Ektimo

Experts in air quality, odour and emission monitoring.

Emission Testing Report

Report: R018605

AGL Newcastle Gas Storage Facility, Tomago

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:	AGL Newcastle Gas Storage Facility
Report Number:	R018605
Date of Issue:	30 July 2025
Attention:	John Moraitis
Address:	5 Old Punt Road Tomago NSW 2322
Testing Laboratory:	Ektimo Pty Ltd, ABN 86 600 381 413

Report Authorisation

Zoe Parker
Air Monitoring Consultant

NATA Accredited Laboratory
No. 14601

Aaron Davis
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.

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1 Executive Summary

1.1 Background

Ektimo was engaged by AGL Newcastle Gas Storage Facility to perform emission testing at their Tomago plant. Testing was carried out in accordance with Environmental Protection Licence 20130.

1.2 Project Objective & Overview

The objectives of the project were to conduct a monitoring programme to quantify emissions from three discharge points to determine compliance with AGL Newcastle Gas Storage Facility's environmental licence.

Monitoring was performed as follows:

Location	Test Date	Test Parameters*
EPA ID 8 – LNG Vaporiser Regasifier (F-501-A)	12 June 2025	Solid particles Nitrogen oxides (as NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), carbon dioxide (CO_2), oxygen (O_2) Sulfuric acid mist and sulfur trioxide (SO_3) Metals and metals compounds (As, Pg, Hg) Polycyclic aromatic hydrocarbons (expressed as benzo(a)pyrene equivalent Hydrogen sulfide (H2S) Speciated volatile organic compounds (SVOCs)
EPA ID 10 – LNG Vaporiser Regasifier (F-501-B)	11 June 2025	
EPA ID 11 – LNG Vaporiser Regasifier (F-501-C)		

* 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.

Monitoring was performed by Zoe Parker and Steven Cooper of Ektimo.

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 20130 (last amended on 6 September 2023).

EPA No.	Location	Pollutant	Units	100 percentile Concentration Licence Limit	Detected values	Detected values (corrected to 3% O_2)
EPA No. 8	LNG Vaporiser Regasifier (F-501-A)	Nitrogen oxides	mg/m^3	190	**140**	**160**
		Volatile organic compounds as n-propane equivalent	mg/m^3	20	**0.32**	**0.37**
		Solid particles	mg/m^3	40	**<2**	**<2**
		Sulfur oxides (reported as sulfuric acid mist and sulfur trioxide as SO_3)	mg/m^3	5	**<0.03**	**<0.04**
		Carbon monoxide	mg/m^3	125	**<2**	**<3**
EPA No. 10	LNG Vaporiser Regasifier (F-501-B)	Nitrogen oxides	mg/m^3	190	**140**	**150**
		Volatile organic compounds as n-propane equivalent	mg/m^3	20	**2.3**	**2.5**
		Solid particles	mg/m^3	40	**<2**	**<2**
		Sulfur oxides (reported as sulfuric acid mist and sulfur trioxide as SO_3)	mg/m^3	5	**0.073**	**0.079**
		Carbon monoxide	mg/m^3	125	**<2**	**<3**
EPA No. 11	LNG Vaporiser Regasifier (F-501-C)	Nitrogen oxides	mg/m^3	190	**170**	**160**
		Volatile organic compounds as n-propane equivalent	mg/m^3	20	**0.094**	**0.087**
		Solid particles	mg/m^3	40	**<2**	**<2**
		Sulfur oxides (reported as sulfuric acid mist and sulfur trioxide as SO_3)	mg/m^3	5	**0.052**	**0.048**
		Carbon monoxide	mg/m^3	125	**7.3**	**6.7**

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 EPA ID 8 – LNG Vaporiser Regasifier (F-501-A)

Date	12/06/2025	**Client**	AGL Newcastle Gas Storage Facility
Report	R018605	**Stack ID**	EPA ID 8 - LNG Vaporiser Regasifier (F-501-A)
Licence No.	20130	**Location**	Tomago
Ektimo Staff	Zoe Parker & Steven Cooper	**State**	NSW
Process Conditions	Operating at 65% load, throughput 40TJs		250610

Stack Parameters		
Moisture content, %v/v	14	
Gas molecular weight, g/g mole	28.1 (wet)	29.8 (dry)
Gas density at STP, kg/m³	1.25 (wet)	1.33 (dry)
Gas density at discharge conditions, kg/m³	0.95	
% Oxygen correction & Factor	3 %	1.17
Gas Flow Parameters		
Flow measurement time(s) (hhmm)	0755 & 1022	
Temperature, °C	88	
Temperature, K	361	
Ambient pressure, kPa	102	
Stack pressure, kPa	102	
Velocity at sampling plane, m/s	5.2	
Volumetric flow rate, actual, m³/s	3.1	
Volumetric flow rate (wet STP), m³/s	2.4	
Volumetric flow rate (dry STP), m³/s	2	
Mass flow rate (wet basis), kg/h	11000	

Gas Analyser Results	Average			Minimum			Maximum		
Sampling time	0836 - 0950			0836 - 0950			0836 - 0950		
	Concentration mg/m³	Corrected to 3% O2 mg/m³	Mass Rate g/min	Concentration mg/m³	Corrected to 3% O2 mg/m³	Mass Rate g/min	Concentration mg/m³	Corrected to 3% O2 mg/m³	Mass Rate g/min
Combustion Gases									
Nitrogen oxides (as NO_2)	140	160	17	120	140	15	150	170	18
Sulfur dioxide	<6		<0.7	<6		<0.7	<6		<0.7
Carbon monoxide	<2	<3	<0.3	<2	<3	<0.3	<2	<3	<0.3
	Concentration %v/v			Concentration %v/v			Concentration %v/v		
Carbon dioxide	8.8			8.1			9.4		
Oxygen	5.7			4.8			6.8		

Isokinetic Results	Results		
Sampling time	0833-0955		
	Concentration mg/m³	Corrected to 3% O2 mg/m³	Mass Rate g/min
Solid Particles	<2	<2	<0.2
Sulfur trioxide and/or Sulfuric acid (as SO3)	<0.03	<0.04	<0.004
Isokinetic Sampling Parameters			
Sampling time, min		80	
Isokinetic rate, %		102	
Gravimetric analysis date (total particulate)		16-06-2025	

Total VOCs (as n-Propane)	Results		
Sampling time	0838-0940		
	Concentration mg/m³	Corrected to 3% O2 mg/m³	Mass Rate g/min
Total	0.32	0.37	0.038

VOC (speciated)	Results		
Sampling time	0838-0940		
	Concentration mg/m³	Corrected to 3% O2 mg/m³	Mass Rate g/min
Detection limit(1)	<0.07	<0.09	<0.009
Toluene	0.48	0.57	0.059
Residuals as Toluene	0.18	0.21	0.022

(1) Unless otherwise reported, the following target compounds were found to be below detection:
Ethanol, Acetone, 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

Date	12/06/2025	**Client**	AGL Newcastle Gas Storage Facility
Report	R018605	**Stack ID**	EPA ID 8 - LNG Vaporiser Regasifier (F-501-A)
Licence No.	20130	**Location**	Tomago
Ektimo Staff	Zoe Parker & Steven Cooper	**State**	NSW
Process Conditions	Operating at 65% load, throughput 40TJs		250610

Stack Parameters		
Moisture content, %v/v	15	
Gas molecular weight, g/g mole	28.0 (wet)	29.8 (dry)
Gas density at STP, kg/m³	1.25 (wet)	1.33 (dry)
Gas density at discharge conditions, kg/m³	0.95	
Gas Flow Parameters		
Flow measurement time(s) (hhmm)	0755 & 1022	
Temperature, °C	88	
Temperature, K	361	
Ambient pressure, kPa	102	
Stack pressure, kPa	102	
Velocity at sampling plane, m/s	5.2	
Volumetric flow rate, actual, m³/s	3.1	
Volumetric flow rate (wet STP), m³/s	2.4	
Volumetric flow rate (dry STP), m³/s	2	
Mass flow rate (wet basis), kg/h	11000	

Date	12/06/2025	**Client**	AGL Newcastle Gas Storage Facility
Report	R018605	**Stack ID**	EPA ID 8 - LNG Vaporiser Regasifier (F-501-A)
Licence No.	20130	**Location**	Tomago
Ektimo Staff	Zoe Parker & Steven Cooper	**State**	NSW
Process Conditions	Operating at 65% load, throughput 40TJs		250610

Polycyclic Aromatic Hydrocarbons (PAHs)	Results	
Sampling time	0828 - 0950	
	Concentration ng/m³	Mass Rate ng/min
Naphthalene	1200	140000
2-Methylnaphthalene	180	21000
Acenaphthylene	<20	<2000
Acenaphthene	850	100000
Fluorene	<20	<2000
Phenanthrene	530	64000
Anthracene	51	6100
Fluoranthene	98	12000
Pyrene	<20	<2000
Benz(a)anthracene	<20	<2000
Chrysene	<20	<2000
Benzo(b)fluoranthene	<20	<2000
Benzo(k)fluoranthene	<20	<2000
Benzo(e)pyrene	<20	<2000
Benzo(a)pyrene	<20	<2000
Perylene	<20	<2000
Indeno(1,2,3-cd)pyrene	<20	<2000
Dibenz(ah)anthracene	<20	<2000
Benzo(ghi)perylene	<20	<2000
Total 16 PAHs	2700	320000
Total 19 PAHs	2900	350000
Total Specified Toxic PAHs - TEQs‡		
Lower Bound	0	0
Middle Bound	16	1900
Upper Bound	32	3900

Abbreviations and definitions

‡ BaP-TEQ: TEQs calculated using the CARB/OEHHA TEFs as specified in "Benzo(a)pyrene as a Toxic Air Contaminant" 1994.

