installation of the forced ventilation system subject to MOD-133-11-2006, the Applicant shall provide to the EPA, manufacturer's performance guarantees, demonstrating to the satisfaction of the EPA that the equipment will comply with the design parameters specified in this consent and/or the Environmental Protection License.</p>	<p>Noted</p>																																																												
<p>91</p>	<p>A meteorological station must be sited and operated at the premises in accordance with the Approved Methods for the Sampling and Analysis of Air Pollutants in NSW. The Applicant shall undertake the sampling and analysis of the meteorological parameters specified in table below. Sampling and analysis of 16 meteorological parameters shall be carried out strictly in accordance with the methods and references specified in the table.</p> <table border="1" data-bbox="347 1043 1134 1935"> <thead> <tr> <th>Parameter</th> <th>Units of Measure</th> <th>Averaging Period</th> <th>Method¹</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>Wind Speed @ 10 m</td> <td>m/s</td> <td>1 hour</td> <td>AM-2 & AM-4</td> <td>Continuous</td> </tr> <tr> <td>Wind Direction @ 10 m</td> <td>°</td> <td>1 hour</td> <td>AM-2 & AM-4</td> <td>Continuous</td> </tr> <tr> <td>Sigma Theta @ 10 m</td> <td>°</td> <td>1 hour</td> <td>AM-2 & AM-4</td> <td>Continuous</td> </tr> <tr> <td>Temperature @ 10 m</td> <td>K</td> <td>1 hour</td> <td>AM-4</td> <td>Continuous</td> </tr> <tr> <td>Temperature @ 2 m</td> <td>K</td> <td>1 hour</td> <td>AM-4</td> <td>Continuous</td> </tr> <tr> <td>Solar Radiation</td> <td>W/m²</td> <td>1 hour</td> <td>AM-4</td> <td>Continuous</td> </tr> <tr> <td>Rainfall</td> <td>mm</td> <td>24 hours</td> <td>AM-4</td> <td>Continuous</td> </tr> <tr> <td>Evaporation</td> <td>mm</td> <td>24 hours</td> <td>Note²</td> <td>Continuous</td> </tr> <tr> <td colspan="2">Additional Requirements</td> <td colspan="3">Method</td> </tr> <tr> <td colspan="2">Siting</td> <td colspan="3">AM-1 & AM-4</td> </tr> <tr> <td colspan="2">Measurement</td> <td colspan="3">AM-2 & AM-4</td> </tr> </tbody> </table> <p>Note: ¹ All methods are specified in the Approved Methods for the Sampling and Analysis of Air Pollutants in NSW. Note: ² Method approved by the EPA in writing.</p>	Parameter	Units of Measure	Averaging Period	Method ¹	Frequency	Wind Speed @ 10 m	m/s	1 hour	AM-2 & AM-4	Continuous	Wind Direction @ 10 m	°	1 hour	AM-2 & AM-4	Continuous	Sigma Theta @ 10 m	°	1 hour	AM-2 & AM-4	Continuous	Temperature @ 10 m	K	1 hour	AM-4	Continuous	Temperature @ 2 m	K	1 hour	AM-4	Continuous	Solar Radiation	W/m ²	1 hour	AM-4	Continuous	Rainfall	mm	24 hours	AM-4	Continuous	Evaporation	mm	24 hours	Note ²	Continuous	Additional Requirements		Method			Siting		AM-1 & AM-4			Measurement		AM-2 & AM-4			<p>Noted and addressed in Section 3.1.1 (Weather Monitoring Instrumentation)</p>
Parameter	Units of Measure	Averaging Period	Method ¹	Frequency																																																										
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92	The Applicant shall implement the Dust Management Plan (Construction Stage) and the approved Dust Management Plan (Operation Stage) to the satisfaction of the Planning Secretary.	Noted
93	All operations and activities occurring at the premises must be carried out in a manner that will minimise the emission of dust from the premises.	Noted and addressed in Section 4.1 (Dust and Odour Control Measures)
94	All trafficable areas and vehicle manoeuvring areas in or on the premises shall be maintained at all times in a condition that will minimise the generation or emission from the premises, of wind-blown or traffic generated dust.	Noted and addressed in Section 4.1 (Dust and Odour Control Measures)
95	Trucks entering and leaving the premises that are carrying loads must be covered at all times, except during loading and unloading. (EPA)	Noted and addressed in Section 4.1 (Dust and Odour Control Measures)
96	The Applicant must prepare and implement an Ambient Air Quality Monitoring Plan. The Plan must address, but not necessarily be limited to, the following: (a) Monitoring methodologies and standards (sampling and analysis); (b) Monitoring for concentrations of total suspended particulates and dust deposition rates; (c) Locations where monitoring will be carried out; (d) Detailed monitoring cycle and the duration of each monitoring cycle; and (e) Reporting.	Noted and addressed in Section 5.1 (Monitoring Program)

1.3.2. Environment Protection Licence

The Environment Protection Licence (EPL 11763) related to the AQMP are detailed in **Table 1.2** below.

