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**AGL UPSTREAM INVESTMENTS PTY LTD
ROSALIND PARK GAS PLANT
Quarterly Air Monitoring Report**

Reporting Period: 3rd Quarter - September 2012

AGL Upstream Investments Pty Ltd
ABN 58 115 063 744
Locked Bag 1837, St Leonards NSW 2065
Level 22, 101 Miller Street, North Sydney NSW 2060
Telephone: 02 9921 2999 Facsimile: 02 9921 2474
Complaints Line (24 hours) 02 9963 1318



Foreword

PREMISES	Rosalind Park Gas Plant Lot 35 Medhurst Road GILEAD NSW 2560
LICENCE DETAILS	<u>Environment Protection Licence 12003</u>
LICENCEE	AGL Upstream Investments Pty Limited
LICENCEE'S ADDRESS	Locked Bag 1837, North Sydney, NSW 2060
MONITORING DATE	3 rd Quarter – 11 and 12 September 2012
MONITORING BY	EML Air Pty Ltd (Report N89816, 05 November 2012)
REPORT DATE	06 November 2012
REPORT PREPARED BY	Aaron Clifton Environmental Manager

SUMMARY OF ACTIVITY

Rosalind Park Gas Plant, located approximately 60km south west of Sydney, is a natural gas processing and treatment plant, used to process coal seam natural gas from the Camden Gas Project.

Produced natural gas is cleaned, dehydrated, compressed and odourised before being measured and transported by pipeline about 500 metres into the nearby Moomba to Sydney Natural Gas Pipeline. The premises covered by this Environment Protection Licence also includes all gas wells, gas gathering, reticulation systems, trunk lines and associated effluent storage areas and work areas of the Camden Gas Project.

This Monitoring Report relates to those air monitoring activities specified in Part 5, Monitoring and Recording Conditions, of the Environment Protection Licence. The Licence conditions stipulate air monitoring is required to be carried out at the locations, at the frequency and using the test methods as set out in the tables below.



This report sets out the results of quarterly monitoring. A separate report is issued for continuous monitoring.

This report is prepared in accordance with the *Requirements for Publishing Pollution Monitoring Data* (EPA, March 2012) (**Publication Requirements**).

AIR MONITORING LOCATIONS

Point	Location	Monitoring Frequency
1	Exhaust Stack 1 on Compression Engine 1	Quarterly
2	Exhaust Stack 2 on Compression Engine 2	Quarterly
3	Exhaust Stack 3 on Compression Engine 3	Quarterly
4	Reboiler Flue	Quarterly
5	Reflux Column Vent	Quarterly
6	Carbon Scrubber Vent	Quarterly

AIR MONITORING TEST METHODS – POINTS 1, 2, 3, 4, 5

Parameter	NSW EPA Test Method (Sampling Method)
Carbon dioxide	TM-24
Dry gas density	TM-23
Moisture	TM-22
Molecular weight of stack gases	TM-23
Nitrogen Oxides	TM-11
Oxygen (O ₂)	TM-25
Sulfuric acid mist and sulphur trioxide (as SO ₃)	TM-3
Sulphur dioxide	TM-4
Temperature	TM-2
Velocity	TM-2
Volumetric flowrate	TM-2



AIR MONITORING TEST METHODS – POINT 6

Parameter	NSW EPA Test Method (Sampling Method)
Carbon dioxide	TM-24
Dry gas density	TM-23
Moisture	TM-22
Molecular weight of stack gases	TM-23
Odour	OM-7
Oxygen (O ₂)	TM-25
Temperature	TM-2
Velocity	TM-2
Volumetric flowrate	TM-2



Air Monitoring Results

Monitoring Point	Description	Pollutant	Units of measure	Oxygen correction	Sampling method	Monitoring frequency required by licence	Concentration	Concentration limit
1	Compressor Engine 1	Carbon dioxide	Percent		TM-24	Quarterly	4.4	
		Dry gas density	Kilograms per cubic metre		TM-23	Quarterly	1.31	
		Moisture	Percent		TM-22	Quarterly	6	
		Molecular weight of stack gases	Grams per gram mole		TM-23	Quarterly	29.3	
		Nitrogen Oxides	Milligrams per cubic metre	7% oxygen	TM-11	Quarterly	340	461
		Oxygen (O2)	Percent		TM-25	Quarterly	13	
		Sulfuric acid mist and sulphur trioxide (as SO3)	Milligrams per cubic metre		TM-3	Quarterly	0.02	5.0
		Sulphur dioxide	Milligrams per cubic metre		TM-4	Quarterly	<0.011	7
		Temperature	Degrees Celsius		TM-2	Quarterly	342	
		Velocity	Metres per second		TM-2	Quarterly	25	
		Volumetric flowrate	Cubic metres per second		TM-2	Quarterly	2.9	