TEQs (Toxic Equivalents)	Calculated by multiplying the quantified result for each toxic compound by its corresponding toxic equivalency factor (TEF).
Lower Bound	Defines values reported below detection as equal to zero.
Middle Bound	Defines values reported below detection are equal to half the detection limit.
Upper Bound	Defines values reported below detection are equal to the detection limit.

Isokinetic Sampling Parameters	Results
PAHs	
Sampling time, min	80
Isokinetic rate, %	103

Date	12/06/2025	**Client**	AGL Newcastle Gas Storage Facility
Report	R018605	**Stack ID**	EPA ID 8 - LNG Vaporiser Regasifier (F-501-A)
Licence No.	20130	**Location**	Tomago
Ektimo Staff	Zoe Parker & Steven Cooper	**State**	NSW
Process Conditions	Operating at 65% load, throughput 40TJs		250610

Stack Parameters		
Moisture content, %v/v	14	
Gas molecular weight, g/g mole	28.2 (wet)	29.8 (dry)
Gas density at STP, kg/m³	1.26 (wet)	1.33 (dry)
Gas density at discharge conditions, kg/m³	0.95	
Gas Flow Parameters		
Flow measurement time(s) (hhmm)	1022 & 1158	
Temperature, °C	88	
Temperature, K	361	
Ambient pressure, kPa	102	
Stack pressure, kPa	102	
Velocity at sampling plane, m/s	5.5	
Volumetric flow rate, actual, m³/s	3.3	
Volumetric flow rate (wet STP), m³/s	2.5	
Volumetric flow rate (dry STP), m³/s	2.2	
Mass flow rate (wet basis), kg/h	11000	

Hydrogen Sulfide	Results	
Sampling time	1029-1130	
	Concentration mg/m³	Mass Rate g/min
Hydrogen Sulfide	<0.2	<0.03

Isokinetic Results	Results	
Sampling time	1028-1150	
	Concentration mg/m³	Mass Rate g/min
Arsenic	0.00015	0.00002
Lead	0.0075	0.00098
Mercury	<0.0001	<0.00002
Isokinetic Sampling Parameters		
Sampling time, min	80	
Isokinetic rate, %	102	

2.2 EPA ID 10 – LNG Vaporiser Regasifier (F-501-B)

Date	11/06/2025	**Client**	AGL Newcastle Gas Storage Facility
Report	R018605	**Stack ID**	EPA ID 10 - LNG Vaporiser Regasifier (F-501-B)
Licence No.	20130	**Location**	Tomago
Ektimo Staff	Zoe Parker & Steven Cooper	**State**	NSW
Process Conditions	Operating at 50% load, throughput 30TJs		250610

Stack Parameters		
Moisture content, %v/v	13	
Gas molecular weight, g/g mole	28.2 (wet)	29.8 (dry)
Gas density at STP, kg/m³	1.26 (wet)	1.33 (dry)
Gas density at discharge conditions, kg/m³	0.95	
% Oxygen correction & Factor	3 %	1.08
Gas Flow Parameters		
Flow measurement time(s) (hhmm)	0955 & 1200	
Temperature, °C	87	
Temperature, K	360	
Ambient pressure, kPa	101	
Stack pressure, kPa	101	
Velocity at sampling plane, m/s	4.8	
Volumetric flow rate, actual, m³/s	2.9	
Volumetric flow rate (wet STP), m³/s	2.2	
Volumetric flow rate (dry STP), m³/s	1.9	
Mass flow rate (wet basis), kg/h	9900	

Gas Analyser Results	Average			Minimum			Maximum		
Sampling time	1035 - 1150			1035 - 1150			1035 - 1150		
	Concentration mg/m³	Corrected to 3% O2 mg/m³	Mass Rate g/min	Concentration mg/m³	Corrected to 3% O2 mg/m³	Mass Rate g/min	Concentration mg/m³	Corrected to 3% O2 mg/m³	Mass Rate g/min
Combustion Gases									
Nitrogen oxides (as NO_2)	140	150	16	120	130	14	150	160	17
Sulfur dioxide	<6		<0.6	<6		<0.6	<6		<0.6
Carbon monoxide	<2	<3	<0.3	<2	<3	<0.3	<2	<3	<0.3
		Concentration %v/v			Concentration %v/v			Concentration %v/v	
Carbon dioxide		9.3			8.8			9.5	
Oxygen		4.3			4			5.3	

Isokinetic Results	Results		
Sampling time	1035-1157		
	Concentration mg/m³	Corrected to 3% O2 mg/m³	Mass Rate g/min
Solid Particles	<2	<2	<0.2
Sulfur trioxide and/or Sulfuric acid (as SO3)	0.073	0.079	0.0083
Isokinetic Sampling Parameters			
Sampling time, min		80	
Isokinetic rate, %		103	
Gravimetric analysis date (total particulate)		16-06-2025	

Date	11/06/2025	**Client**	AGL Newcastle Gas Storage Facility
Report	R018605	**Stack ID**	EPA ID 10 - LNG Vaporiser Regasifier (F-501-B)
Licence No.	20130	**Location**	Tomago
Ektimo Staff	Zoe Parker & Steven Cooper	**State**	NSW
Process Conditions	Operating at 50% load, throughput 30TJs		250610

Total VOCs (as n-Propane)	Results		
Sampling time	1040-1140		
	Concentration mg/m³	Corrected to 3% O2 mg/m³	Mass Rate g/min
Total	2.3	2.5	0.26

VOC (speciated)	Results		
Sampling time	1040-1140		
	Concentration mg/m³	Corrected to 3% O2 mg/m³	Mass Rate g/min
Detection limit(1)	<0.07	<0.07	<0.008
Acetone	0.24	0.26	0.027
Pentane	1	1.1	0.11
n-Hexane	0.27	0.29	0.03
2-Methylhexane	0.08	0.086	0.0091
3-Methylhexane	0.087	0.093	0.0098
Heptane	0.087	0.093	0.0098
Toluene	1.5	1.6	0.17
m + p-Xylene	0.08	0.086	0.0091
Residuals as Toluene	1.1	1.2	0.13

(1) Unless otherwise reported, the following target compounds were found to be below detection:

Ethanol, Isopropanol, 1,1-Dichloroethene, Acrylonitrile, Dichloromethane, trans-1,2-Dichloroethene, Methyl ethyl ketone, cis-1,2-Dichloroethene, Ethyl acetate, Chloroform, 1,1,1-Trichloroethane, 1,2-Dichloroethane, Cyclohexane, Benzene, Carbon tetrachloride, Butanol, Isopropyl acetate, 2,3-Dimethylpentane, 1-Methoxy-2-propanol, Trichloroethylene, Ethyl acrylate, Methyl methacrylate, Propyl acetate, Methylcyclohexane, Methyl Isobutyl Ketone, 1,1,2-Trichloroethane, 2-Hexanone, Octane, Tetrachloroethene, Butyl acetate, Chlorobenzene, Ethylbenzene, 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

Date	11/06/2025	**Client**	AGL Newcastle Gas Storage Facility
Report	R018605	**Stack ID**	EPA ID 10 - LNG Vaporiser Regasifier (F-501-B)
Licence No.	20130	**Location**	Tomago
Ektimo Staff	Zoe Parker & Steven Cooper	**State**	NSW
Process Conditions	Operating at 50% load, throughput 30TJs		250610

Stack Parameters		
Moisture content, %v/v	14	
Gas molecular weight, g/g mole	28.1 (wet)	29.8 (dry)
Gas density at STP, kg/m³	1.25 (wet)	1.33 (dry)
Gas density at discharge conditions, kg/m³	0.95	
Gas Flow Parameters		
Flow measurement time(s) (hhmm)	0955 & 1200	
Temperature, °C	87	
Temperature, K	360	
Ambient pressure, kPa	101	
Stack pressure, kPa	101	
Velocity at sampling plane, m/s	4.8	
Volumetric flow rate, actual, m³/s	2.9	
Volumetric flow rate (wet STP), m³/s	2.2	
Volumetric flow rate (dry STP), m³/s	1.9	
Mass flow rate (wet basis), kg/h	9900	

Date	11/06/2025	**Client**	AGL Newcastle Gas Storage Facility
Report	R018605	**Stack ID**	EPA ID 10 - LNG Vaporiser Regasifier (F-501-B)
Licence No.	20130	**Location**	Tomago
Ektimo Staff	Zoe Parker & Steven Cooper	**State**	NSW
Process Conditions	Operating at 50% load, throughput 30TJs		250610

Polycyclic Aromatic Hydrocarbons (PAHs)	Results	
Sampling time	1025 - 1147	
	Concentration ng/m³	Mass Rate ng/min
Naphthalene	1100	130000
2-Methylnaphthalene	200	23000
Acenaphthylene	<20	<2000
Acenaphthene	270	30000
Fluorene	<20	<2000
Phenanthrene	480	55000
Anthracene	46	5100
Fluoranthene	110	13000
Pyrene	<20	<2000
Benz(a)anthracene	<20	<2000
Chrysene	<20	<2000
Benzo(b)fluoranthene	<20	<2000
Benzo(k)fluoranthene	<20	<2000
Benzo(e)pyrene	<20	<2000
Benzo(a)pyrene	<20	<2000
Perylene	<20	<2000
Indeno(1,2,3-cd)pyrene	<20	<2000
Dibenz(ah)anthracene	<20	<2000
Benzo(ghi)perylene	<20	<2000
Total 16 PAHs	2000	230000
Total 19 PAHs	2200	250000
Total Specified Toxic PAHs - TEQs‡		
Lower Bound	0	0
Middle Bound	17	1900
Upper Bound	34	3800

Abbreviations and definitions

‡ BaP-TEQ: TEQs calculated using the CARB/OEHHA TEFs as specified in "Benzo(a)pyrene as a Toxic Air Contaminant" 1994.