Table 1.2 Environment Protection Licence Requirements

Relevant Conditions	Requirement	AQMP Reference
L4.1	No condition of this licence identifies a potentially offensive odour for the purposes of section 129 of the <i>Protection of the Environment Operations Act 1997</i> . Note: Section 129 of the <i>Protection of the Environment Operations Act 1997</i> , provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a	Noted

	defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.	
O3.1	All operations and activities occurring at the premises must be carried out in a manner that will minimise the emission of dust from the premises.	Noted and addressed in Section 4 (Air Quality Management Measures)
O3.2	Trucks entering and leaving the premises that are carrying loads must be covered at all times, except during loading and unloading.	Noted and addressed in Section 4.1 (Dust and Odour Control Measures)

1.4. Stakeholder Consultation

As part of an ongoing commitment to stakeholder engagement, Veolia has implemented a program of communication and consultation during the preparation of this AQMP. Veolia has consulted with government bodies and other key stakeholders.

The key issues raised during consultation for air quality impacts included odour impacts on surrounding areas and measures to mitigate, as well as emissions from waste vehicles.

1.4.1. Government Bodies

The following government agencies will be consulted with in relation the requirements of this AQMP:

- NSW Department of Planning, Industry and Environment;
- NSW Environment Protection Authority;
- Cumberland City Council

1.4.2. Community

Veolia aims to ensure that the local community is kept informed of the progress of the project in a proactive and responsive manner. Veolia's communication may include the following where applicable:

- public notices and announcements;
- meetings and correspondence with appropriate regulatory authorities; and
- discussions with adjoining landowners / neighbours who may be affected by the CTT.

The key objectives of the community focused communication and consultation program include:

- Educating stakeholders regarding key aspects of the CTT; and

- Informing community groups and neighbours to help Veolia understand concerns.

The following avenues provide availability of information about the CTT:

- Dedicated Veolia webpage:
<https://www.veolia.com/anz/our-services/our-facilities/transfer-stations/clyde-transfer-station>
- Community telephone line and email address:

Location	Contact
CTT 24 hour feedback line	(02) 9841 2600
Dedicated email address	clyde.weighbridge@veolia.com

- Published Monitoring Reports:
<https://www.veolia.com/anz/our-services/our-facilities/transfer-stations/clyde-transfer-station>
- Published Monitoring Data:
<https://www.veolia.com/anz/about/about-veolia/operational-compliance/nsw-monitoring-reports>

2. Goals of AQMP

2.1. Air Quality Goals

2.1.1. Odour Goals

Historical air quality assessments have established an odour criterion for the CTT in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (EPA 2016). For the operational phase of the CTT, refer to **Table 2.1** below which is applicable at the boundary of the facility.

Table 2.1 CTT Air Quality Impact Assessment Criteria

Pollutant	Criterion
Odour	2 OU

Further mitigation and management measures to assure the effective control of odour, during operation of the CTT are presented in **Section 4** of this AQMP.

2.1.2. Dust Goals

The dust goals adopted for this site are detailed in Table 2.2 below.

Table 2.2 CTT Dust Goals

Pollutant	Criterion
Total Suspended Particulates (TSP)	90g/m ³ as an annual average
Depositional Dust (DD)	4 g/m ² /month for residential areas; and
	5 g/m ² /month for commercial and industrial areas (to follow up dust complaints, or as required)

2.2. Roles and Responsibilities

The following table details the roles and responsibilities associated with the AQMP.

Table 2.3 AQMP Roles and Responsibilities

Action	Responsibility	Timing
Overall implementation of the AQMP	Facility Manager and Operational Personnel	Ongoing
Implement methodology for avoiding odour and dust emissions	Facility Manager and Operational Personnel	Ongoing as per AQMP
Coordinate monitoring and compile reports	Monitoring Personnel	As required
Maintain internal records of monitoring	Monitoring Personnel	As required
Collate and maintain record of complaints, respond to complainant	Facility Manager and/or nominee	Upon receipt of complaint
Identify non-conformances and notify Facility Manager/ NSW Environmental Advisor	EMR	Ongoing
Authorise and confirm the implementation of mitigation measures	Facility Manager/EMR/NSW Environmental Advisor	As required
Reporting on monitoring results	Monitoring Personnel	Annually (<i>Annual Environmental Management Report</i>)
Training and communication	Facility Manager/NSW Environmental Advisor	<p>Training as required, 12 monthly corporate refreshers</p> <p>Monthly toolbox meetings to discuss any safety and compliance issues, including dust, that have arisen since the previous meeting.</p> <p>Review of any complaints received relating to dust and reports from monitoring conducted as a result</p>

3. Existing Environmental and Operational Impacts

3.1. Existing Environment

3.1.1. Weather Monitoring Instrumentation

A weather station has been installed on site, and will remain in place throughout the operation of the CTT. Meteorological measurements are guided by the following documents:

- AS/NZS 3580.1.1:2016 “Methods for sampling and analysis of ambient air. Guide to siting air monitoring equipment”
- AS/NZS 3580.14:2014 “Methods for sampling and analysis of ambient air Meteorological monitoring for ambient air quality monitoring applications”
- USEPA 454/R-99-005 (2000) “Meteorological Monitoring Guidance for Regulatory Modelling Applications”

