AGL UPSTREAM INVESTMENTS PTY LTD

CAMDEN GAS PROJECT

Monthly Flare Pit Water Quality Monitoring Report

Reporting Period: November 2016

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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 (AGL)
LICENCEE'S ADDRESS	Locked Bag 1837, St Leonards, NSW 2065
MONITORING DATE	November 2016 (02 November 2016)
MONITORING BY	AGL
ANALYSIS BY	ALS Laboratory, Smithfield (Work order number: ES1624871)
DATE DATA OBTAINED	09 November 2016
REPORT DATE	14 November 2016
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	Latitiude	Longitude
16	RPFP	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 – November 2016

		Monitoring point	16
		Location	RPFP
		Sampled Date	02/11/2016
		Data obtained	09/11/2016
Analyte	**Units**	**Limit of reporting**	
BOD	mg/L	2	73
Electrical conductivity	µS/cm	1	9510
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

		Monitoring point	16
		Location	RPFP
		Sampled Date	02/11/2016
		Data obtained	09/11/2016
Analyte	**Units**	**Limit of reporting**	
Total organic carbon	mg/L	1	72
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			
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	20

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