TEQs (Toxic Equivalents)	Calculated by multiplying the quantified result for each toxic compound by its corresponding toxic equivalency factor (TEF).
Lower Bound	Defines values reported below detection as equal to zero.
Middle Bound	Defines values reported below detection are equal to half the detection limit.
Upper Bound	Defines values reported below detection are equal to the detection limit.

Isokinetic Sampling Parameters	Results
PAHs	
Sampling time, min	80
Isokinetic rate, %	104

Date	11/06/2025	**Client**	AGL Newcastle Gas Storage Facility
Report	R018605	**Stack ID**	EPA ID 10 - LNG Vaporiser Regasifier (F-501-B)
Licence No.	20130	**Location**	Tomago
Ektimo Staff	Zoe Parker & Steven Cooper	**State**	NSW
Process Conditions	Operating at 50% load, throughput 30TJs		250610

Stack Parameters		
Moisture content, %v/v	13	
Gas molecular weight, g/g mole	28.2 (wet)	29.8 (dry)
Gas density at STP, kg/m³	1.26 (wet)	1.33 (dry)
Gas density at discharge conditions, kg/m³	0.95	
Gas Flow Parameters		
Flow measurement time(s) (hhmm)	1200 & 1348	
Temperature, °C	88	
Temperature, K	361	
Ambient pressure, kPa	101	
Stack pressure, kPa	101	
Velocity at sampling plane, m/s	4.8	
Volumetric flow rate, actual, m³/s	2.9	
Volumetric flow rate (wet STP), m³/s	2.2	
Volumetric flow rate (dry STP), m³/s	1.9	
Mass flow rate (wet basis), kg/h	9900	

Hydrogen Sulfide	Results	
Sampling time	1234-1336	
	Concentration mg/m³	Mass Rate g/min
Hydrogen Sulfide	<0.2	<0.03

Isokinetic Results	Results	
Sampling time	1223-1345	
	Concentration mg/m³	Mass Rate g/min
Arsenic	<0.0005	<0.00006
Lead	0.0033	0.00037
Mercury	<0.0009	<0.0001
Isokinetic Sampling Parameters		
Sampling time, min	80	
Isokinetic rate, %	102	

2.3 EPA ID 11 – LNG Vaporiser Regasifier (F-501-C)

Date	11/06/2025	**Client**	AGL Newcastle Gas Storage Facility
Report	R018605	**Stack ID**	EPA ID 11 - LNG Vaporiser Regasifier (F-501-C)
Licence No.	20130	**Location**	Tomago
Ektimo Staff	Zoe Parker & Steven Cooper	**State**	NSW
Process Conditions	Operating at 50% load, throughput 30TJs		250610

Comments
The velocity difference for isokinetic testing is outside the criteria (±10%)

Stack Parameters		
Moisture content, %v/v	15	
Gas molecular weight, g/g mole	28.2 (wet)	29.9 (dry)
Gas density at STP, kg/m³	1.26 (wet)	1.34 (dry)
Gas density at discharge conditions, kg/m³	0.95	
% Oxygen correction & Factor	3 %	0.92
Gas Flow Parameters		
Flow measurement time(s) (hhmm)	1446 & 1628	
Temperature, °C	87	
Temperature, K	360	
Ambient pressure, kPa	101	
Stack pressure, kPa	101	
Velocity at sampling plane, m/s	3.9	
Volumetric flow rate, actual, m³/s	2.3	
Volumetric flow rate (wet STP), m³/s	1.8	
Volumetric flow rate (dry STP), m³/s	1.5	
Mass flow rate (wet basis), kg/h	8000	

Gas Analyser Results	Average			Minimum			Maximum		
Sampling time	1514 - 1613			1514 - 1613			1514 - 1613		
	Concentration mg/m³	Corrected to 3% O2 mg/m³	Mass Rate g/min	Concentration mg/m³	Corrected to 3% O2 mg/m³	Mass Rate g/min	Concentration mg/m³	Corrected to 3% O2 mg/m³	Mass Rate g/min
Combustion Gases									
Nitrogen oxides (as NO_2)	170	160	16	170	160	15	180	160	16
Sulfur dioxide	<6		<0.5	<6		<0.5	<6		<0.5
Carbon monoxide	7.3	6.7	0.66	<2	<2	<0.2	84	77	7.6
		Concentration %v/v			Concentration %v/v			Concentration %v/v	
Carbon dioxide		11			10.6			11.4	
Oxygen		1.4			0.7			2.2	

Isokinetic Results	Results		
Sampling time	1500-1622		
	Concentration mg/m³	Corrected to 3% O2 mg/m³	Mass Rate g/min
Solid Particles	<2	<2	<0.2
Sulfur trioxide and/or Sulfuric acid (as SO3)	0.052	0.048	0.0047
Isokinetic Sampling Parameters			
Sampling time, min		80	
Isokinetic rate, %		104	
Velocity difference, %		23	
Gravimetric analysis date (total particulate)		16-06-2025	

Date	11/06/2025	**Client**	AGL Newcastle Gas Storage Facility
Report	R018605	**Stack ID**	EPA ID 11 - LNG Vaporiser Regasifier (F-501-C)
Licence No.	20130	**Location**	Tomago
Ektimo Staff	Zoe Parker & Steven Cooper	**State**	NSW
Process Conditions	Operating at 50% load, throughput 30TJs		250610

Total VOCs (as n-Propane)	Results		
Sampling time	1508-1608		
	Concentration mg/m³	Corrected to 3% O2 mg/m³	Mass Rate g/min
Total	0.094	0.087	0.0085

VOC (speciated)	Results		
Sampling time	1508-1608		
	Concentration mg/m³	Corrected to 3% O2 mg/m³	Mass Rate g/min
Detection limit(1)	<0.07	<0.06	<0.006
Toluene	0.088	0.081	0.008
Residuals as Toluene	0.11	0.1	0.0098

(1) Unless otherwise reported, the following target compounds were found to be below detection:

Ethanol, Acetone, 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

Date	11/06/2025	**Client**	AGL Newcastle Gas Storage Facility
Report	R018605	**Stack ID**	EPA ID 11 - LNG Vaporiser Regasifier (F-501-C)
Licence No.	20130	**Location**	Tomago
Ektimo Staff	Zoe Parker & Steven Cooper	**State**	NSW
Process Conditions	Operating at 50% load, throughput 30TJs		250610

Comments
The velocity difference for isokinetic testing is outside the criteria (±10%)

Stack Parameters		
Moisture content, %v/v	16	
Gas molecular weight, g/g mole	28.1 (wet)	29.9 (dry)
Gas density at STP, kg/m³	1.25 (wet)	1.33 (dry)
Gas density at discharge conditions, kg/m³	0.95	
Gas Flow Parameters		
Flow measurement time(s) (hhmm)	1446 & 1628	
Temperature, °C	87	
Temperature, K	360	
Ambient pressure, kPa	101	
Stack pressure, kPa	101	
Velocity at sampling plane, m/s	3.9	
Volumetric flow rate, actual, m³/s	2.3	
Volumetric flow rate (wet STP), m³/s	1.8	
Volumetric flow rate (dry STP), m³/s	1.5	
Mass flow rate (wet basis), kg/h	8000	

Date	11/06/2025	**Client**	AGL Newcastle Gas Storage Facility
Report	R018605	**Stack ID**	EPA ID 11 - LNG Vaporiser Regasifier (F-501-C)
Licence No.	20130	**Location**	Tomago
Ektimo Staff	Zoe Parker & Steven Cooper	**State**	NSW
Process Conditions	Operating at 50% load, throughput 30TJs		250610

Polycyclic Aromatic Hydrocarbons (PAHs)	Results	
Sampling time	1456 - 1618	
	Concentration ng/m³	Mass Rate ng/min
Naphthalene	1300	110000
2-Methylnaphthalene	190	17000
Acenaphthylene	<20	<2000
Acenaphthene	970	88000
Fluorene	<20	<2000
Phenanthrene	590	53000
Anthracene	75	6700
Fluoranthene	120	11000
Pyrene	<20	<2000
Benz(a)anthracene	<20	<2000
Chrysene	<20	<2000
Benzo(b)fluoranthene	<20	<2000
Benzo(k)fluoranthene	<20	<2000
Benzo(e)pyrene	<20	<2000
Benzo(a)pyrene	<20	<2000
Perylene	<20	<2000
Indeno(1,2,3-cd)pyrene	<20	<2000
Dibenz(ah)anthracene	<20	<2000
Benzo(ghi)perylene	<20	<2000
Total 16 PAHs	3000	270000
Total 19 PAHs	3200	290000
Total Specified Toxic PAHs - TEQs‡		
Lower Bound	0	0
Middle Bound	18	1600
Upper Bound	35	3200

Abbreviations and definitions

‡ BaP-TEQ: TEQs calculated using the CARB/OEHHA TEFs as specified in "Benzo(a)pyrene as a Toxic Air Contaminant" 1994.