The weather station is programmed to continuously record the following meteorological parameters:

Parameter	Units of Measure	Averaging Period	Method ¹	Frequency
Wind Speed @ 10 m	m/s	1 hour	AM-2 & AM-4	Continuous
Wind Direction @ 10 m	°	1 hour	AM-2 & AM-4	Continuous
Sigma Theta @ 10 m	°	1 hour	AM-2 & AM-4	Continuous
Temperature @ 10 m	K	1 hour	AM-4	Continuous
Temperature @ 2 m	K	1 hour	AM-4	Continuous
Solar Radiation	W/m ²	1 hour	AM-4	Continuous
Rainfall	mm	24 hours	AM-4	Continuous
Evaporation	mm	24 hours	Note ²	Continuous

Note: ¹ All methods are specified in the Approved Methods for the Sampling and Analysis of Air Pollutants in NSW.

Note: ² Method approved by the EPA in writing.

3.2. Predicted Air Quality Impacts

Historical assessments identified potential air quality impacts and associated risks associated with the operation of the CTT. **Table 3.1** lists these impacts and risks.

Table 3.1 Air Quality Impact Risk Rating

Potential Impact	Source	Risk Ranking	Control
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			Implemented
Odour emissions from putrescible waste	The handling of large quantities of waste at the facility has potential to result in the emission of odour if not properly managed.	Moderate	Yes, refer Section 4
Dust emissions from deposition from dry loads	The handling of large quantities of non-putrescible waste and deposition of dusty loads on the tipping floor has the potential to result in dust emissions beyond the Site boundary if not appropriately controlled.	Low	Yes, refer to Section 4
Air pollutants emitted from vehicles and trains accessing the Site and machinery operating on-site.	The operation of numerous vehicles on the Site, including trains, trucks, front-end loaders and container handlers, has the potential to result in dust and pollutants reducing ambient air quality if not properly managed.	Moderate	Yes, refer to Section 4

Dust and odour were predicted to be the principle air quality impacts associated with the operations of the CTT.

Dust can be generated from heavy vehicles, plant and equipment moving around the CTT, as well as the handling of waste within the transfer terminal building. However, dust impacts have not been a source of concern since the CTT opened. Since all trafficable areas of the site are sealed, and the majority of potentially dust generating activities are conducted inside the transfer building, the operation of the facility is considered unlikely to generate significant dust emissions. In general, dust emissions are controlled within the CTT transfer terminal building through the operation of a deluge system if required.

Odour emissions are controlled within the CTT transfer terminal building through the operation of an exhaust stack and ventilation system.

The details of measures installed within the CTT to mitigate potential dust and odour emissions are discussed in **Section 4**.

In accordance with Condition 48(f) of the Consent for the Clyde Transfer Terminal, odour audits are conducted at the facility and within the surrounding commercial and residential areas. These audits, conducted by The Odour Unit Pty Ltd (TOU) include, but are not limited to:

- Smoke testing in the transfer building to assess the effectiveness of the forced air extraction system;
- A review of any odour complaints, and subsequent actions, in the audit period; and,
- A downwind field odour survey in the surrounding area to identify potential odour impacts.

4. Air Quality Management Measures

Mitigation measures have been incorporated into the design of the CTT facility to minimise the risk and consequences associated with the key air quality management issues. Operational activities are undertaken to comply with relevant regulations and guidelines for the handling of dust and odour, and to ensure emissions are minimised. These are:

- **Handling of the waste:** All the waste received at CTT is handled inside the terminal building.
- **Dust emissions from handling of waste:** if required, the deluge system inside the terminal building can be used as a dust suppression system during dust generating activities.
- **Odour impacts from waste received:** a forced air extraction system in the transfer terminal building to capture and disperse odour emissions from the waste handling area

Based on the adopted mitigation measures, the residual risk for air quality for operation of the CTT is low. Controls and mitigation measures have been adopted to minimise the production of fugitive emissions at the CTT to ensure that air quality is not evident outside site boundaries.

The following general operational measures have been implemented through to manage any potential source odour and dust impacts associated with the operational phase of the CTT:

- The terminal building is enclosed, with the exception of vehicle access openings and an air extraction system.
- Dust generated from waste is to be managed by the deluge system, located within the transfer building, if required.
- The air extraction system services the waste handling area within the terminal building so as to manage odour through a single exhaust point.
- Plastic strips installed on the doorways will help contain odour within the terminal building.
- Containers used for the transport of waste have been purpose built for the CTT. The waste is completely enclosed and sealed during transportation.

4.1. Dust and Odour Control Measures

Control measures that have been implemented for the management of odour and dust whilst the CTT is operating are detailed below. Deodorisers and masking agents are not used on site as odour control as per Condition 75 of the COCs.

4.1.1. Management of Waste

In accordance with Condition 48 (b) the [CTT Odour Control Management Work Instruction \(WIS-5548\)](#) has been implemented to ensure waste is managed to minimise the generation of odours and to provide operators with clear tasks aimed at eliminating potential sources of odour.

