Ektimo

Experts in air quality, odour and emission monitoring.

Annual Emission Testing Report - 2026 (GS1 only)

Report: R020346

CPE Mascot Pty Ltd, Mascot

ilac-MRA NATA

Accredited for compliance with ISO/IEC 17025 - Testing. NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, calibration, and inspection reports.

Document Information

Client Name:	CPE Mascot Pty Ltd
Report Number:	R020346
Date of Issue:	12 June 2026
Attention:	Renz Tengco
Address:	Building TG1, 10 Bourke Rd Mascot NSW 2020
Testing Laboratory:	Ektimo Pty Ltd, ABN 86 600 381 413

Report Authorisation

Rick Peralta
Air Monitoring Consultant

NATA Accredited Laboratory
No. 14601

Steven Cooper
Ektimo Signatory

Please note that only numerical results pertaining to measurements conducted directly by Ektimo are covered by Ektimo terms of NATA accreditation as described in the Test Methods table. This does not include calculations that use data supplied by third-parties, comments, conclusions, or recommendations based upon the results. Refer to Test Methods section for full details of testing covered by NATA accreditation.

Table of Contents

1 Executive Summary 3

1.1 Background 3
1.2 Project Objective & Overview 3
1.3 Licence Comparison 3

2 Results 4

2.1 DP 1 – Unit 1 4

3 Sample Plane Compliance 5

3.1 DP 1 – Unit 1 5

4 Plant Operating Conditions 5

5 Test Methods 6

6 Deviations to Test Methods 6

7 Quality Assurance/Quality Control Information 7

8 Definitions 7

9 Appendices 8

Appendix A: Site Image 8
Appendix B: Chain of Custody 9
Appendix C: Laboratory Results 10

1 Executive Summary

1.1 Background

Ektimo was engaged by CPE Mascot Pty Ltd to perform emission testing at their Mascot plant. Testing was carried out in accordance with Environment Protection Licence 20246

1.2 Project Objective & Overview

The objective of the project is to quantify emissions from one (1) discharge point to determine compliance with CPE Mascot Pty Ltd 's Environmental Licence.

Monitoring was performed as follows:

Location	Test Date	Test Parameters*
DP 1 – Unit 1	28 May 2026	Oxides of nitrogen (as NO_2) Volatile organic compounds (VOCs) as n-propane equivalent

* Flow rate, velocity, temperature, and moisture were also determined.

All volume-based concentrations are reported on a dry basis at STP.

Plant operating conditions have been noted in this report.

1.3 Licence Comparison

The following licence comparison table shows that all analytes are within the licence limit set by the NSW EPA as per licence 20246 (last amended on 14 November 2017).

EPA No.	Pollutant	Units	Licence limit	Detected values (Corrected to 7% O_2)
1	Nitrogen Oxides	mg/m^3 at STP	250	230
	Volatile Organic Compounds (as n-propane)	mg/m^3 at STP	40	0.086

Note: The previous 3% O_2 Reference Condition under the *Protection of the Environment Operations (Clean Air) Regulation (NSW)*, 2022 has been removed and has been replaced with a 7% O_2 Reference Condition for fuel burning equipment using gas (in force as of 14 July 2023) for Group 5 or 6 under Schedule 3, Part 3 Reference condition Division 1 for Scheduled Premises.

Please note that the measurement uncertainty associated with the test results was not considered when determining whether the results were compliant or non-compliant.

