



ENVIRONMENT  
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## Product Conformity Certificate

Certificate No: Sira MC 990008/00

Issue date: 22 February 2000

Valid to: 21 February 2005

This certificate is issued for the:

### **MonoGard and MultiGard Particulate Monitoring System** for a range of 0 to 150mgm<sup>-3</sup>

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 150 mgm<sup>-3</sup> particulate concentration

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

MCT/WTC/B.02/SO<sub>2</sub> (AEAT)

MCT/RUGC/B.01/SO<sub>2</sub> (AEAT)

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  $\text{mgm}^{-3}$ . 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 14,000 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  $7.5 \text{ ms}^{-1}$  with a particulate concentration of  $15 \text{ mgm}^{-3}$ . The velocity was varied over the range  $2.5$  to  $15 \text{ ms}^{-1}$ . The variation in response was from  $33 \text{ mgm}^{-3}$  to  $3 \text{ mgm}^{-3}$  (+12% to -10%) of the certification range.

Effect of particulate size:

The instrument was calibrated with a particulate size of  $18 \mu\text{m}$  at  $24 \text{ mgm}^{-3}$ . At a particulate size of  $9 \mu\text{m}$  the reading was  $2.4 \text{ mgm}^{-3}$  (-19.8% of certification range).

### Field Trial Information

The system was evaluated for 3 months on a large coal fired power station with stack conditions appropriate to those given in Table 2.1 of the above Standard. The instrument was installed after the electrostatic precipitators. The instrument 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 test was satisfactorily completed on the components that are normally mounted on the stack.

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