4.1.2. Maintenance and Repair

Subject to the requirements of Condition 48, the following operation and maintenance procedures are in place for odour management at the CTT. These procedures and testing programs outline protocols aimed at improving operating safety and to minimise the risk of adverse impact on surrounding sensitive receivers such as odour exceedances.

4.1.2.1. Odour Control System Operation and Maintenance

In accordance with Condition 48(d), procedures for the maintenance and repair of the odour control system mechanisms are detailed in the Operation and Maintenance Manual for the Odour Control System provided in **Appendix A**.

4.1.2.2. Container Filter Maintenance

In accordance with Conditions 48 (h) and (i), the container filter maintenance is managed by Veolia's secondary putrescible transfer facility in Sydney, the Banksmeadow Transfer Terminal (BTT), following the [Container Servicing Work Instruction \(WIS-5169\)](#). This procedure includes inspection of containers and regular carbon filter replacement and is accessible on BMS and on site.

An odour adsorption material is contained in the sealed modified shipping containers fitted with a hatch with louvers as required by Condition 81. The design of the filtration system on the containers has been approved by the Planning Secretary to satisfy Condition 82. Compacted waste that has been packed into containers will not be exposed to the atmosphere.

Studies undertaken at the commencement of operations of the CTT, in accordance with Condition 48 (h), determined the appropriate replacement interval for the container carbon filters. The studies involved retrieving a sample of filters from service for a range of different timeframes. The filters were weighed before and after use to record the percentage increase in weight and determine the appropriate removal efficiency. Results showed that the mass increase did not exceed 33% until at least 100 days in service. Currently, each hatch has two carbon filters that are changed out annually at the BTT, based on the results of an Odour Unit study in 2018 which determined that 2 filters at 6 monthly change frequency was adequate.

4.1.3. Additional Measures

Additional odour control measures that relate to the CTT's operations include the following:

4.1.3.1. Truck Controls

Waste delivery trucks entering the CTT are to be fully enclosed or covered. Therefore any odour emissions generated by the trucks are considered to be insignificant and not expected to cause nuisance to sensitive areas. Further details regarding the requirements of operational traffic and waste delivery are found in the Waste Management Plan (WMP) and Traffic Management Plan (TMP).

4.1.3.2. Odour Control System Management

In accordance with Condition 76, the odour control system is to be operated continuously whenever waste is contained within the building.

Historical odour emission rate sampling and analysis, as well as odour dispersion modelling demonstrates compliance with Condition 77 to achieve the EPA Approved Methods (see Section 4.3) criteria of less than 2 Odour Units (OU) at the nearest sensitive receiver.

The odour performance testing and modelling indicates the design parameters of the odour control system meet the requirements of COCs to adequately manage odour in the terminal building.

4.1.3.3. Operational Contingency Plan

In accordance with Condition 47(i) and 48(g), an Operational Contingency Plan has been prepared in the event that containerisation of waste is prevented in excess of 18 hours due to incidents such as equipment failure, emergencies or industrial action. Refer to the WMP for the plan, a current version of which is accessible on site via BMS.

4.1.4. Odour Control System

The odour control system at the CTT comprises a plenum on the mezzanine level of the terminal building, a central vent stack and support structures, and two 75 kilowatt fans. Detailed components of the system are as follows.

4.1.4.1. Odour Control System Components

4.1.4.1.1. Extraction Fans

The two 75 kW extraction fans, designed to extract a total of 109.48 m³/s in accordance with Condition 70, including fan controls wired into a switchboard for the variable speed drives (VSDs) are positioned on the mezzanine level of the terminal building. The VSDs were integrated into the electrical controls of the odour control system.

4.1.4.1.2. Plenum

An insulated plenum to house the extraction fans is installed along the mezzanine level of the terminal building with the following dimensions: Length 46 m x Width 4.2 m x Height 2.2 m. Grilles, dampers and lino flooring are also installed to enable controlled air flow through each grille in the plenum.

4.1.4.1.3. Stack and Support Structure

A support platform was constructed to bear the fans and comprises two horizontal and two vertical steel sections fastened to the mezzanine and building structure of the CTT. The air discharge stack diameter equals 2.64 m and extends to 4 m about the peak of the roof, 21 m above ground to meet the requirements of Condition 70. The support structure for the stack consists of four galvanised support legs.

In accordance with Condition 48(a), detailed description of the odour control system design including site location, system drawings, technical specifications and operational methods are provided in **Appendix B**.

4.1.4.2. Odour Control System Operation Protocol

In accordance with Condition 48(c), the [Odour Control System Operation Procedure \(PRO-14622\)](#) has been implemented to minimise the risk of any adverse impact on surrounding commercial and residential areas by detailing the activities required to effectively maintain the odour control system. This protocol ensures that the fans are operated effectively and in accordance with the COCs.

4.1.5. Containers

Containers used for the transport of waste have been purpose built for the CTT. They include activated carbon filtration packs fitted to the air exhaust vent on the container as well as rubber seals to help manage potential odour.

