



AGL UPSTREAM INVESTMENTS PTY LTD

Emission Testing Report

Report No 88503

November 2011

EML AIR PTY LTD

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Stack Emission Specialists
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FOREWORD

Tests were performed at the request of AGL Upstream Investments Pty Ltd to determine emissions to air as detailed in the test summary below;

TEST METHODS

Parameter	NSW Test Method	Reference Method	Uncertainty*
Sample Plane Criteria	TM-1	AS 4323.1	-
Flow rate, temperature and velocity	TM-2	USEPA 2	8%, 2%, 7%
Moisture content	TM-22	USEPA 4	8%
Sulfuric acid mist (including sulfur trioxide and sulfur dioxide)	TM-3	USEPA 8	16%
Nitrogen oxides (NO _x)	TM-11	USEPA 7E	12%

* Uncertainty values cited in this table are calculated at the 95% confidence level (coverage factor = 2)

AS – Australian Standard

USEPA – United States Environmental Protection Agency

TM - Test Method

RESULTS

Stack Identification	Test Parameters	Concentration mg/m ³	Licence Limit mg/m ³
Point 1 – Engine 1	Sulfuric acid mist and sulfur trioxide (expressed as sulfur trioxide)	0.012	5
	Sulfur dioxide	<0.064	7
	Nitrogen oxides (as NO ₂) corrected to 7% O ₂	260	461

Stack Identification	Test Parameters	Concentration mg/m ³	Licence Limit mg/m ³
Point 2 – Engine 2	Sulfuric acid mist and sulfur trioxide (expressed as sulfur trioxide)	0.039	5
	Sulfur dioxide	<0.084	7
	Nitrogen oxides (as NO ₂) corrected to 7% O ₂	190	461

Stack Identification	Test Parameters	Concentration mg/m ³	Licence Limit mg/m ³
Point 4 – Reboiler Flue 4	Sulfuric acid mist and sulfur trioxide (expressed as sulfur trioxide)	0.038	3.5
	Sulfur dioxide	<0.18	35
	Nitrogen oxides (as NO ₂) corrected to 7% O ₂	110	110

Stack Identification	Test Parameters	Concentration mg/m ³	Licence Limit mg/m ³
Point 5 – Reflux Column Vent 5	Sulfuric acid mist and sulfur trioxide (expressed as sulfur trioxide)	3.3	35
	Sulfur dioxide	0.32	1042
	Nitrogen oxides (as NO ₂) corrected to 7% O ₂	<2.8	13

Note: Point 3 – Engine 3 did not run on this day.

QUALITY ASSURANCE

EML Air is accredited to Australian Standard 17025 – General Requirements for the Competence of Testing and Calibration Laboratories. Australian Standard 17025 requires that a laboratory have a quality system similar to ISO 9002. More importantly it also requires that a laboratory have adequate equipment to perform the testing, as well as laboratory personnel with the competence to perform the testing. This quality assurance system is administered and maintained by the Quality Assurance Manager.

A formal Quality Control program is in place at EML Air to monitor analyses performed in the laboratory and sampling conducted in the field. The program is designed to check where appropriate; the sampling reproducibility, analytical method, accuracy, precision and the performance of the analyst. The Laboratory Manager is responsible for the administration and maintenance of this program.

DEFINITIONS

The following symbols and abbreviations may be used in this test report:

<	Less than
NA	Not applicable