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

Reporting Period: September 2012

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## Foreword

<b>PREMISES</b>	Rosalind Park Gas Plant Lot 35 Medhurst Road GILEAD NSW 2560
<b>LICENCE DETAILS</b>	<a href="#"><u>Environment Protection Licence 12003</u></a>
<b>LICENCEE</b>	AGL Upstream Investments Pty Limited
<b>LICENCEE'S ADDRESS</b>	Locked Bag 1837, North Sydney, NSW 2060
<b>REPORTING PERIOD</b>	01 September to 30 September 2012
<b>REPORT DATE</b>	23 November 2012
<b>REPORT PREPARED BY</b>	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	TM-22	USEPA Method 4
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	<i>The CEMS of Compressor Engine 1 was operating for 45 minutes of every one hour period. The remaining 15 minute period was down time for cleaning purposes. See Note 1</i>	175	238	304	461
		Temperature	degrees Celsius		TM-2	Continuous		318	326	346	
		Moisture	percent		TM-22	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		12.25	12.97	13.85	
2	Compressor Engine 2	Oxides of Nitrogen	milligrams per cubic metre	7% oxygen	CEM-2	Continuous	<i>The CEMS of Compressor Engine 2 was operating from 01-12 September for 45 minutes of every one hour period. The remaining 15 minute period was down time for cleaning purposes. See Note 2.</i>	202	328	587 See Note 2	461
		Temperature	degrees Celsius		TM-2	Continuous		377	401	432	
		Moisture	percent		TM-22	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		0.45	0.51	0.65	
3	Compressor Engine 3	Oxides of Nitrogen	milligrams per cubic metre	7% oxygen	CEM-2	Continuous	<i>The CEMS of Compressor Engine 3 was operating from 12-30 September for 45 minutes of every one hour period. The remaining 15 minute period was down time for cleaning purposes. See Note 3.</i>	69	86	157	461
		Temperature	degrees Celsius		TM-2	Continuous		397	442	493	
		Moisture	percent		TM-22	Continuous		See Note 4	See Note 4	See Note 4	
		Volumetric flow rate	cubic metres per second		CEM-6	Continuous		See Note 4	See Note 4	See Note 4	
		Oxygen	percent		CEM-3	Continuous		0.49	0.64	0.76	



**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 1 (Compressor #1 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 (eg. replacement of failed components of measuring equipment).

<b>Date</b>	<b>Approximate total hours</b>	<b>Pollutant</b>
03.09.2012 to 07.09.2012	9	Oxides of Nitrogen and Oxygen
01.09.2012 to 30.09.2012	720	Volumetric Flow Rate, Moisture

2. Analysis of the Compressor 2 data has confirmed that the hourly NOx average exceeded the 461mg/m<sup>3</sup> limit on 12 occasions (i.e. 12 hours) between 05-12 September. The exceedances range from 477-587mg/m<sup>3</sup> during periods of reduced engine load.

It should be noted that the exceedances occurred prior to the Compressor being shutdown for it's annual service during late September 2012. At the time of the compressor service, the compressor was not known to have exceeded NOx levels.

During the service, numerous components were replaced which may possibly have contributed to the earlier increased NOx emissions. Additional maintenance work is currently being carried out on the catalytic converter. Further monitoring will be undertaken once the maintenance work is completed to confirm whether the cause of the exceedances has been rectified.

3. 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 (eg. replacement of failed components of measuring equipment).

<b>Date</b>	<b>Approximate total hours</b>	<b>Pollutant</b>
03.09.2012 to 10.09.2012	16	Oxides of Nitrogen
01.09.2012 to 12.09.2012	288	Volumetric Flow Rate, Moisture

4. 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 (eg. replacement of failed components of measuring equipment).

<b>Date</b>	<b>Approximate total hours</b>	<b>Pollutant</b>
12.09.2012 to 30.09.2012	432	Volumetric Flow Rate, Moisture