2 Results

2.1 DP 1 – Unit 1

Date	28/05/2026	**Client**	CPE Mascot
Report	R020346	**Stack ID**	DP 1- Unit 1
Licence No.	20246	**Location**	Mascot
Ektimo Staff	Rick Peralta	**State**	NSW
Process Conditions	Load: 4100 kW (95%); Engine rated Capacity (4.3 MW)		260310

Stack Parameters		
Moisture content, %v/v	15	
Gas molecular weight, g/g mole	27.8 (wet)	29.5 (dry)
Gas density at STP, kg/m³	1.24 (wet)	1.32 (dry)
Gas density at discharge conditions, kg/m³	0.49	
% Oxygen correction & Factor	7 %	1.34
Gas Flow Parameters		
Flow measurement time(s) (hhmm)	0957	
Temperature, °C	408	
Temperature, K	681	
Ambient pressure, kPa	101	
Stack pressure, kPa	101	
Velocity at sampling plane, m/s	21	
Volumetric flow rate, actual, m³/s	14	
Volumetric flow rate (wet STP), m³/s	5.4	
Volumetric flow rate (dry STP), m³/s	4.6	
Mass flow rate (wet basis), kg/h	24000	

Gas Analyser Results	Average			Minimum			Maximum		
Sampling time	1011 - 1111			1011 - 1111			1011 - 1111		
	Concentration mg/m³	Corrected to 7% O2 mg/m³	Mass Rate g/min	Concentration mg/m³	Corrected to 7% O2 mg/m³	Mass Rate g/min	Concentration mg/m³	Corrected to 7% O2 mg/m³	Mass Rate g/min
Combustion Gases									
Nitrogen oxides (as NO_2)	170	230	46	120	170	34	200	260	54
	Concentration %v/v			Concentration %v/v			Concentration %v/v		
Carbon dioxide	6.2			4.8			6.6		
Oxygen	10.5			10			12.2		

Total VOCs (as n-Propane)	Results		
Sampling time	1008-1108		
	Concentration mg/m³	Corrected to 7% O2 mg/m³	Mass Rate g/min
Total	0.064	0.086	0.017

VOC (speciated)	Results		
Sampling time	1008-1108		
	Concentration mg/m³	Corrected to 7% O2 mg/m³	Mass Rate g/min
Detection limit(1)	<0.02	<0.02	<0.005
Acetone	0.058	0.078	0.016
Toluene	0.022	0.029	0.0059
Residuals as Toluene	0.02	0.027	0.0054

(1) Unless otherwise reported, the following target compounds were found to be below detection:
Ethanol, Isopropanol, Pentane, 1,1-Dichloroethene, Acrylonitrile, Dichloromethane, trans-1,2-Dichloroethene, Methyl ethyl ketone, n-Hexane, cis-1,2-Dichloroethene, Ethyl acetate, Chloroform, 1,1,1-Trichloroethane, 1,2-Dichloroethane, Cyclohexane, Benzene, Carbon tetrachloride, Butanol, Isopropyl acetate, 2-Methylhexane, 2,3-Dimethylpentane, 1-Methoxy-2-propanol, 3-Methylhexane, Heptane, Trichloroethylene, Ethyl acrylate, Methyl methacrylate, Propyl acetate, Methylcyclohexane, Methyl Isobutyl Ketone, 1,1,2-Trichloroethane, 2-Hexanone, Octane, Tetrachloroethene, Butyl acetate, Chlorobenzene, Ethylbenzene, m + p-Xylene, 1-Methoxy-2-propyl acetate, Styrene, o-Xylene, Butyl acrylate, Nonane, 2-Butoxyethanol, Cellosolve acetate, 1,1,2,2-Tetrachloroethane, Isopropylbenzene, alpha-Pinene, Propylbenzene, 1,3,5-Trimethylbenzene, beta-Pinene, tert-Butylbenzene, 1,2,4-Trimethylbenzene, Decane, 3-Carene, 1,2,3-Trimethylbenzene, D-Limonene, Undecane, Dodecane, Tridecane, Tetradecane

3 Sample Plane Compliance

3.1 DP 1 – Unit 1

Sampling Plane Details	
Source tested	Reciprocating engine - gas
Sampling plane dimensions	900 mm
Sampling plane area	0.636 m²
Sampling port size, number & depth	2" BSP (x2), 45 mm
Duct orientation & shape	Vertical Circular
Downstream disturbance	Exit 10 D
Upstream disturbance	Junction 2 D
No. traverses & points sampled	2 16
Sample plane conformance to AS 4323.1	Conforming but non-ideal

The sampling plane is deemed to be non-ideal due to the following reasons:
The sampling plane is too near to the upstream disturbance but is greater than or equal to 2D

4 Plant Operating Conditions

The below plant operating conditions have been supplied by CPE Mascot Pty Ltd personnel.

