



AGL UPSTREAM INVESTMENTS PTY LTD
CAMDEN GAS PROJECT

Monthly Flare Pit Water Quality Monitoring Report

Reporting Period: May 2019

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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 (AGL)
LICENCEE'S ADDRESS	Locked Bag 3013, Australia Square, NSW 1215
MONITORING DATE	May 2019 (02 May 2019 and 15 May 2019)
MONITORING BY	AGL
ANALYSIS BY	ALS Laboratory, Smithfield (Work order number: ES1913284 02 May 2019 and ES1914872 15 May 2019)
DATE DATA OBTAINED	09 May 2019 (ES1913284) and 23 May 2019 (ES1914872)
REPORT DATE	24 May 2019
REPORT PREPARED BY	A. Clifton, Environment Business Partner

Introduction

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. The premises are covered by Environment Protection Licence 12003 which 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 water monitoring activities specified in Part 5, Monitoring and Recording Conditions, of the Environment Protection Licence, specifically monitoring point 16 (Rosalind Park Gas Plant Flare Pit) (Table 1). The Licence conditions stipulate water monitoring is required to be carried out at the locations, at the frequency and using the test methods as set out in Table 2.

Table 3 presents the results of this month's water monitoring. This report is prepared in accordance with the Requirements for Publishing Pollution Monitoring Data (EPA, October, 2013) (**Publication Requirements**).

The water quality samples are analysed by an external NATA certified laboratory (ALS Environmental, Smithfield), in accordance with the EPA Approved Methods Publication "*Approved Methods for the Sampling and Analysis of Water Pollutants in New South Wales*" (EPA, 2004), with the exception of phenols and PAHs, which were analysed with an alternate method following written approval from the EPA (EPA, 2014) (refer to Table 2 for analytical methodology).

Table 1- Flare pit water quality monitoring point location

EPA monitoring point	Location	Latitude	Longitude
16	RFPF	34°07'17.0"S	150°46'08.1"E

Coordinate reference system: Map Grid of Australia 1994 Zone 56

Table 2 – Analytes monitored, frequency (as per EPL 12003) and methodology

Analyte	Units of measure	Frequency	Sampling Method	Analytical method
BOD	milligrams per litre	Monthly	Grab sample	APHA 5210 B using APHA 4500-O G for the determination of dissolved oxygen
Electrical conductivity	Microsiemens per centimetre	Monthly	Grab sample	APHA (1998) section 2510 B
Oil and grease	milligrams per litre	Monthly	Grab sample	APHA 5520 B
Phenols	micrograms per litre	Monthly	Grab sample	USEPA (1996a) method 8270 D
Total organic carbon	milligrams per litre	Monthly	Grab sample	APHA 5310 B
Total PAH's	micrograms per litre	Monthly	Grab sample	USEPA (1996a) method 8270 D
Total petroleum hydrocarbons	micrograms per litre	Monthly	Grab sample	USEPA (1996h) method 8015B
Total suspended solids	milligrams per litre	Monthly	Grab sample	APHA 2540 D

Table 3 – Flare pit water monitoring results

		Monitoring point	16
		Location	RFPF
		Sampled Date	02 & 15/05/2019
		Data obtained	09 & 23/05/2019
Analyte	Units	Limit of reporting	
BOD	mg/L	2	64
Electrical conductivity	µS/cm	1	19700
Oil and grease	mg/L	5	<5
Phenols			
Phenol	µg/L	1	<1.0
2-Chlorophenol	µg/L	1	<1.0
2-Methylphenol	µg/L	1	<1.0
3- & 4-Methylphenol	µg/L	2	<2.0
2-Nitrophenol	µg/L	1	<1.0
2,4-Dimethylphenol	µg/L	1	<1.0
2,4-Dichlorophenol	µg/L	1	<1.0
2,6-Dichlorophenol	µg/L	1	<1.0
4-Chloro-3-methylphenol	µg/L	1	<1.0
2,4,6-Trichlorophenol	µg/L	1	<1.0
2,4,5-Trichlorophenol	µg/L	1	<1.0
Pentachlorophenol	µg/L	2	<2.0
Total organic carbon	mg/L	1	<1

		Monitoring point	16
		Location	RFPF
		Sampled Date	02 & 15/05/2019
		Data obtained	09 & 23/05/2019
Analyte	Units	Limit of reporting	
Total PAH's			
Naphthalene	µg/L	1	<1.0
Acenaphthylene	µg/L	1	<1.0
Acenaphthene	µg/L	1	<1.0
Fluorene	µg/L	1	<1.0
Phenanthrene	µg/L	1	<1.0
Anthracene	µg/L	1	<1.0
Fluoranthene	µg/L	1	<1.0
Pyrene	µg/L	1	<1.0
Benz(a)anthracene	µg/L	1	<1.0
Chrysene	µg/L	1	<1.0
Benzo(b+j)fluoranthene	µg/L	1	<1.0
Benzo(k)fluoranthene	µg/L	1	<1.0
Benzo(a)pyrene	µg/L	0.5	<0.5
Indeno(1.2.3.cd)pyrene	µg/L	1	<1.0
Dibenz(a,h)anthracene	µg/L	1	<1.0
Benzo(g,h,i)perylene	µg/L	1	<1.0
Sum of polycyclic aromatic hydrocarbons	µg/L	0.5	<0.5
Benzo(a)pyrene TEQ (zero)	µg/L	0.5	<0.5
Total petroleum hydrocarbons <i>*Resampled on 15 May 2019 due to erroneous result</i>			
C6 - C9 Fraction	µg/L	20	<20
C10 - C14 Fraction*	µg/L	50	<50
C15 - C28 Fraction*	µg/L	100	<100
C29 - C36 Fraction*	µg/L	50	<50
C10 - C36 Fraction (sum)*	µg/L	50	<50
Total suspended solids	mg/L	5	49

References

Environment Protection Authority (EPA), 2014. Letter correspondence to AGL Upstream Investments Pty Ltd., titled: *Environment Protection Licence 12003*, EPA reference: EF13/2522:DOC14/95163-07:CK, dated 28 August 2014, signed: Greg Newman (Acting Manager Illawarra).

Environment Protection Authority (EPA), 2004. Approved Methods for the Sampling and Analysis of Water Pollutants in New South Wales, The Department of Environment and Conservation, Sydney, Australia. Available online: <http://www.environment.nsw.gov.au/resources/water/approvedmethods-water.pdf>

The State of NSW and Environment Protection Authority (EPA), 2013. Requirements for publishing pollution monitoring data. Environment Protection Authority, Sydney, Australia. Available online: <http://www.epa.nsw.gov.au/resources/licensing/130742reqpubpmdata.pdf>