



ENVIRONMENT
AGENCY

Product Conformity Certificate

Certificate No: **Sira MC 990007/00**

Issue date: 06 September 1999

Valid to: 05 September 2004

This certificate is issued for the following instrument:

MonoGard and MultiGard Particulate Monitoring System

Manufactured by:

CODEL International Limited
Station Building
Station Road
Bakewell
Derbyshire DE45 1GE
UK

Sira Certification Service being accredited by the United Kingdom Accreditation Service certifies that this instrument has been found to comply with the following standard:

MCERTS Performance Standards for Continuous Emission Monitoring Systems
(November 1998)

Certification Range:

0 to 30 mgm⁻³ particulate concentration

and has successfully met the test requirements recorded in Test Report Nos:

MCT/WTC/B.01/SO₂ (AEAT)
MCT/ESTC/B.01/SO₃ (AEAT)
QE21/N99/001 (NPL)
N 0311 (Sira)

I D Knott
Chief Executive

MCERTS is operated on behalf of the Environment Agency by

Sira Certification Service

South Hill, Chislehurst, Kent, BR7 5EH, England
Tel: 020-8467-2636 Fax: 020-8295-3005

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Product Conformity Certificate (continued)

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Description:

The SiteGard particulate sensor uses d.c. tribo-electric monitoring principles to establish the mass concentration of particles in stack gases in mg/m^3 . The sensor has an intrusive probe which absorbs static charge from colliding particles. SiteGard amplifies, conditions and then digitises the signal and exports it to a databus for collection by the control unit.

The MonoGard control unit is capable of servicing up to four SiteGard sensors simultaneously and possesses an on-board data logger which stores 14000 data points. The data may be exported to a p.c. for evaluation and long-term storage.

The MultiGard control unit can service up to 64 SiteGard sensors simultaneously; but has no data logging capability as the data is exported directly to a personal computer which accomplishes this function.

Ordering Code of System Tested:

990 511B (SiteGard Probe Unit), 990 520A (MonoGard Control Unit)

Maintenance Interval (as defined in the standard)

> 3 months



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Product Conformity Certificate (continued)

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Performance Results

Refer to MCERTS Performance Standards for Continuous Emission Monitoring Systems (November 1998) for full performance criteria.

Performance values are given with reference to the certified ranges.

Note: The instrument was tested with a probe length of 1m. The performance of the instrument is a function of probe length.

Effect of particulate velocity:

The instrument was calibrated at a velocity of 7.5 ms^{-1} with a particulate concentration of 15 mgm^{-3} . The velocity was varied over the range 2.5 to 15 ms^{-1} . The variation in response was from -60 to +60% of the certification range.

Effect of particulate size:

The instrument was calibrated with a particulate size of $18 \mu\text{m}$. At a particulate size of $9 \mu\text{m}$ the reading changed by -73% of certification range.

Field Trial Information

The system was evaluated for 3 months on a municipal waste incinerator with stack conditions similar to those given in Table 2.1 of the above Standard. Fuel capacity of the incinerator was 11 tonnes/hour. Abatement techniques were carbon and lime injection, and bag filters. The system complied with the performance requirements stated in the above standard.

Any potential user should ensure, in consultation with the manufacturer, that the emission monitoring system is suitable for the process on which it will be installed. The above standard gives guidance of process conditions for some other types of plant.

Additional Tests:

A vibration tests was satisfactorily completed on the probe unit.

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General Notes

1. This certificate is based upon the equipment tested. The Manufacturer is responsible for ensuring that on-going production complies with the standard(s) and performance criteria defined in this Certificate. The Manufacturer is required to maintain an approved quality management system controlling the manufacture of the certified product. Both the product and the quality management systems shall be subject to regular surveillance according to SCS regulations. The design of the product certified is defined in the SCS Design Schedule for certificate No. MC 990007/00.
2. If marked product is found not to comply, Sira Certification Service should be notified immediately at the address shown on page 1.
3. The Certification Marks that can be applied to the product or used in publicity material are defined in SCS regulations.
4. This document remains the property of SCS and shall be returned when requested by the company.

Limitations on Use:

Ambient Temperature Range:	Stack Components	-20 to +70°C.
	Control Unit	-20 to +70°C

Relative Humidity:	Stack Components	5 to 95% (including condensation)
	Control Unit	20 to 80% (excluding condensation)

Minimum stack gas velocity: This certificate is only valid for stack gas velocities >5ms⁻¹

Consult the manufacturer if this instrument is to be mounted after an electrostatic precipitator (ESP).

This instrument is not suitable for sample streams which may contain condensing water.

Particulate monitors may exhibit sensitivity to various temperature effects such as refraction, convection and direct radiation etc. Potential interferences are site specific and may vary from stack to stack. It has not been possible to devise a range of tests to include in the current MCERTS standards that would cover all possible stack conditions. Potential users should assure themselves of the suitability of equipment for the specific conditions in the intended application in discussions with instrument suppliers.

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