Location Description	Brand and model	Engine Serial No.	Power Generating Load	Fuel type
DP 1 – Unit 1	MWM TCG2032v16	2209648	4100 kW (95%)	Natural Gas

See CPE Mascot Pty Ltd records for complete process conditions.

5 Test Methods

All sampling and analysis were performed by Ektimo unless otherwise specified. Specific details of the methods are available upon request.

Parameter	Sampling method	Analysis method	Method detection limit	Uncertainty*	NATA accredited Sampling	NATA accredited Analysis
Sampling points - Selection	NSW EPA TM-1 (AS 4323.1)	NA	NA	NA	✓	NA
Flow rate, temperature & velocity	NSW EPA TM-2 (USEPA Method 2)	NSW EPA TM-2 (USEPA Method 2)	location specific	8%, 2%, 7%	NA	✓
Moisture content	NSW EPA TM-22 (USEPA Alt-Method 008)	NSW EPA TM-22 (USEPA Alt-Method 008)	1.0%	19%	✓	✓
Molecular weight	NA	NSW EPA TM-23 (USEPA Method 3)	NA	not specified	NA	✓
Dry gas density	NA	NSW EPA TM-23 (USEPA Method 3)	NA	not specified	NA	✓
Carbon dioxide	NSW EPA TM-24 (USEPA Method 3A)	NSW EPA TM-24 (USEPA Method 3A)	0.1%	13%	✓	✓
Nitrogen oxides	NSW EPA TM-11 (USEPA Method 7E)	NSW EPA TM-11 (USEPA Method 7E)	0.004 g/m³	12%	✓	✓
Oxygen	NSW EPA TM-25 (USEPA Method 3A)	NSW EPA TM-25 (USEPA Method 3A)	0.1%	13%	✓	✓
Speciated volatile organic compounds (VOCs)	NSW EPA TM-34 (USEPA Method 18)	Ektimo 344	0.4 mg/m³	19%	✓	✓†

240326

* Uncertainties cited in this table are estimated using typical values and are calculated at the 95% confidence level (coverage factor = 2).

† Analysis performed by Ektimo. Results were reported to Ektimo on 03 June 2026 in report LV-008969.

d Excludes recovery study as specified in section 8.4.3 of USEPA Test Method 18.

6 Deviations to Test Methods

NSW EPA TM-34 (USEPA 18)

Ektimo notes that the sampling and analysis of Volatile Organic Compounds (VOCs), per USEPA Method 18 has excluded the recovery study as specified in Section 8.4.3. Performing the recovery study described in Section 8.4.3 of USEPA Method 18 for analytes present at low levels is problematic. Given this, Ektimo applies a threshold of 50µg as a lower-bound mass, below which the 'spiking' of specific volatile organic compounds is not performed. For the purposes of this round of monitoring, the following compounds were present above the detection limit (0.1 µg) but were below 50µg. Therefore, recovery studies for the following analytes were not performed:

- Acetone (3.2 µg)
- Toluene (1.2 µg)

7 Quality Assurance/Quality Control Information

Ektimo is accredited by the National Association of Testing Authorities (NATA) for the sampling and analysis of air pollutants from industrial sources. Unless otherwise stated test methods used are accredited with the National Association of Testing Authorities. For full details, search for Ektimo at NATA's website www.nata.com.au.