TEQs (Toxic Equivalents)	Calculated by multiplying the quantified result for each toxic compound by its corresponding toxic equivalency factor (TEF).
Lower Bound	Defines values reported below detection as equal to zero.
Middle Bound	Defines values reported below detection are equal to half the detection limit.
Upper Bound	Defines values reported below detection are equal to the detection limit.

Isokinetic Sampling Parameters	Results
PAHs	
Sampling time, min	80
Isokinetic rate, %	104
Velocity difference, %	23

Date	11/06/2025	**Client**	AGL Newcastle Gas Storage Facility
Report	R018605	**Stack ID**	EPA ID 11 - LNG Vaporiser Regasifier (F-501-C)
Licence No.	20130	**Location**	Tomago
Ektimo Staff	Zoe Parker & Steven Cooper	**State**	NSW
Process Conditions	Operating at 50% load, throughput 30TJs		250610

Stack Parameters		
Moisture content, %v/v	15	
Gas molecular weight, g/g mole	28.1 (wet)	29.9 (dry)
Gas density at STP, kg/m³	1.25 (wet)	1.34 (dry)
Gas density at discharge conditions, kg/m³	0.95	
Gas Flow Parameters		
Flow measurement time(s) (hhmm)	1628 & 1805	
Temperature, °C	86	
Temperature, K	360	
Ambient pressure, kPa	101	
Stack pressure, kPa	101	
Velocity at sampling plane, m/s	4.2	
Volumetric flow rate, actual, m³/s	2.5	
Volumetric flow rate (wet STP), m³/s	1.9	
Volumetric flow rate (dry STP), m³/s	1.6	
Mass flow rate (wet basis), kg/h	8600	

Hydrogen Sulfide	Results	
Sampling time	1646-1746	
	Concentration mg/m³	Mass Rate g/min
Hydrogen Sulfide	<0.3	<0.02

Isokinetic Results	Results	
Sampling time	1641-1803	
	Concentration mg/m³	Mass Rate g/min
Arsenic	0.0003	0.000029
Lead	0.0053	0.00052
Mercury	<0.0001	<0.00001
Isokinetic Sampling Parameters		
Sampling time, min	80	
Isokinetic rate, %	102	

3 Sample Plane Compliance

3.1 EPA ID 8 – LNG Vaporiser Regasifier (F-501-A)

Sampling Plane Details	
Source tested	Boiler
Sampling plane dimensions	875 mm
Sampling plane area	0.601 m²
Sampling port size, number	4" Flange (x2)
Access & height of ports	Elevated work platform 8 m
Duct orientation & shape	Vertical Circular
Downstream disturbance	Exit 6 D
Upstream disturbance	Junction 4 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

3.2 EPA ID 10 – LNG Vaporiser Regasifier (F-501-B)

Sampling Plane Details	
Source tested	Boiler
Sampling plane dimensions	875 mm
Sampling plane area	0.601 m²
Sampling port size, number	4" Flange (x2)
Access & height of ports	Elevated work platform 8 m
Duct orientation & shape	Vertical Circular
Downstream disturbance	Exit 6 D
Upstream disturbance	Junction 4 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

3.3 EPA ID 11 – LNG Vaporiser Regasifier (F-501-C)

Sampling Plane Details	
Source tested	Boiler
Sampling plane dimensions	875 mm
Sampling plane area	0.601 m²
Sampling port size, number	4" Flange (x2)
Access & height of ports	Elevated work platform 8 m
Duct orientation & shape	Vertical Circular
Downstream disturbance	Exit 6 D
Upstream disturbance	Junction 4 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 highest to lowest gas velocity ratio exceeds 1.6:1
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 AGL Newcastle Gas Storage Facility personnel.

Location Description	Date	Sample Collection Time	Throughput in TJ and Load % for each heater
F501B	11 June 2025	1025 - 1345	30TJs (50%)
F501C	11 June 2025	1456 - 1803	30TJs (50%)
F501A	12 June 2025	0828 - 1150	40TJs (65%)

Based on information received from AGL Newcastle Gas Storage Facility personnel, it is our understanding that samples were collected during typical plant operations.

See AGL Newcastle Gas Storage Facility 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	Uncertainty*	NATA accredited Sampling	NATA accredited Analysis
Sampling points - Selection	NSW EPA TM-1 (AS 4323.1)	NA	NA	✓	NA
Flow rate, temperature & velocity	NSW EPA TM-2 (USEPA Method 2)	NSW EPA TM-2 (USEPA Method 2)	8%, 2%, 7%	NA	✓
Moisture content	NSW EPA TM-22 (USEPA Method 4)	NSW EPA TM-22 (USEPA Method 4)	8%	✓	✓
Molecular weight	NA	NSW EPA TM-23 (USEPA Method 3)	not specified	NA	✓
Dry gas density	NA	NSW EPA TM-23 (USEPA Method 3)	not specified	NA	✓
Carbon dioxide	NSW EPA TM-24 (USEPA Method 3A)	NSW EPA TM-24 (USEPA Method 3A)	13%	✓	✓
Carbon monoxide	NSW EPA TM-32 (USEPA Method 10)	NSW EPA TM-32 (USEPA Method 10)	12%	✓	✓
Nitrogen oxides	NSW EPA TM-11 (USEPA Method 7E)	NSW EPA TM-11 (USEPA Method 7E)	12%	✓	✓
Oxygen	NSW EPA TM-25 (USEPA Method 3A)	NSW EPA TM-25 (USEPA Method 3A)	13%	✓	✓
Sulfur dioxide	NSW EPA TM-4 (USEPA Method 6C)	NSW EPA TM-4 (USEPA Method 6C)	12%	✓	✓
Hydrogen sulfide	NSW EPA TM-5 (USEPA Method 11)	NSW EPA TM-5	not specified	✓	✓[†]
Speciated volatile organic compounds (VOCs)	NSW EPA TM-34[d] (USEPA Method 18)	Ektimo 344	19%	✓	✓[†]
Solid particles (total)	NSW EPA TM-15 (AS 4323.2)	NSW EPA TM-15 (AS 4323.2)	3%	✓	✓[††]
Total (gaseous & particulate) metals & metallic compounds	NSW EPA TM-12, NSW EPA TM-13, NSW EPA TM-14 (USEPA Method 29)	Ektimo 666	not specified	✓	✓[†]
Polycyclic aromatic hydrocarbons (PAHs)	NSW EPA OM-6	NMI in-house method NGCMS 11.27	21%	✓	✓[¶]
Sulfuric acid mist and/or sulfur trioxide	NSW EPA TM-3 (USEPA Method 8)	Ektimo 235	16%	✓	✓[†m]

200625

Please see the next page for laboratory results footnotes.

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

¶ Analysis performed by Australian Government National Measurement Institute, NATA accreditation number 198. Results were reported to Ektimo on 15 July 2025 in report RN1470911.

† Analysis performed by Ektimo. Results were reported to Ektimo on.

- 20 June 2025 in report LV-007398 (H2S).
- 1 July 2025 in report LV-007438 (VOCs).
- 2 July 2025 in report LV-007443 (Metals).
- 3 July 2025 in report LV-007447 (SO3).

†† Gravimetric analysis conducted at the Ektimo NSW laboratory.

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

[m] Includes analysis of SO_3/H_2SO_4 by Ektimo 235 which uses the same principle as USEPA SW-846 Method 9056A which is an approved alternative to the analytical procedure of USEPA Method 8.

6 Deviations to Test Methods

TM-34 VOLATILE ORGANIC COMPOUNDS

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 (unless bolded). Therefore, recovery studies for the following analytes were not performed:

EPA ID 8 - LNG Vaporiser Regasifier (F-501-A)

- Toluene (6.5 µg)

EPA ID 10 - LNG Vaporiser Regasifier (F-501-B)

- Acetone (3.6 µg)
- Pentane (15 µg)
- n-Hexane (4 µg)
- 2-Methylhexane (1.2 µg)
- 3-Methylhexane (1.3 µg)
- Heptane (1.3 µg)
- Toluene (22 µg)
- m + p-Xylene (1.2 µg)

EPA ID 11 - LNG Vaporiser Regasifier (F-501-C)

- Toluene (1.3 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 Calibration Records

Equipment Type	Equipment Name	Asset ID	Calibration Method	Last Calibration Date
Nozzles	SS Nozzle Kit	891	12 Monthly Nozzle Calibration	2-Jan-25
	Teflon Nozzle Kit	3829		14-Mar-25
Analyser	Testo Gas Analyser	943	6 Monthly Analyser Linearity Check	2-Jan-25
Gas Meters	DITGM Gas Meter	3827	6 Monthly Gas Meter Calibration	13-Mar-25
	DITGM Gas Meter	3828		13-Mar-25
	DITGM Gas Meter	3057		6-Feb-25
Manometer	Testo DP-440	941	12 Monthly Manometer Calibration	1-Jan-25
Barometer	Testo 511	1627	6 Monthly Barometer Checks (BOM)	3-Jan-25
Pitot Tube	Pitot tip (s-type)	1756	6 Monthly Pitot Tube Calibration	2-Jan-25
Temperature device	Pyrometer	941	6 Monthly Temperature Device Checks	2-Jan-25
	Thermocouple	708		2-Jan-25