4.1.6. Odour control and ventilation equipment

Maintenance schedule for odour control system and ventilation equipment is carried out typically in accordance with the manufacturer’s specification and includes monthly mechanical maintenance. Regular inspections are undertaken as per the CTT Environmental Inspection & Testing Schedule, included in **Section 5.1.1** of the OEMP.

4.1.7. Additional Information

The odour mitigation strategies included in **Table 4.1** below have been adopted to ensure that generation of odours from waste accepted at the CTT facility are minimised. This includes a cleaning protocol to routinely manage, maintain and clean the internal surfaces of the transfer building and externally as well.

All Veolia sites are required to follow a [Housekeeping and Inspection Procedure \(PRO-257\)](#) which requires that a standard checklist be followed to ensure site safety and hazard reduction is maintained. This checklist has been adapted for the CTT in order to manage odour through the implementation of housekeeping procedures (refer to the [Weekly Site Inspection Checklist \(TEM-5557\)](#)) and compactor cleaning procedures.

Table 4.1 Summary of Odour and Dust Controls and Mitigation Measures

Source of Dust or Odour	Control Measures	Responsibility
Waste received at the facility	<ul style="list-style-type: none"> - Routine maintenance and cleaning of containers will NOT be undertaken at the site - Waste delivery trucks entering the CTT will be required to be fully enclosed or covered - The floor of the transfer terminal will be cleaned daily - The amount of waste left on site within the terminal building will be minimised - An odour complaint logbook will be maintained on-site. When odour complaints are received, a Site investigation will be conducted to identify any unusual odour sources within the Site boundary and appropriate action taken as required - An incident specific risk assessment if required will be undertaken to consider additional control measures 	Facility Manager or nominee

	<ul style="list-style-type: none"> - The existing odour extraction system improves performance and mitigates odours to below nuisance levels for all operating and meteorological conditions - Waste storage containers are fitted with rubber seals and a carbon filters to minimise emission of odour 	
Any dust generating activities	<ul style="list-style-type: none"> - Weather station installed on site to monitor meteorological conditions on site during operational; - Visual inspection of the site entry and exit points and use of sweeper on public roads if required; - Site induction including details regarding measures to minimise dust impacts; - On-site vehicles and plant engines switched off when not in use; - On-site operational machinery and vehicles maintained and serviced according to the manufacturer's specifications undertake periodic visual checks of exhaust system emissions; - Visually monitor dust generation on site to ensure no excessive dust generation; and - Risk assessments undertaken, as required, to consider additional control measures 	Facility Manager or Nominee
Traffic Movements	<p>During waste acceptance activities:</p> <ul style="list-style-type: none"> - regular cleaning of sealed haul roads including removing litter/spilt material from access roads (sweeper/vacuum cleaner is used) - Restricting traffic to designated routes; and - Keeping vehicle loads covered when entering and leaving transporting the site except during loading and unloading. 	Operators/Drivers
Manual Handling	<ul style="list-style-type: none"> - Minimising drop heights of materials from loading/handling equipment; and - Prohibiting burning of materials on-site. 	Facility Manager and/or Nominee
General	<ul style="list-style-type: none"> - Regular sweeping and washing down, as required, as well as outside of the building, and the general site including regular sweeping to remove dust and other debris. - Training of all staff and personnel accessing the site in the need to minimise dust generation. - Use of a deluge system for dust suppression within the building, when there are particularly dusty loads or noticeable dust levels, as required. - Review of any complaints received relating to dust and reports from monitoring conducted as a result. - Monthly toolbox meetings to discuss any safety and compliance issues, including dust, that have arisen since 	Facility Manager and/or Nominee

	the previous meeting.	
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The Facility Manager and/or nominee may devise additional mitigation measures if required based on an incident specific risk assessment. If alternate methods are to be employed, the effectiveness of those methods will be demonstrated and this AQMP updated accordingly.

Additional dust and odour control measures will be put in place as appropriate so that air quality does not adversely impact neighbouring properties. Once the air emission source is removed or wind speeds reduced, standard construction dust and odour control measures would be applied.

In accordance with consent condition 49, the AQMP must provide for the monitoring of the performance of the dust suppression spray system and for improving its performance as necessary.

Site personnel are trained to operate the dust suppression system in accordance with **Section 4.2** of the OEMP. In the event of a particularly dusty load, Loader Operators will need to turn on the dust suppression system to wet waste before moving the waste on the terminal building floor. Infinity Fire performs a monthly test on the deluge system to monitor performance and to check if any maintenance may be required.

Work instructions have been prepared for site personnel to operate the dust suppression system.

Following the receipt of any dust or odour related complaints, the Planning Secretary may require the Applicant to undertake further investigations, monitoring or implement measures aimed to mitigate identified dust or odour impacts on residential or commercial areas associated with the operation of the CTT.

5. Air Quality Monitoring and Reporting

5.1. Monitoring Program

In accordance with condition 56 of the COCs, an [Environmental Monitoring Program \(MAN-14012\)](#) has been developed for the CTT, which details the monitoring schedule, calendar and locations for all environmental aspects, including air quality.