Ektimo is accredited by NATA to ISO/IEC 17025 - Testing. ISO/IEC 17025 - Testing requires that a laboratory have adequate equipment to perform the testing, as well as laboratory personnel with the competence to perform the testing. This quality assurance system is administered and maintained by the Quality Director.

NATA is a member of APAC (Asia Pacific Accreditation Co-operation) and of ILAC (International Laboratory Accreditation Co-operation). Through mutual recognition arrangements with these organisations, NATA accreditation is recognised worldwide.

Unless specifically noted, all samples were collected and handled in accordance with Ektimo's QA/QC standards.

8 Definitions

The following symbols and abbreviations may be used in this test report:

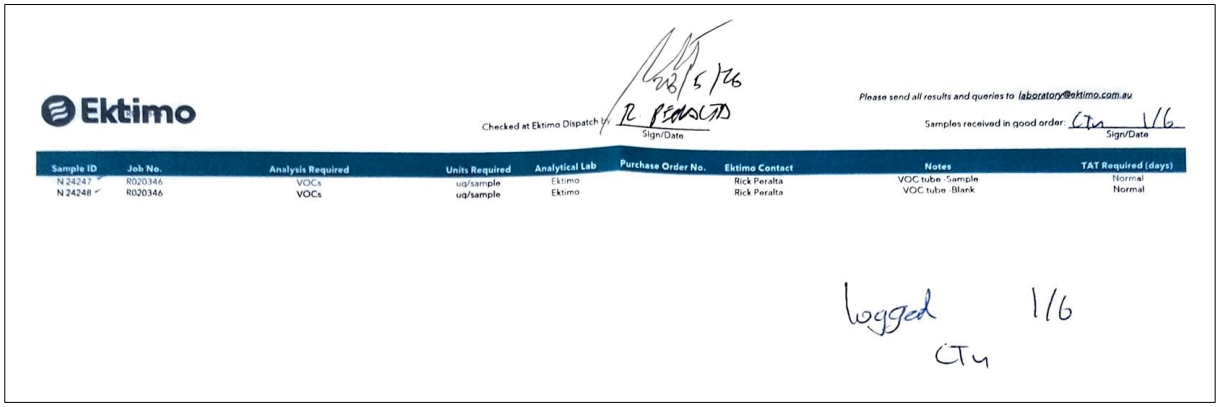
% v/v	Volume to volume ratio, dry basis (except moisture)
~	Approximately
<	Less than
>	Greater than
≥	Greater than or equal to
AS	Australian Standard
BSP	British standard pipe
CEM/CEMS	Continuous emission monitoring/Continuous emission monitoring system
CTM	Conditional test method
D	Duct diameter or equivalent duct diameter for rectangular ducts
DECC	Department of Environment & Climate Change (NSW)
Disturbance	A flow obstruction or instability in the direction of the flow which may impede accurate flow determination. This includes centrifugal fans, axial fans, partially closed or closed dampers, louvres, bends, connections, junctions, direction changes or changes in pipe diameter.
EPA	Environment Protection Authority
NA	Not applicable
NATA	National Association of Testing Authorities
NT	Not tested or results not required
OM	Other approved method
Semi-quantified VOCs	Unknown VOCs (those for which an analytical standard is not available), are identified by matching the mass spectrum of the chromatographic peak to the NIST Standard Reference Database (version 14.0), with a match quality exceeding 70%. An estimated concentration is determined by matching the area of the peak with the nearest suitable compound in the analytical calibration standard mixture.
STP	Standard temperature and pressure. Gas volumes and concentrations are expressed on a dry basis at 0 °C, at discharge oxygen concentration and an absolute pressure of 101.325 kPa.
TM	Test method
USEPA	United States Environmental Protection Agency
VDI	Verein Deutscher Ingenieure (Association of German Engineers)
Velocity difference	The percentage difference between the average of initial flows and after flows.
VOC	Volatile organic compound. A carbon-based chemical compound with a vapour pressure of at least 0.010 kPa at 25°C or having a corresponding volatility under the given conditions of use. VOCs may contain oxygen, nitrogen and other elements. VOCs do not include carbon monoxide, carbon dioxide, carbonic acid, metallic carbides and carbonate salts.
95% confidence interval	Range of values that contains the true result with 95% certainty. This means there is a 5% risk that the true result is outside this range