Monitoring Point	Description	Pollutant	Units of measure	Oxygen correction	Sampling method	Monitoring frequency required by licence	Concentration	Concentration limit
2	Compressor Engine 2	Carbon dioxide	Percent		TM-24	Quarterly	10.6	
		Dry gas density	Kilograms per cubic metre		TM-23	Quarterly	1.33	
		Moisture	Percent		TM-22	Quarterly	16	
		Molecular weight of stack gases	Grams per gram mole		TM-23	Quarterly	29.9	
		Nitrogen Oxides	Milligrams per cubic metre	7% oxygen	TM-11	Quarterly	340	461
		Oxygen (O2)	Percent		TM-25	Quarterly	1.1	
		Sulfuric acid mist and sulphur trioxide (as SO3)	Milligrams per cubic metre		TM-3	Quarterly	<0.009	5.0
		Sulphur dioxide	Milligrams per cubic metre		TM-4	Quarterly	<0.01	7
		Temperature	Degrees Celsius		TM-2	Quarterly	379	
		Velocity	Metres per second		TM-2	Quarterly	17	
		Volumetric flowrate	Cubic metres per second		TM-2	Quarterly	0.7	



Monitoring Point	Description	Pollutant	Units of measure	Oxygen correction	Sampling method	Monitoring frequency required by licence	Concentration	Concentration limit
3	Compressor Engine 3	Carbon dioxide	Percent		TM-24	Quarterly	10.6	
		Dry gas density	Kilograms per cubic metre		TM-23	Quarterly	1.33	
		Moisture	Percent		TM-22	Quarterly	17	
		Molecular weight of stack gases	Grams per gram mole		TM-23	Quarterly	29.9	
		Nitrogen Oxides	Milligrams per cubic metre	7% oxygen	TM-11	Quarterly	140	461
		Oxygen (O2)	Percent		TM-25	Quarterly	1	
		Sulfuric acid mist and sulphur trioxide (as SO3)	Milligrams per cubic metre		TM-3	Quarterly	<0.011	5.0
		Sulphur dioxide	Milligrams per cubic metre		TM-4	Quarterly	<0.071	7
		Temperature	Degrees Celsius		TM-2	Quarterly	400	
		Velocity	Metres per second		TM-2	Quarterly	20	
		Volumetric flowrate	Cubic metres per second		TM-2	Quarterly	0.77	



Monitoring Point	Description	Pollutant	Units of measure	Oxygen correction	Sampling method	Monitoring frequency required by licence	Concentration	Concentration limit
4	Reboiler Flue	Carbon dioxide	Percent		TM-24	Quarterly	4.5	
		Dry gas density	Kilograms per cubic metre		TM-23	Quarterly	1.31	
		Moisture	Percent		TM-22	Quarterly	7.9	
		Molecular weight of stack gases	Grams per gram mole		TM-23	Quarterly	29.4	
		Nitrogen Oxides	Milligrams per cubic metre	7% oxygen	TM-11	Quarterly	99	110
		Oxygen (O2)	Percent		TM-25	Quarterly	13.2	
		Sulfuric acid mist and sulphur trioxide (as SO3)	Milligrams per cubic metre		TM-3	Quarterly	<0.016	3.5
		Sulphur dioxide	Milligrams per cubic metre		TM-4	Quarterly	<0.027	35
		Temperature	Degrees Celsius		TM-2	Quarterly	251	
		Velocity	Metres per second		TM-2	Quarterly	3.2	
		Volumetric flowrate	Cubic metres per second		TM-2	Quarterly	0.082	



Monitoring Point	Description	Pollutant	Units of measure	Oxygen correction	Sampling method	Monitoring frequency required by licence	Concentration	Concentration limit
5	Reflux Column Vent	Carbon dioxide	Percent		TM-24	Quarterly	10.9	
		Dry gas density	Kilograms per cubic metre		TM-23	Quarterly	1.33	
		Moisture	Percent		TM-22	Quarterly	72	
		Molecular weight of stack gases	Grams per gram mole		TM-23	Quarterly	29.9	
		Nitrogen Oxides	Milligrams per cubic metre	7% oxygen	TM-11	Quarterly	<2.8	13
		Oxygen (O2)	Percent		TM-25	Quarterly	0.2	
		Sulfuric acid mist and sulphur trioxide (as SO3)	Milligrams per cubic metre		TM-3	Quarterly	3.2	35
		Sulphur dioxide	Milligrams per cubic metre		TM-4	Quarterly	<0.037	1042
		Temperature	Degrees Celsius		TM-2	Quarterly	91	
		Velocity	Metres per second		TM-2	Quarterly	1.9	
		Volumetric flowrate	Cubic metres per second		TM-2	Quarterly	0.0032	



Monitoring Point	Description	Pollutant	Units of measure	Oxygen correction	Sampling method	Monitoring frequency required by licence	Concentration	Concentration limit
6	Carbon Scrubber Vent	Carbon dioxide	Percent		TM-24	Quarterly	<0.1	
		Dry gas density	Kilograms per cubic metre		TM-23	Quarterly	1.29	
		Moisture	Percent		TM-22	Quarterly	<0.4	
		Molecular weight of stack gases	Grams per gram mole		TM-23	Quarterly	29.0	
		Odour	Odour Units		OM-7	Quarterly	29	
		Oxygen (O2)	Percent		TM-25	Quarterly	20.8	
		Temperature	Degrees Celsius		TM-2	Quarterly	28	
		Velocity	Metres per second		TM-2	Quarterly	5.4	
		Volumetric flowrate	Cubic metres per second		TM-2	Quarterly	0.14	