Visual assessment of dust levels are undertaken on site through daily walk arounds by site personnel and completion of housekeeping inspections.

The monitoring and recording of data is aimed at gaining a good understanding of the air quality impacts, and ensuring that the control measures are being implemented and are effective. The information is designed to provide quick identification of poor air quality episodes and to enable effective remedial action to be undertaken. This information is able to be correlated with dust monitoring results, if required.

Inspection and monitoring checklists for air quality management during the operational phase of the CTT are kept on BMS. This ensures that all monitoring activities will assist to minimise the impact of any emissions and trigger protocols for managing any exceedances.

The frequency of the monitoring is defined but in the instance of adverse meteorological conditions and extraordinary events, such as strong winds, and a complaint, the monitoring will be undertaken more regularly. In such an event, a specific risk assessment will be undertaken to devise suitable control measures. This process may also result in specific activities ceasing on site until adverse weather conditions subside, if it is not practical to implement suitable control measures.

Table 5.1 Air Quality Monitoring Requirements

Parameter	Monitoring Requirements	Frequency	Criteria/Performance Measure/Trigger	Response
Meteorological Monitoring - Wind	Airborne dust	As required or if offsite air pollution is visible	Severe weather events or adverse weather conditions	Inspect all active work areas including any exposed areas and stockpiles Utilise sweeper to manage dust levels if required
Visual Monitoring	Inspecting dust generating activities to ensure effective controls are in place	Daily or as required	Adverse weather conditions	Address housekeeping
Odour	Site inspections	Daily or as required	Detection and/or Complaints	Address housekeeping or refer Section 5.3
Odour Audits	Testing	Six monthly	Performance of the odour and ventilation equipment	Address audit requirements

The following information is also collected and can be correlated with the general monitoring information to provide a better understanding of site conditions relevant to odour management:

- automatic weather monitoring station data, including temperature, wind speed and direction;
- odour emission rate data;
- details regarding odorous loads including time, date and nature of waste pollution complaints register information
- weighbridge information relating to incoming waste, including type, time and weight; and compactor information relating to compacted waste, including time and weight for each load.

This information is used to assist in establishing Condition settings and quantitatively support operating procedures by documenting the most appropriate course of action to reduce the potential for odour complaints. Outcomes of this process include the implementation of additional odour related procedures since the commencement of operations.

5.1.1. Air Emissions Monitoring Program

The requirements of Condition 48(e) and 77 are to ensure the operation of the stack meets the EPA's odour goal of less than 2 OU at the nearest sensitive receiver. This has been verified through historical odour emission rate sampling and analysis from the stack to determine the performance of the odour control system in accordance with the EPA's Approved Methods (see Section 4.3).

5.1.2. Air Quality Study Program

An odour dispersion modelling study for the stack odour discharge has been undertaken in accordance with the Approved Methods (see Section 3.1.1) specified in Condition 77.

An Odour Mitigation Study has been undertaken for the CTT to model the dispersion rate of the odour control system and odour impact on the local area. The findings of which indicate four operation scenarios where the flow rate of the stack varies depending on environmental wind direction which permits corresponding operation regimes for Veolia to achieve the EPA's odour performance criteria as well as aiming to reduce the CTT's power consumption and greenhouse gas emissions.

5.1.3. Odour Monitoring

In accordance with Condition 56, an Environmental Monitoring Program is in place for the CTT. This program supports the OEMP in identifying environmental issues to be monitored, details the monitoring schedule, calendar and locations for all environmental aspects. As part of the Environmental Monitoring Program, an odour audit is performed at the CTT on a 6 monthly basis.

The following table provides details regarding odour monitoring requirements at the CTT. Further monitoring details are provided in the Environmental Monitoring Program, appended to the OEMP.

Table 5.2 Odour Monitoring Schedule

Action	Schedule
Odour auditing of premises and nearby receivers	Ongoing 6-monthly

5.1.4. Dust Monitoring

Due to the waste type accepted at the premises, there are minimal dust impacts at the CTT and there have been no dust complaints since commencement of operation, so no routine sampling and analysis of ambient air pollutants are performed at the CTT. Verification is completed through visual inspections and managed through housekeeping practices..

Inspections for dust management are recorded to assist with identifying and implementing appropriate actions to minimise the impact of any emissions and trigger protocols for managing any exceedances. In the event of a complaint, monitoring would be conducted once again at the CTT to determine if there are any exceedances. Dust Deposition (DD) and Total Suspended Solid Particles (TSP) would be monitored as per **Table 5.3** below.

Table 5.3 Dust Monitoring

Parameter	Location	Schedule
Visual dust emissions	Terminal	As part of ongoing site inspections

Dust deposition	Terminal	On receipt of dust complaints, as required
Total suspended particles	Within fenced enclosure of onsite retention pond	On receipt of dust complaints, as required

The following table provides details regarding odour monitoring requirements at the CTT. Further monitoring details are provided in the Environmental Monitoring Program.