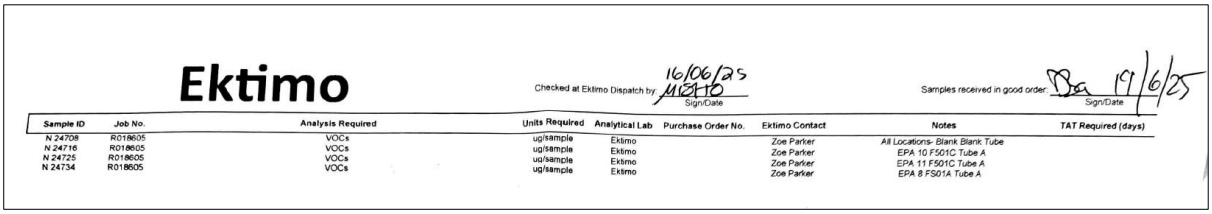
9 Definitions

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
BaP-TEQ	Benzo(a)pyrene toxic equivalents
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
D_{50}	'Cut size' of a cyclone is defined as the particle diameter at which the cyclone achieves a 50% collection efficiency i.e. half of the particles are retained by the cyclone and half pass through it. The D_{50} method simplifies the capture efficiency distribution by assuming that a given cyclone stage captures all of the particles with a diameter equal to or greater than the D_{50} of that cyclone and less than the D_{50} of the preceding cyclone.
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.
DWER	Department of Water and Environmental Regulation (WA)
DEHP	Department of Environment and Heritage Protection (QLD)
EPA	Environment Protection Authority
FTIR	Fourier transform infra-red
ISC	Intersociety Committee, Methods of Air Sampling and Analysis
ISO	International Organisation for Standardisation
ITE	Individual threshold estimate
I-TEQ	International toxic equivalents
Lower bound	When an analyte is not present above the detection limit, the result is assumed to be equal to zero.
Medium bound	When an analyte is not present above the detection limit, the result is assumed to be equal to half of the detection limit.
NA	Not applicable
NATA	National Association of Testing Authorities
NIOSH	National Institute of Occupational Safety and Health
NT	Not tested or results not required
OM	Other approved method
OU	Odour unit. One OU is that concentration of odorant(s) at standard conditions that elicits a physiological response from a panel equivalent to that elicited by one Reference Odour Mass (ROM), evaporated in one cubic metre of neutral gas at standard conditions.
PM_{10}	Particulate matter having an equivalent aerodynamic diameter less than or equal to 10 microns (µm).
$PM_{2.5}$	Particulate matter having an equivalent aerodynamic diameter less than or equal to 2.5 microns (µm).
PSA	Particle size analysis. PSA provides a distribution of geometric diameters, for a given sample, determined using laser diffraction.
RATA	Relative accuracy test audit
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
TOC	Total organic carbon. This is the sum of all compounds of carbon which contain at least one carbon-to-carbon bond, plus methane and its derivatives.
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.
Vic EPA	Victorian Environment Protection Authority
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.
WHO05-TEQ	World Health Organisation toxic equivalents
XRD	X-ray diffractometry
Upper bound	When an analyte is not present above the detection limit, the result is assumed to be equal to the detection limit.
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

10 Appendices

Appendix A: Chains of Custody

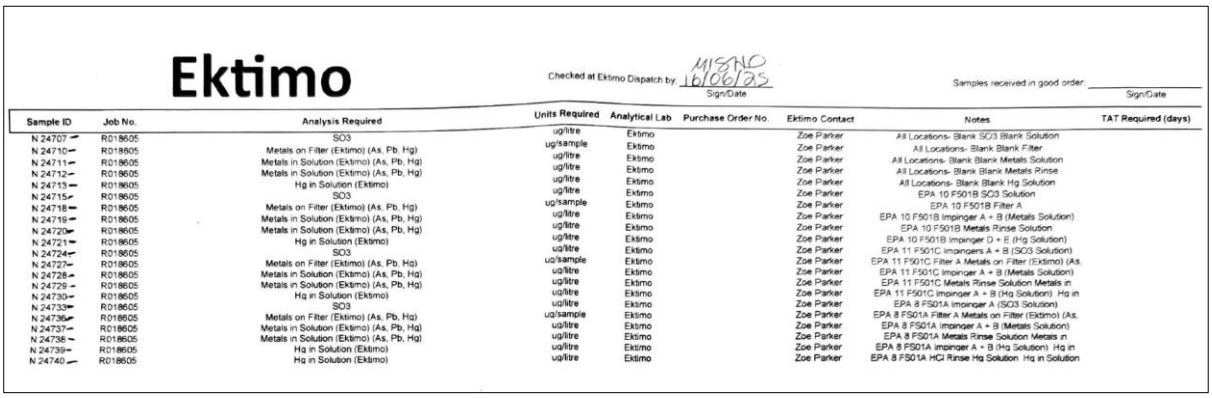


Ektimo

Checked at Ektimo Dispatch by: MSMO 16/06/25 Sign/Date

Samples received in good order: [signature] 19/6/25 Sign/Date

Sample ID	Job No.	Analysis Required	Units Required	Analytical Lab	Purchase Order No.	Ektimo Contact	Notes	TAT Required (days)
N 24708	R018605	VOCs	ug/sample	Ektimo		Zoe Parker	All Locations- Blank Blank Tube	
N 24716	R018605	VOCs	ug/sample	Ektimo		Zoe Parker	EPA 10 F501C Tube A	
N 24725	R018605	VOCs	ug/sample	Ektimo		Zoe Parker	EPA 11 F501C Tube A	
N 24734	R018605	VOCs	ug/sample	Ektimo		Zoe Parker	EPA 8 FS01A Tube A	