9 Appendices

Appendix A: Site Image

Image 1. DP1 - Unit 1

Appendix B: Chain of Custody



Ektimo

Checked at Ektimo Dispatch by: [signature] 12/5/26
Sign/Date

Please send all results and queries to laboratory@ektimo.com.au

Samples received in good order: CTM 1/6
Sign/Date

Sample ID	Job No.	Analysis Required	Units Required	Analytical Lab	Purchase Order No.	Ektimo Contact	Notes	TAT Required (days)
N 24247	R020346	VOCs	ug/sample	Ektimo		Rick Peralta	VOC tube -Sample	Normal
N 24248	R020346	VOCs	ug/sample	Ektimo		Rick Peralta	VOC tube -Blank	Normal

logged 1/6
CTM

Appendix C: Laboratory Results

Ektimo

1300 364 005
+61 2 4003 3296
info@ektimo.com.au
ektimo.com.au

ABN 86 600 381 413

CERTIFICATE OF ANALYSIS

Testing Laboratory:	Ektimo 26 Redland Drive Mitcham, VIC 3132
Report Number:	LV-008969
Job Number:	R020346
Date of Issue:	3/06/2026
Attention:	CPE-Mascot
Address:	Building TG1, 10 Bourke Rd Mascot NSW 2020
Date samples received:	1/6/2026
Number of samples received:	2
Date samples analysed:	29/05/2026
No of samples analysed:	2
Test method(s) used:	Ektimo 344

Comments

QC Acceptance Criteria:

Parameter	Criteria	Pass/Fail
Standard Curve	$R^2 > 0.99$	Pass
Range	All samples <110% of highest standard	Pass
Repeat samples	Between 80% - 120%	Pass
Method Blanks	All method blanks < PQL	Pass
QC sample	2 standard deviations of theoretical	Pass
Chemical Expiry	All chemicals within expiry date	Pass

This report supersedes any previous report(s) with this reference. Sample(s) have been analysed as received.

Ektimo is accredited by the National Association of Testing Authorities (NATA) for the sampling and analysis of air pollutants from industrial sources. Unless otherwise stated test methods used are accredited with the National Association of Testing Authorities. For full details, search for Ektimo at NATA's website www.nata.com.au.
Ektimo is accredited by NATA (National Association of Testing Authorities) to ISO/IEC 17025 - Testing. ISO/IEC 17025 - Testing requires that a laboratory have adequate equipment to perform the testing, as well as laboratory personnel with the competence to perform the testing. This quality assurance system is administered and maintained by the Quality Director.
NATA is a member of APAC (Asia Pacific Laboratory Accreditation Co-operation) and of ILAC (International Laboratory Accreditation Co-operation). Through the mutual recognition arrangements with both of these organisations, NATA accreditation is recognised world -wide.
A formal Quality Control program is in place at Ektimo to monitor analyses performed in the laboratory and sampling conducted in the field. The program is designed to check where appropriate; the sampling reproducibility, analytical method, accuracy, precision and the performance of the analyst. The Laboratory Manager is responsible for the administration and maintenance of this program.

REPORT AUTHORISATION

Version: 291025

Matthew Cook
Laboratory Manager

Daniel Balaam
Senior Laboratory Chemist

NATA Accredited Laboratory 14601

Accredited for compliance with ISO/IEC 17025. NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports.