5.4 Odour Monitoring Schedule

Action	Schedule
Detectable odour emissions	As part of ongoing site inspections
Odour auditing of premises and nearby receivers	Ongoing 6-monthly

5.1.5. General Requirements

The measurement procedures employed throughout the monitoring program are guided by the requirements contained in the following documents:

- AS 4323.1 -1995 “Selection of Sampling Positions”
- AS/NZS 3580.1.1:2016 “Methods for sampling and analysis of ambient air. Guide to siting air monitoring equipment
- AS/NZS 3580.9.3:2015 “Methods for sampling and analysis of ambient air, Method 9.3: Determination of suspended particulate matter - Total suspended particulate matter (TSP) - High volume sampler gravimetric method
- AS/NZS 3580.10.1:2016 “Methods for sampling and analysis of ambient air. Determination of particulate matter - Deposited matter - Gravimetric method”
- NSW Environment Protection Authority, “Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales” (2007)
 - USEPA (2000) Method 2 - “Determination of stack gas velocity and volumetric flow rate (type S pitot tube) or (as applicable);
 - USEPA (2000) Method 2C - “Determination of of stack gas velocity and volumetric flow rate from small stacks or ducts (standard pitot tube) or;
 - USEPA (1999) Method 2F - “Determination of stack gas velocity and volumetric flow rate with three-dimensional probes” or;
 - USEPA (1999) Method 2G - “Determination of stack gas velocity and volumetric flow rate with two-dimensional probes” or;
 - USEPA (1999) Method 2H - “Determination of stack gas velocity taking into account velocity decay rate near the stack wall”
- USEPA (2000) Method 4 - “Determination of Moisture Content in Stack Gases”
- USEPA (2000) Method 3 - “Gas analysis for the determination of dry molecular weight”
- AS 4323.3 (2001) - Stationary source emissions. Determination of odour concentration by dynamic olfactometry.

5.2. Performance Reporting and Review

5.2.1. Odour Reporting

Annual management reviews of the environmental performance of the CTT will assess the continuing suitability, adequacy and effectiveness of the on-site environmental management measures implemented. This review will include environmental performance against the goals of the AQMP.

Where performance reporting is required under the COCs or EPL, all relevant information shall be recorded and maintained on site, including but not limited to

- Sampling dates, times and name of sampler;
- Chain of Custody, analysis and results;
- Complaints received and corrective actions taken; and
- Copy of the EPL, development consent and other relevant approvals.

Veolia will use monitoring data to review and identify any exceedances against the adopted goals with the appropriate corrective actions applied as discussed below.

Validation of the odour and system performance will be carried using the six monthly odour audits to be undertaken by external consultants

Details of compliance reporting are provided in **Section 5.1.2** of the OEMP.

Odour monitoring forms an important part of the overall AQMP and any measured contributed emissions shall be evaluated and assessed against the criteria given in the COCs. Any non-compliance will be reported in accordance with **Section 3.2.3** of the OEMP.

Odour monitoring results are documented and reported in the Annual Environmental Management Report (AEMR) required by Conditions 59 and 87.

5.2.2. Dust Reporting

In the event of a dust complaint received at the CTT, dust monitoring requirements will be reviewed and undertaken as required, the results of which will be reported in the AEMR and annual returns. Annual management reviews of the environmental performance of the CTT will assess the continuing suitability, adequacy and effectiveness of the on-site environmental management measures implemented. This review will include environmental performance against the goals of the AQMP, when triggered. If any exceedance of air quality goals or complaints does occur, the information will be correlated with any site conditions recorded that relate to dust.

Where performance reporting is required under the COCs or EPL, all relevant information shall be recorded and maintained on site, including but not limited to:

- Sampling dates, times and name of sampler;
- Chain of Custody, analysis and results;
- Complaints received and corrective actions taken; and
- Copy of the EPL, development consent and other relevant approvals.

Veolia will use monitoring data to review and identify any exceedances against the adopted goals with the appropriate corrective actions applied as discussed below.

Details of compliance reporting are provided in **Section 5.1.2** of the OEMP.

5.2.3. Community Consultation Program

Community consultation for odour is consistent with the general program for community consultation outlined in **Section 4.3.2** of the OEMP.

In addition to these measures, and in accordance with condition 48(j), comments will be sought from the community and relevant stakeholders regarding the effectiveness of the AQMP and the process implemented to deal with odour complaints. This process would include discussions regarding proposed alterations to the odour management system, including any performance testing programs.

Consideration will also be given to the development of a community survey regarding odour.

5.3. Exceedances and Corrective Actions

In the event of an exceedance of the relevant criteria, the EMR or site nominee is informed of the location, margin of exceedance and source of emission. The pollutant, weather conditions and all relevant operating data are documented and forwarded to the EMR or nominee for an appropriate management response.

Handling of any odour or dust complaints will be managed in accordance with the process outlined in **Section 4.3.4** of the OEMP. The Facility Manager, or their site nominee, will record and manage all complaints in accordance with Veolia's complaints handling, notification and reporting procedures, outlined in the OEMP.

Any air quality related incidents will be managed in accordance with Veolia's Incident Management Standard. Investigations, where required, will be undertaken as per the same standard on a case by case basis depending on the severity of the incident as described in **Section 5.1.1** of the OEMP.

