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

Reporting Period: October 2013

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Foreword

PREMISES	Rosalind Park Gas Plant Lot 35 Medhurst Road GILEAD NSW 2560
LICENCE DETAILS	Environment Protection Licence 12003
LICENCEE	AGL Upstream Investments Pty Limited
LICENCEE'S ADDRESS	Locked Bag 1837, North Sydney, NSW 2060
REPORTING PERIOD	01 October to 31 October 2013
REPORT DATE	13 November 2013
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 continuous monitoring summarized on a monthly basis. A separate report is issued for quarterly 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	Continuous
2	Exhaust Stack 2 on Compression Engine 2	Continuous
3	Exhaust Stack 3 on Compression Engine 3	Continuous

Note: monitoring is only undertaken when the compression engines are running.

AIR MONITORING TEST METHODS

Parameter	NSW EPA Test Method (Sampling Method)	Reference Method
Oxides of Nitrogen	CEM-2	USEPA Performance Specification 2
Temperature	TM-2	USEPA Method 2
Moisture content	Method approved by EPA in writing	Calibration by reference to TM-22
Volumetric Flow Rate	CEM-6	USEPA Performance Specification 6
Oxygen	CEM-3	USEPA Performance Specification 3

USEPA Method refers to the US Environmental Protection Agency 2000, Code of Federal Regulations, Title 40, Part 60, Appendix A Methods.

USEPA Performance Specification refers to the US Environmental Protection Agency 2000, Code of Federal Regulations, Title 40, Part 60, Appendix B, Performance Specifications.

Air Monitoring Results

Continuous monitoring results are based on test results obtained over a one-hour averaging period as set out in Schedule 5 of the *Protection of the Environment Operations (Clean Air) Regulation* 2010 (NSW).

Monitoring Point	Description	Pollutant	Units of measure	Oxygen correction	Sampling method	Monitoring frequency required by licence	Number of times measured during sampling period	Minimum value	Average value	Maximum value	Concentration limit
1	Compressor Engine 1	Oxides of Nitrogen	milligrams per cubic metre	7% oxygen	CEM-2	Continuous	*Compressor Engine 1 operated from 1 to 31 October 2013.*	189	288	375	461
		Temperature	degrees Celsius		TM-2	Continuous		297	316	334	
		Moisture	percent		Method approved by EPA	Continuous		6.3	7.2	8.4	
		Volumetric flow rate	cubic metres per second		CEM-6	Continuous		2.6	2.8	3.1	
		Oxygen	percent		CEM-3	Continuous		12.4	12.8	13.4	
2	Compressor Engine 2	Oxides of Nitrogen	milligrams per cubic metre	7% oxygen	CEM-2	Continuous	*Compressor Engine 2 operated from 1-16 and 18-29 October 2013. The CEMS of Compressor Engine 2 was operating for 45 minutes of every one hour period. The remaining 15 minute period was down time for cleaning purposes. See Note 1.*	66	115	209	461
		Temperature	degrees Celsius		TM-2	Continuous		398	441	498	
		Moisture	percent		Method approved by EPA	Continuous		See Note 1	See Note 1	See Note 1	
		Volumetric flow rate	cubic metres per second		CEM-6	Continuous		See Note 1	See Note 1	See Note 1	
		Oxygen	percent		CEM-3	Continuous		0.022 See Note 2	0.5	1.0	
3	Compressor Engine 3	Oxides of Nitrogen	milligrams per cubic metre	7% oxygen	CEM-2	Continuous	*Compressor Engine 3 operated on 18 and 29-31 October 2013. The CEMS of Compressor Engine 3 was operating for 45 minutes of every one hour period. The remaining 15 minute period was down time*	74	90	113	461
		Temperature	degrees Celsius		TM-2	Continuous		419	447	502	
		Moisture	percent		Method approved by EPA	Continuous		See Note 3	See Note 3	See Note 3	
		Volumetric flow rate	cubic metres per second		CEM-6	Continuous		See Note 3	See Note 3	See Note 3	
		Oxygen	percent		CEM-3	Continuous		0.67	0.83	0.93	

							for cleaning purposes. See Note 3.				

Air Monitoring Results

Emission Testing Consultants has been engaged by AGL to undertake independent monitoring each month. This is additional monitoring beyond the conditions of EPL 12003. Results for monitoring undertaken by Emission Testing Consultants (Report 130670r) on 17 October 2013 are as follows:

Monitoring Point	Description	Pollutant	Units of measure	Oxygen correction	Sampling method	Monitoring frequency required by licence	Result	Concentration limit
1	Compressor Engine 1	Oxides of Nitrogen	milligrams per cubic metre	7% oxygen	TM-11	Not applicable	230	461
		Temperature	degrees Celsius		TM-2	Not applicable	330	
		Moisture	percent		TM-22	Not applicable	9.2	
		Volumetric flow rate	cubic metres per second		TM-2	Not applicable	2.9	
		Oxygen	percent		TM-25	Not applicable	10.4	
2	Compressor Engine 2	Oxides of Nitrogen	milligrams per cubic metre	7% oxygen	TM-11	Not applicable	200	461
		Temperature	degrees Celsius		TM-2	Not applicable	439	
		Moisture	percent		TM-22	Not applicable	20	
		Volumetric flow rate	cubic metres per second		TM-2	Not applicable	0.72	
		Oxygen	percent		TM-25	Not applicable	0.58	
3	Compressor Engine 3	Oxides of Nitrogen	milligrams per cubic metre	7% oxygen	TM-11	Not applicable	110	461
		Temperature	degrees Celsius		TM-2	Not applicable	456	
		Moisture	percent		TM-22	Not applicable	20	
		Volumetric flow rate	cubic metres per second		TM-2	Not applicable	0.76	
		Oxygen	percent		TM-25	Not applicable	<0.4	

Notes:

1. In accordance with Section 3.4.1 of the EPA Publication Requirements, the following data points have not been included for Monitoring Point 2 (Compressor #2 exhaust stack) as AGL knows that the data collected is incorrect. The data is incorrect because the component of the equipment measuring the relevant parameter has either failed or was not operating. AGL has taken and is currently taking actions to rectify the issue (e.g. replacement of failed components of measuring equipment).

Date	Approximate total hours	Pollutant
1-16 and 18-29.10.2013	629	Volumetric Flow Rate, Moisture
26-28.10.2013	31	Oxides of Nitrogen and oxygen
10.10.2013	1	Oxides of Nitrogen, temperature and oxygen

2. Between 11 and 13 October, the Oxygen analyzer was recording 1 minute Oxygen results to the nearest whole number, not to two decimal places. When the 1 minute data was then calculated to the hourly average at three decimal places, the recorded result was temporarily lower than the actual result.
3. In accordance with Section 3.4.1 of the EPA Publication Requirements, the following data points have not been included for Monitoring Point 3 (Compressor #3 exhaust stack) as AGL knows that the data collected is incorrect. The data is incorrect because the component of the equipment measuring the relevant parameter has either failed or was not operating. AGL has taken and is currently taking actions to rectify the issue (e.g. replacement of failed components of measuring equipment).

Date	Approximate total hours	Pollutant
18, 29-31.10.2013	69	Volumetric Flow Rate and Moisture