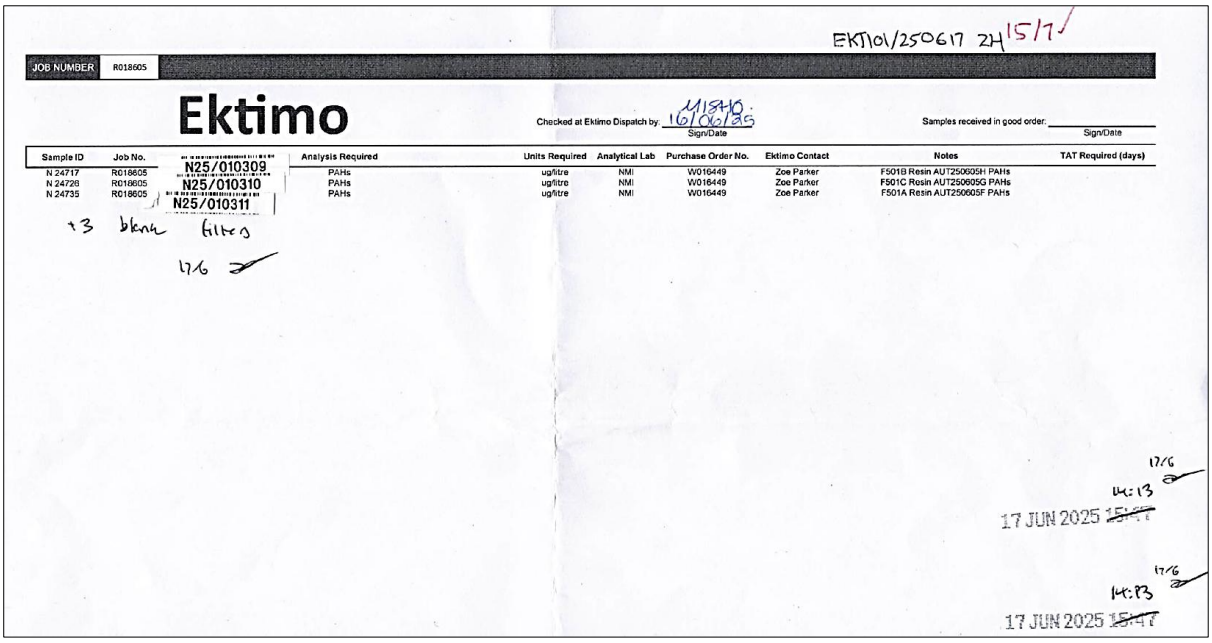


Ektimo

Checked at Ektimo Dispatch by: MSMO 16/06/25 Sign/Date

Samples received in good order: _____ Sign/Date

Sample ID	Job No.	Analysis Required	Units Required	Analytical Lab	Purchase Order No.	Ektimo Contact	Notes	TAT Required (days)
N 24707	R018605	SO3	ug/litre	Ektimo		Zoe Parker	All Locations- Blank SO3 Blank Solution	
N 24710	R018605	Metals on Filter (Ektimo) (As, Pb, Hg)	ug/sample	Ektimo		Zoe Parker	All Locations- Blank Blank Filter	
N 24711	R018605	Metals in Solution (Ektimo) (As, Pb, Hg)	ug/litre	Ektimo		Zoe Parker	All Locations- Blank Blank Metals Solution	
N 24712	R018605	Metals in Solution (Ektimo) (As, Pb, Hg)	ug/litre	Ektimo		Zoe Parker	All Locations- Blank Blank Metals Rinse	
N 24713	R018605	Hg in Solution (Ektimo)	ug/litre	Ektimo		Zoe Parker	All Locations- Blank Blank Hg Solution	
N 24715	R018605	SO3	ug/litre	Ektimo		Zoe Parker	EPA 10 F501B SO3 Solution	
N 24718	R018605	Metals on Filter (Ektimo) (As, Pb, Hg)	ug/sample	Ektimo		Zoe Parker	EPA 10 F501B Filter A	
N 24719	R018605	Metals in Solution (Ektimo) (As, Pb, Hg)	ug/litre	Ektimo		Zoe Parker	EPA 10 F501B Impinger A + B (Metals Solution)	
N 24720	R018605	Metals in Solution (Ektimo) (As, Pb, Hg)	ug/litre	Ektimo		Zoe Parker	EPA 10 F501B Metals Rinse Solution	
N 24721	R018605	Hg in Solution (Ektimo)	ug/litre	Ektimo		Zoe Parker	EPA 10 F501B Impinger D + E (Hg Solution)	
N 24724	R018605	SO3	ug/litre	Ektimo		Zoe Parker	EPA 11 F501C Impingers A + B (SO3 Solution)	
N 24727	R018605	Metals on Filter (Ektimo) (As, Pb, Hg)	ug/sample	Ektimo		Zoe Parker	EPA 11 F501C Filter A Metals on Filter (Ektimo) (As,	
N 24728	R018605	Metals in Solution (Ektimo) (As, Pb, Hg)	ug/litre	Ektimo		Zoe Parker	EPA 11 F501C Impinger A + B (Metals Solution)	
N 24729	R018605	Metals in Solution (Ektimo) (As, Pb, Hg)	ug/litre	Ektimo		Zoe Parker	EPA 11 F501C Metals Rinse Solution Metals in	
N 24730	R018605	Hg in Solution (Ektimo)	ug/litre	Ektimo		Zoe Parker	EPA 11 F501C Impinger A + B (Hg Solution) Hg in	
N 24733	R018605	SO3	ug/litre	Ektimo		Zoe Parker	EPA 8 FS01A Impinger A (SO3 Solution)	
N 24736	R018605	Metals on Filter (Ektimo) (As, Pb, Hg)	ug/sample	Ektimo		Zoe Parker	EPA 8 FS01A Filter A Metals on Filter (Ektimo) (As,	
N 24737	R018605	Metals in Solution (Ektimo) (As, Pb, Hg)	ug/litre	Ektimo		Zoe Parker	EPA 8 FS01A Impinger A + B (Metals Solution)	
N 24738	R018605	Metals in Solution (Ektimo) (As, Pb, Hg)	ug/litre	Ektimo		Zoe Parker	EPA 8 FS01A Metals Rinse Solution Metals in	
N 24739	R018605	Hg in Solution (Ektimo)	ug/litre	Ektimo		Zoe Parker	EPA 8 FS01A Impinger A + B (Hg Solution) Hg in	
N 24740	R018605	Hg in Solution (Ektimo)	ug/litre	Ektimo		Zoe Parker	EPA 8 FS01A HCl Rinse Hg Solution Hg in Solution	



EKTI01/250617 ZH 15/7

JOB NUMBER R018605

Ektimo

Checked at Ektimo Dispatch by: MSMO 16/06/25 Sign/Date

Samples received in good order: _____ Sign/Date

Sample ID	Job No.		Analysis Required	Units Required	Analytical Lab	Purchase Order No.	Ektimo Contact	Notes	TAT Required (days)
N 24717	R018605	N25/010309	PAHs	ug/litre	NMI	W016449	Zoe Parker	F501B Resin AUT250605H PAHs	
N 24726	R018605	N25/010310	PAHs	ug/litre	NMI	W016449	Zoe Parker	F501C Resin AUT250605G PAHs	
N 24735	R018605	N25/010311	PAHs	ug/litre	NMI	W016449	Zoe Parker	F501A Resin AUT250605F PAHs	

+3 blank filters

17/6

17/6 14:13 17 JUN 2025 15:47

17/6 14:13 17 JUN 2025 15:47

Appendix B: Laboratory Results

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-007447
Job Number:	R018605
Date of Issue:	3/07/2025
Attention:	AGL Newcastle Gas Storage Facility
Address:	5 Old Punt Road Tomago NSW 2322
Date samples received:	19/06/2025
Number of samples received:	4
Date samples analysed:	1/07/2025
No of samples analysed:	4
Test method(s) used:	Ektimo 235

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.

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REPORT AUTHORISATION

Version: 060525

Annie Kolokithas
Laboratory Technician

Cappi Tuffery
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

Ektimo Analytical Results

Report No. LV-007447
Job No. R018605
Client Name: AGL Newcastle Gas Storage Facility

Parameter	PQL	Units	N 24707 R018605	N 24715 R018605	N 24724 R018605	N 24733 R018605
Volume	1	mL	230	285	260	225
Sulfur trioxide (SO) as SO ²	0.2	mg/L	0.2	0.49	0.43	0.32

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

NATA Accredited Laboratory 14601

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-007443
Job Number:	R018605
Date of Issue:	2/07/2025
Attention:	AGL Newcastle Gas Storage Facility
Address:	5 Old Punt Road Tomago NSW 2322
Date samples received:	19/06/2025
Number of samples received:	20
Date samples analysed:	1/07/2025
No of samples analysed:	20
Test method(s) used:	Ektimo 666

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 70% - 130%	Pass
Method Blanks	All method blanks < PQL	Pass
QC sample	2 standard deviations of theoretical	Pass
Chemical Expiry	All chemicals within expiry date	Pass

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REPORT AUTHORISATION

Version: 060525

Cappi Tuffery
Laboratory Chemist

Daniel Balaam
Senior Laboratory Chemist

NATA Accredited Laboratory 14601

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Ektimo

Ektimo Analytical Results

Report No. LV-007443
Job No. R018605
Client Name: AGL Newcastle Gas Storage Facility

Parameter	PQL	Units	N 24710 R018605	N 24711 R018605	N 24712 R018605	N 24713 R018605
Volume	1	mL		225	185	255
Arsenic	0.1	µg/L		0.11	0.1	
Lead	1	µg/L		<1	<1	
Mercury	0.1	µg/L		<0.1	<0.1	<0.1
Arsenic (Total)	0.061	µg	0.043			
Lead (Total)	0.61	µg	<0.31			
Mercury (Total)	0.061	µg	<0.031			

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

NATA Accredited Laboratory 14601

Results page 2 of 6

Ektimo

Ektimo Analytical Results

Report No. LV-007443
Job No. R018605
Client Name: AGL Newcastle Gas Storage Facility

Parameter	PQL	Units	N 24714 R018605	N 24718 R018605	N 24719 R018605	N 24720 R018605
Volume	1	mL	254		310	160
Arsenic	0.1	µg/L			0.15	0.13
Lead	1	µg/L			2.8	10
Mercury	0.1	µg/L	<0.1		<0.1	<0.1
Arsenic (Total)	0.061	µg		0.14		
Lead (Total)	0.61	µg		1.2		
Mercury (Total)	0.061	µg		<0.061		

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

NATA Accredited Laboratory 14601

Ektimo

Ektimo Analytical Results

Report No. LV-007443
Job No. R018605
Client Name: AGL Newcastle Gas Storage Facility

Parameter	PQL	Units	N 24721 R018605	N 24722 R018605	N 24727 R018605	N 24728 R018605
Volume	1	mL	173	265		335
Arsenic	0.1	µg/L				<0.1
Lead	1	µg/L				<1
Mercury	0.1	µg/L	<0.1	<0.1		<0.1
Arsenic (Total)	0.061	µg			0.23	
Lead (Total)	0.61	µg			3.8	
Mercury (Total)	0.061	µg			<0.061	

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NATA Accredited Laboratory 14601

Ektimo

Ektimo Analytical Results

Report No. LV-007443
Job No. R018605
Client Name: AGL Newcastle Gas Storage Facility

Parameter	PQL	Units	N 24729 R018605	N 24730 R018605	N 24731 R018605	N 24736 R018605
Volume	1	mL	185	230	270	
Arsenic	0.1	µg/L	0.92			
Lead	1	µg/L	16			
Mercury	0.1	µg/L	<0.1	<0.1	<0.1	
Arsenic (Total)	0.061	µg				0.13
Lead (Total)	0.61	µg				5.7
Mercury (Total)	0.061	µg				<0.061

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NATA Accredited Laboratory 14601

Results page 5 of 6

Ektimo

Ektimo Analytical Results

Report No. LV-007443
Job No. R018605
Client Name: AGL Newcastle Gas Storage Facility

Parameter	PQL	Units	N 24737 R018605	N 24738 R018605	N 24739 R018605	N 24740 R018605
Volume	1	mL	360	125	223	255
Arsenic	0.1	µg/L	0.11	0.59		
Lead	1	µg/L	2.3	21		
Mercury	0.1	µg/L	<0.1	<0.1	<0.1	<0.1
Arsenic (Total)	0.061	µg				
Lead (Total)	0.61	µg				
Mercury (Total)	0.061	µg				

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NATA Accredited Laboratory 14601

Results page 6 of 6

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-007438
Job Number:	R018605
Date of Issue:	1/07/2025
Attention:	AGL Newcastle
Address:	5 Old Punt Road Tomago NSW 2322
Date samples received:	19/06/2025
Number of samples received:	4
Date samples analysed:	27/06/2025
No of samples analysed:	4
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.