Notification, emergency response and reporting requirements relating to incidents are detailed in **Section 4.4** of the OEMP. In addition, an Emergency Response Plan (ERP) has been developed for the CTT, which incorporates the Pollution Incident Response Management Plan and the procedures to be followed.

At completion of any investigation, any corrective actions required will be recorded in Veolia's issue management system, Rivo and managed in accordance with the Continual Improvement Procedure in a timely manner as described in **Section 5.1.1** of OEMP.

The process for incident response is summarised in the figure below.

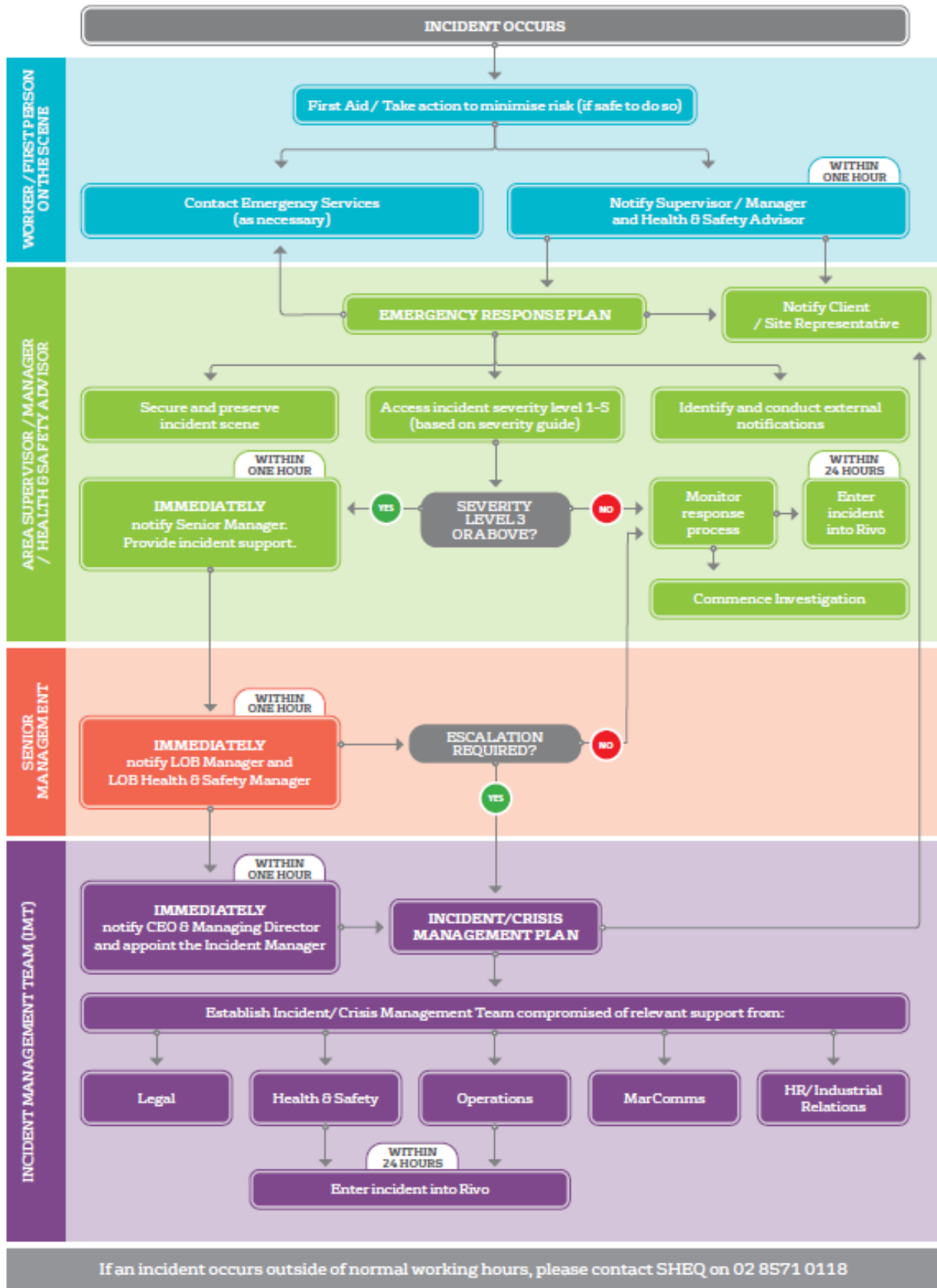


Figure 5.1 Incident Response Process Map

5.4. Publishing of Monitoring Data

Where required, Veolia publishes the results of any environmental monitoring required under the EPL on the following website:

<https://www.veolia.com/anz/about/about-veolia/operational-compliance/nsw-monitoring-reports>

References

Document Name
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Wilkinson Murray (2016). <i>Clyde Transfer Station Air Quality Impact Assessment</i> , Wilkinson Murray Pty Ltd. January 2017.

Appendix A - Operation and Maintenance Manual for the Odour Control System

Appendix B - Odour Control System