Ektimo

Analytical Results

Report No. LV-008969
Job No. R020346
Client Name: CPE-Mascot

Parameter	Units	N24247 R020346	N24248 R020346
	PQL	1	1
2-Butoxyethanol	µg	<1	<1
Cellosolve acetate	µg	<1	<1
1,1,2,2-Tetrachloroethane	µg	<1	<1
Isopropylbenzene	µg	<1	<1
alpha-Pinene	µg	<1	<1
Propylbenzene	µg	<1	<1
1,3,5-Trimethylbenzene	µg	<1	<1
beta-Pinene	µg	<1	<1
tert-Butylbenzene	µg	<1	<1
1,2,4-Trimethylbenzene	µg	<1	<1
Decane	µg	<1	<1
3-Carene	µg	<1	<1
1,2,3-Trimethylbenzene	µg	<1	<1
D-Limonene	µg	<1	<1
Undecane	µg	<1	<1
Dodecane	µg	<1	<1
Tridecane	µg	<1	<1
Tetradecane	µg	<1	<1
Residuals as Toluene	µg	1.1	<1

* Results marked with an asterisk are outside the acceptable calibration range of the instrument.

ilac-MRA NATA

NATA Accredited Laboratory 14601

Results page 3 of 3

Ektimo

Analytical Results

Report No. LV-008969
Job No. R020346
Client Name: CPE-Mascot

Parameter	Units	N24247 R020346	N24248 R020346
	PQL	1	1
Ethanol	µg	<1	<1
Acetone	µg	3.2	<1
Isopropanol	µg	<1	<1
Pentane	µg	<1	<1
1,1-Dichloroethene	µg	<1	<1
Acrylonitrile	µg	<1	<1
Dichloromethane	µg	<1	<1
trans-1,2-Dichloroethene	µg	<1	<1
Methyl ethyl ketone	µg	<1	<1
n-Hexane	µg	<1	<1
cis-1,2-Dichloroethene	µg	<1	<1
Ethyl acetate	µg	<1	<1
Chloroform	µg	<1	<1
1,1,1-Trichloroethane	µg	<1	<1
1,2-Dichloroethane	µg	<1	<1
Cyclohexane	µg	<1	<1
Benzene	µg	<1	<1
Carbon tetrachloride	µg	<1	<1
Butanol	µg	<1	<1
Isopropyl acetate	µg	<1	<1
2-Methylhexane	µg	<1	<1
2,3-Dimethylpentane	µg	<1	<1
1-Methoxy-2-propanol	µg	<1	<1
3-Methylhexane	µg	<1	<1
Heptane	µg	<1	<1
Trichloroethylene	µg	<1	<1
Ethyl acrylate	µg	<1	<1
Methyl methacrylate	µg	<1	<1
Propyl acetate	µg	<1	<1
Methylcyclohexane	µg	<1	<1
Methyl Isobutyl Ketone	µg	<1	<1
Toluene	µg	1.2	<1
1,1,2-Trichloroethane	µg	<1	<1
2-Hexanone	µg	<1	<1
Octane	µg	<1	<1
Tetrachloroethene	µg	<1	<1
Butyl acetate	µg	<1	<1
Chlorobenzene	µg	<1	<1
Ethylbenzene	µg	<1	<1
m + p-Xylene	µg	<1	<1
1-Methoxy-2-propyl acetate	µg	<1	<1
Styrene	µg	<1	<1
o-Xylene	µg	<1	<1
Butyl acrylate	µg	<1	<1
Nonane	µg	<1	<1

* Results marked with an asterisk are outside the acceptable calibration range of the instrument.

ilac-MRA NATA

NATA Accredited Laboratory 14601

Ektimo

Experts in air quality, odour and emission monitoring.

Melbourne
(Head Office)
26 Redland Dr
Mitcham, VIC 3132

Wollongong
1/10 Doyle Ave
Unanderra
NSW 2526

Brisbane
3/109 Riverside Pl
Morningside
QLD 4170

Perth
52 Cooper Rd
Cockburn Central
WA 6164

1300 364 005

ektimo.com.au