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REPORT AUTHORISATION

Version: 060525

Daniel Balaam
Senior Laboratory Chemist

Cappi Tuffery
Laboratory Chemist

NATA Accredited Laboratory 14601

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Ektimo

Ektimo Analytical Results

Report No. LV-007438
Job No. R018605
Client Name: AGL Newcastle

Parameter	Units	N24708 R018605	N24716 R018605	N24725 R018605	N24734 R018605
	PQL	1	1	1	1
Ethanol	µg	<1	<1	<1	<1
Acetone	µg	<1	3.6	<1	<1
Isopropanol	µg	<1	<1	<1	<1
Pentane	µg	<1	15	<1	<1
1,1-Dichloroethene	µg	<1	<1	<1	<1
Acrylonitrile	µg	<1	<1	<1	<1
Dichloromethane	µg	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg	<1	<1	<1	<1
Methyl ethyl ketone	µg	<1	<1	<1	<1
n-Hexane	µg	<1	4	<1	<1
cis-1,2-Dichloroethene	µg	<1	<1	<1	<1
Ethyl acetate	µg	<1	<1	<1	<1
Chloroform	µg	<1	<1	<1	<1
1,1,1-Trichloroethane	µg	<1	<1	<1	<1
1,2-Dichloroethane	µg	<1	<1	<1	<1
Cyclohexane	µg	<1	<1	<1	<1
Benzene	µg	<1	<1	<1	<1
Carbon tetrachloride	µg	<1	<1	<1	<1
Butanol	µg	<1	<1	<1	<1
Isopropyl acetate	µg	<1	<1	<1	<1
2-Methylhexane	µg	<1	1.2	<1	<1
2,3-Dimethylpentane	µg	<1	<1	<1	<1
1-Methoxy-2-propanol	µg	<1	<1	<1	<1
3-Methylhexane	µg	<1	1.3	<1	<1
Heptane	µg	<1	1.3	<1	<1
Trichloroethylene	µg	<1	<1	<1	<1
Ethyl acrylate	µg	<1	<1	<1	<1
Methyl methacrylate	µg	<1	<1	<1	<1
Propyl acetate	µg	<1	<1	<1	<1
Methylcyclohexane	µg	<1	<1	<1	<1
Methyl Isobutyl Ketone	µg	<1	<1	<1	<1
Toluene	µg	<1	22	1.3	6.5
1,1,2-Trichloroethane	µg	<1	<1	<1	<1
2-Hexanone	µg	<1	<1	<1	<1
Octane	µg	<1	<1	<1	<1
Tetrachloroethene	µg	<1	<1	<1	<1
Butyl acetate	µg	<1	<1	<1	<1
Chlorobenzene	µg	<1	<1	<1	<1
Ethylbenzene	µg	<1	<1	<1	<1
m + p-Xylene	µg	<1	1.2	<1	<1
1-Methoxy-2-propyl acetate	µg	<1	<1	<1	<1
Styrene	µg	<1	<1	<1	<1
o-Xylene	µg	<1	<1	<1	<1
Butyl acrylate	µg	<1	<1	<1	<1
Nonane	µg	<1	<1	<1	<1

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

ilac-MRA NATA

NATA Accredited Laboratory 14601

Ektimo

Ektimo

Analytical Results

Report No. LV-007438
Job No. R018605
Client Name: AGL Newcastle

Parameter	Units	N24708 R018605	N24716 R018605	N24725 R018605	N24734 R018605
	PQL	1	1	1	1
2-Butoxyethanol	µg	<1	<1	<1	<1
Cellosolve acetate	µg	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg	<1	<1	<1	<1
Isopropylbenzene	µg	<1	<1	<1	<1
alpha-Pinene	µg	<1	<1	<1	<1
Propylbenzene	µg	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg	<1	<1	<1	<1
beta-Pinene	µg	<1	<1	<1	<1
tert-Butylbenzene	µg	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg	<1	<1	<1	<1
Decane	µg	<1	<1	<1	<1
3-Carene	µg	<1	<1	<1	<1
1,2,3-Trimethylbenzene	µg	<1	<1	<1	<1
D-Limonene	µg	<1	<1	<1	<1
Undecane	µg	<1	<1	<1	<1
Dodecane	µg	<1	<1	<1	<1
Tridecane	µg	<1	<1	<1	<1
Tetradecane	µg	<1	<1	<1	<1
Residuals as Toluene	µg	<1	17	1.6	2.4

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ilac-MRA NATA

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Results page 3 of 3

Ektimo

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

ABN 86 600 381 413

Version: 260624

CERTIFICATE OF ANALYSIS

Testing Laboratory:	Ektimo 26 Redland Drive Mitcham, VIC 3132
Client:	AGL Newcastle Gas Storage Facility
Report Number:	LV-007398
Job Number:	R018605
Date of Issue:	23/06/2025 16:29
Attention:	AGL Newcastle Gas Storage Facility
Address:	5 Old Punt Road Tomago NSW 2322
Date samples received:	19/06/2025
Number of samples received:	4
Date samples analysed:	20/06/2025
No of samples analysed:	4
Test method(s) used:	USEPA Method 11

Comments

QC Acceptance Criteria:

Parameter	Criteria	Pass/Fail
Standardisation	All titres within 0.05 mL.	PASS
Storage	All samples refrigerated below 4 °C.	PASS
Sample Integrity	All sample containers undamaged.	PASS
Chemical expiry	All chemicals within expiry date.	PASS
Holding time	All samples analysed within holding time.	PASS

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

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REPORT AUTHORISATION

Annie Kolokithas
Laboratory Technician

Daniel Balaam
Senior Laboratory Chemist

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Ektimo

Analytical Results

Report No. LV-007398
Job No. R018605
Client Name: AGL Newcastle Gas Storage Facility

Sample ID	Location	Sample name	Observations	As received sample volume (ml)	Volume analysed (ml)	H_2S mass in impinger solution (µg)
N 24709	All Locations- Blank	BLANK	Clear, nil odour	44	44	< 21.3
N 24723	EPA 10 F501B	IMP C-E	Clear, slight odour	40	40	< 21.3
N 24732	EPA 11 F501C	IMP C-E	Clear, slight odour	42	42	< 21.3
N 24741	EPA 8 FS01A	IMP C-E	Clear, nil odour	45	45	< 21.3

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

NATA Accredited Laboratory 14601

Results page 2 of 2

Australian Government
Department of Industry, Science and Resources

National Measurement Institute

NATA

REPORT OF ANALYSIS

Report No. RN1470911

Client	: EKTIMO PTY LTD	**Job No.**	: EKTI01/250617
	52 COOPER ROAD	**Quote No.**	: QT-02288
	COCKBURN CENTRAL WA 6164	**Order No.**	: W016449
		Date Sampled	:
		Date Received	: 17-JUN-2025
Attention	:	**Sampled By**	: CLIENT
Project Name	:		
For Follow up enquiries	: ASB@measurement.gov.au	**Phone**	: 1300 722 845

Lab Reg No.	Sample Ref	Sample Description
N25/010309	N 24717	F501B RESIN AUT250605H JOB NO. R018605
N25/010310	N 24726	F501C RESIN AUT250605G JOB NO. R018605

Lab Reg No. / Sample Reference	Units	N25/010309 N 24717	N25/010310 N 24726	Method
PAH				
Naphthalene (91-20-3)	ng	1200	1300	NGCMS_1127
2-Methylnaphthalene (91-57-6)	ng	220	190	NGCMS_1127
Acenaphthylene (208-96-8)	ng	< 20	< 20	NGCMS_1127
Acenaphthene (83-32-9)	ng	290	1000	NGCMS_1127
Fluorene (86-73-7)	ng	< 20	< 20	NGCMS_1127
Phenanthrene (85-01-8)	ng	520	610	NGCMS_1127
Anthracene (120-12-7)	ng	49	77	NGCMS_1127
Fluoranthene (206-44-0)	ng	120	120	NGCMS_1127
Pyrene (129-00-0)	ng	< 20	< 20	NGCMS_1127
Benz(a)anthracene (56-55-3)	ng	< 20	< 20	NGCMS_1127
Chrysene (218-01-9)	ng	< 20	< 20	NGCMS_1127
Benzo(b)fluoranthene (205-99-2)	ng	< 20	< 20	NGCMS_1127
Benzo(k)fluoranthene (207-08-9)	ng	< 20	< 20	NGCMS_1127
Benzo(e)pyrene (192-97-2)	ng	< 20	< 20	NGCMS_1127
Benzo(a)pyrene (50-32-8)	ng	< 20	< 20	NGCMS_1127
Perylene (198-55-0)	ng	< 20	< 20	NGCMS_1127
Indeno(1,2,3-cd)pyrene (193-39-5)	ng	< 20	< 20	NGCMS_1127
Dibenz(ah)anthracene (53-70-3)	ng	< 20	< 20	NGCMS_1127
Benzo(ghi)perylene (50-32-8)	ng	< 20	< 20	NGCMS_1127
Field Surogate				
Surrogate: d14-Terphenyl	%	112	129	NGCMS_1127
Labelled Internal Recovery %				
d8-Naphthalene	%	98	120	NGCMS_1127
d8-Acenaphthylene	%	100	120	NGCMS_1127
d10-Acenaphthene	%	110	140	NGCMS_1127
d10-Fluorene	%	93	120	NGCMS_1127
d10-Phenanthrene	%	91	110	NGCMS_1127
d10-Fluoranthene	%	100	120	NGCMS_1127
d12-Benz(a)anthracene	%	140	150	NGCMS_1127

