NB ENGINEERING SERVICES LTD.

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Method Statement

Air Emissions Monitoring of the Generators

Client

The Corinthia Group of Companies

Site

Radisson Bay Point – St.Julians
600Kva generator – FG Wilson

Introduction

This method statement has been prepared to highlight the principles used by NBEngineering Services Employees when performing Flue Gas Emission Monitoring on Industrial Sites.

Competency

The engineering staff deployed on the job have been trained in both theory and practice of flue gas monitoring and handling of emission equipment. They have over 24 months training and experience in the field. For large industrial Clients, the job may be handled by two personnel working as a team, and not a single person.

Client Requirements

It is expected that the Client would allocate a local site staff member to the NBEngineering team in order to show the whereabouts of the various auxiliary equipment. This staff member must be a first aider, must know the best and safest way to access the auxiliary equipment, must be able to operate the same equipment under test, and must have a reliable means of communication with the Plant Room at all times. The operating of all Auxilliary Equipment must be done by the Client's nominated member of staff only.

The Client must also prepare a 10mm diameter access hole in the horizontal plane, in the various exhaust ducts/ chimneys as indicated by the NBEnginnering personnel (if none are already available) for means of accessing the exhaust gases. These sampling holes must be closed off by the staff after the samples have been taken.

The equipment to be used by NBE personnel shall be calibrated. A copy of the calibration certificate shall be provided with the results.

NBE personnel shall be using the following equipment, with the following emissions components:

Testo 340

O2, CO, NOx, CO2, NOx, SO2, Flue gas temperature, Velocity

The Testo 340 Methodology is based upon DIN EN 50379-1 and DIN EN 50379-2

The Limits of Detection for the Testo 340 are as follows:

	Minimum	Maximum
CO: Concentration	0 ppm	10000 ppm
	0 mg/Nm3	12476 mg/Nm3
NO:	0 ppm	3000 ppm
	0 mg/Nm3	4009 mg/Nm3
NO2:	0 ppm	500 ppm
	0 mg/Nm3	1024 mg/Nm3
SO2:	0 ppm	5000 ppm
	0 mg/Nm3	14268 mg/Nm3

Dust shall not be measured due to the nature of the fuels currently being used on site, namely diesel oil.

A print out of the results at each sampling point will be taken and shown to the Clients representative. This will be signed by one of the NBE personnel at the sampling point.

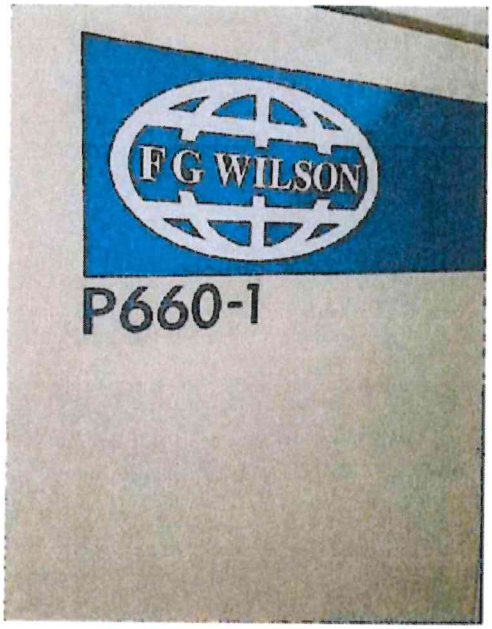
The sampling point is to be closed off prior to leaving the area. Setting up of next sampling point to commence thereafter.

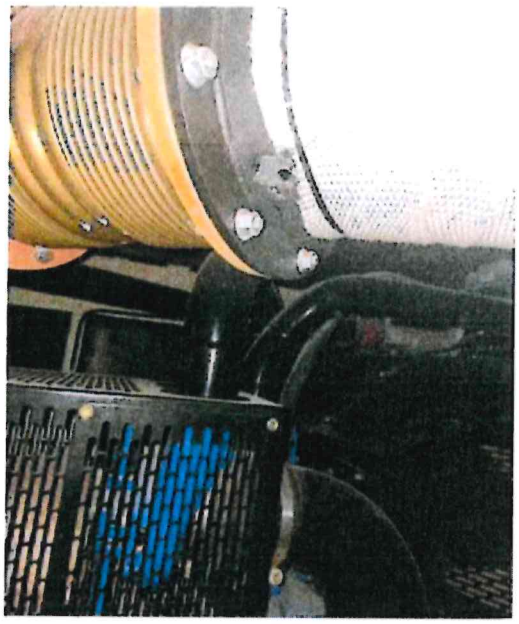
The sampling point shall be chosen such that it is at least 4 exhaust pipe diameters away from the engine exit point, preferably in a straight length of exhaust pipe. Site conditions may require further consideration. If a sampling point already exists, this may also be used. A photo of the sampling point to be included in the test report.

Sampling Procedure.

- Coordination with control room that system shall be disturbed
- Start up generator, leave idle for 5 mins
- Increase power to full load conditions and leave for 2 mins
- Place probe inside the duct and sample flue gas until CO / NOx reading is steady.
- Record result, and remove probe.
- Leave in operation at full load another 2 mins.
- Place probe inside the duct and sample flue gas until CO / NOx reading is steady.

Position of sampling point





Behind the seen panel, a hole of 10mm shall be drilled in the horizontal exhaust pipe.

Diameter of exhaust pipe: 150 - 200mm