REPORT OF ANALYSIS

Lab Reg No.		N25/010309	N25/010310	
Sample Reference	Units	N 24717	N 24726	Method
Labelled Internal Recovery %				
d12-Chrysene	%	120	140	NGCMS_1127
d12-Benzo(b)fluoranthene	%	100	120	NGCMS_1127
d12-Benzo(k)fluoranthene	%	90	110	NGCMS_1127
d12-Benzo(a)pyrene	%	120	140	NGCMS_1127
d12-Indeno(1,2,3-c,d)pyrene	%	80	99	NGCMS_1127
d14-Dibenz(ah)anthracene	%	76	97	NGCMS_1127
d12-Benzo(ghi)perylene	%	83	100	NGCMS_1127
CARB - Benzo(a)pyrene Potency Equivalent Factors				
BaP-PEF Benz(a)anthracene		0.1	0.1	NGCMS_1127
BaP-PEF Chysene		0.01	0.01	NGCMS_1127
BaP-PEF Benzo(b)fluoranthene		0.1	0.1	NGCMS_1127
BaP-PEF Benzo(k)fluoranthene		0.1	0.1	NGCMS_1127
BaP-PEF Benzo(a)pyrene		1	1	NGCMS_1127
BaP-PEF Indeno(1,2,3-cd)pyrene		0.1	0.1	NGCMS_1127
BaP-PEF Dibenz(ah)anthracene		0.4	0.4	NGCMS_1127
CARB - Benzo(a)pyrene Toxic Equivalent Summary				
BaP-TEQPAH Lower Bound [excl LOR]	ng	0	0	NGCMS_1127
BaP-TEQPAH Middle Bound [incl 1/2 LOR]	ng	18	18	NGCMS_1127
BaP-TEQPAH Upper Bound [incl LOR]	ng	36	36	NGCMS_1127
Dates				
Date extracted		3-JUL-2025	3-JUL-2025	
Date analysed		3-JUL-2025	3-JUL-2025	

N25/010309
to
N25/010311

The standard Reporting Level for this analysis is 20 ng.
Standard acceptable recovery range is 50 to 150%.

BaP-PEF Factors are as below:
BaP-PEF Benz(a)anthracene: 0.1
BaP-PEF Chysene: 0.01
BaP-PEF Benzo(b)fluoranthene: 0.1
BaP-PEF Benzo(k)fluoranthene: 0.1
BaP-PEF Benzo(a)pyrene: 1
BaP-PEF Indeno(1,2,3-cd)pyrene: 0.1
BaP-PEF Dibenz(ah)anthracene: 0.4

The PAH-BaP toxicity factors is as defined in "Benzo(a)pyrene as a Toxic Air Contaminant",

REPORT OF ANALYSIS

CARB/OEHHA Executive Summary, July 1994.

Gabriela Saveluc, Analyst
Organics - NSW
Accreditation No. 198

15-JUL-2025

Lab Reg No.		N25/010309	N25/010310	
Sample Reference	Units	N 24717	N 24726	Method
Components				
Cartridge Preparation Charge		AUT250605H	AUT250605G	
Extraction				
Pressurised Solvent Extraction		01-JUL-2025	01-JUL-2025	AUT_MET_01

Alan Yates, Analyst
Australian Ultra Trace Laboratory
Accreditation No. 198

15-JUL-2025

REPORT OF ANALYSIS

Report No. RN1470911

Client	: EKTIMO PTY LTD	**Job No.**	: EKTI01/250617
	52 COOPER ROAD	**Quote No.**	: QT-02288
	COCKBURN CENTRAL WA 6164	**Order No.**	: W016449
		Date Sampled	:
		Date Received	: 17-JUN-2025
Attention	:	**Sampled By**	: CLIENT
Project Name	:		
For Follow up enquiries	: ASB@measurement.gov.au	**Phone**	: 1300 722 845

Lab Reg No.	Sample Ref	Sample Description
N25/010311	N 24735	F501A RESIN AUT250605F JOB NO. R018605

Lab Reg No.		N25/010311		
Sample Reference	Units	N 24735		Method
PAH				
Naphthalene (91-20-3)	ng	1300		NGCMS_1127
2-Methylnaphthalene (91-57-6)	ng	200		NGCMS_1127
Acenaphthylene (208-96-8)	ng	<20		NGCMS_1127
Acenaphthene (83-32-9)	ng	960		NGCMS_1127
Fluorene (86-73-7)	ng	<20		NGCMS_1127
Phenanthrene (85-01-8)	ng	600		NGCMS_1127
Anthracene (120-12-7)	ng	57		NGCMS_1127
Fluoranthene (206-44-0)	ng	110		NGCMS_1127
Pyrene (129-00-0)	ng	<20		NGCMS_1127
Benz(a)anthracene (56-55-3)	ng	<20		NGCMS_1127
Chrysene (218-01-9)	ng	<20		NGCMS_1127
Benzo(b)fluoranthene (205-99-2)	ng	<20		NGCMS_1127
Benzo(k)fluoranthene (207-08-9)	ng	<20		NGCMS_1127
Benzo(e)pyrene (192-97-2)	ng	<20		NGCMS_1127
Benzo(a)pyrene (50-32-8)	ng	<20		NGCMS_1127
Perylene (198-55-0)	ng	<20		NGCMS_1127
Indeno(1,2,3-cd)pyrene (193-39-5)	ng	<20		NGCMS_1127
Dibenz(ah)anthracene (53-70-3)	ng	<20		NGCMS_1127
Benzo(ghi)perylene (50-32-8)	ng	<20		NGCMS_1127
Field Surogate				
Surrogate: d14-Terphenyl	%	138		NGCMS_1127
Labelled Internal Recovery %				
d8-Naphthalene	%	120		NGCMS_1127
d8-Acenaphthylene	%	89		NGCMS_1127
d10-Acenaphthene	%	120		NGCMS_1127
d10-Fluorene	%	94		NGCMS_1127
d10-Phenanthrene	%	82		NGCMS_1127
d10-Fluoranthene	%	95		NGCMS_1127
d12-Benz(a)anthracene	%	150		NGCMS_1127
d12-Chrysene	%	140		NGCMS_1127

REPORT OF ANALYSIS

Lab Reg No.		N25/010311		
Sample Reference	Units	N 24735		Method
Labelled Internal Recovery %				
d12-Benzo(b)fluoranthene	%	120		NGCMS_1127
d12-Benzo(k)fluoranthene	%	110		NGCMS_1127
d12-Benzo(a)pyrene	%	140		NGCMS_1127
d12-Indeno(1,2,3-c,d)pyrene	%	91		NGCMS_1127
d14-Dibenz(ah)anthracene	%	93		NGCMS_1127
d12-Benzo(ghi)perylene	%	100		NGCMS_1127
CARB - Benzo(a)pyrene Potency Equivalent Factors				
BaP-PEF Benz(a)anthracene		0.1		NGCMS_1127
BaP-PEF Chysene		0.01		NGCMS_1127
BaP-PEF Benzo(b)fluoranthene		0.1		NGCMS_1127
BaP-PEF Benzo(k)fluoranthene		0.1		NGCMS_1127
BaP-PEF Benzo(a)pyrene		1		NGCMS_1127
BaP-PEF Indeno(1,2,3-cd)pyrene		0.1		NGCMS_1127
BaP-PEF Dibenz(ah)anthracene		0.4		NGCMS_1127
CARB - Benzo(a)pyrene Toxic Equivalent Summary				
BaP-TEQPAH Lower Bound [excl LOR]	ng	0		NGCMS_1127
BaP-TEQPAH Middle Bound [incl 1/2 LOR]	ng	18		NGCMS_1127
BaP-TEQPAH Upper Bound [incl LOR]	ng	36		NGCMS_1127
Dates				
Date extracted		3-JUL-2025		
Date analysed		3-JUL-2025		

Gabriela Saveluc, Analyst
Organics - NSW
Accreditation No. 198

15-JUL-2025

Lab Reg No.		N25/010311		
Sample Reference	Units	N 24735		Method
Components				
Cartridge Preparation Charge		AUT250605F		
Extraction				
Pressurised Solvent Extraction		01-JUL-2025		AUT_MET_01

REPORT OF ANALYSIS

Lab Reg No.		N25/010311		
Sample Reference	Units	N 24735		Method

Alan Yates, Analyst
Australian Ultra Trace Laboratory
Accreditation No. 198

15-JUL-2025

NATA
WORLD RECOGNISED ACCREDITATION

Accredited for compliance with ISO/IEC 17025 - Testing.
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Results relate only to the sample(s) as received and tested.

* Denotes the analyte or test method is not within our ISO/IEC 17025 scope of accreditation.

Measurement Uncertainty is available upon request.
The testing was undertaken at: 105 Delhi Road, North Ryde, NSW, 2113

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