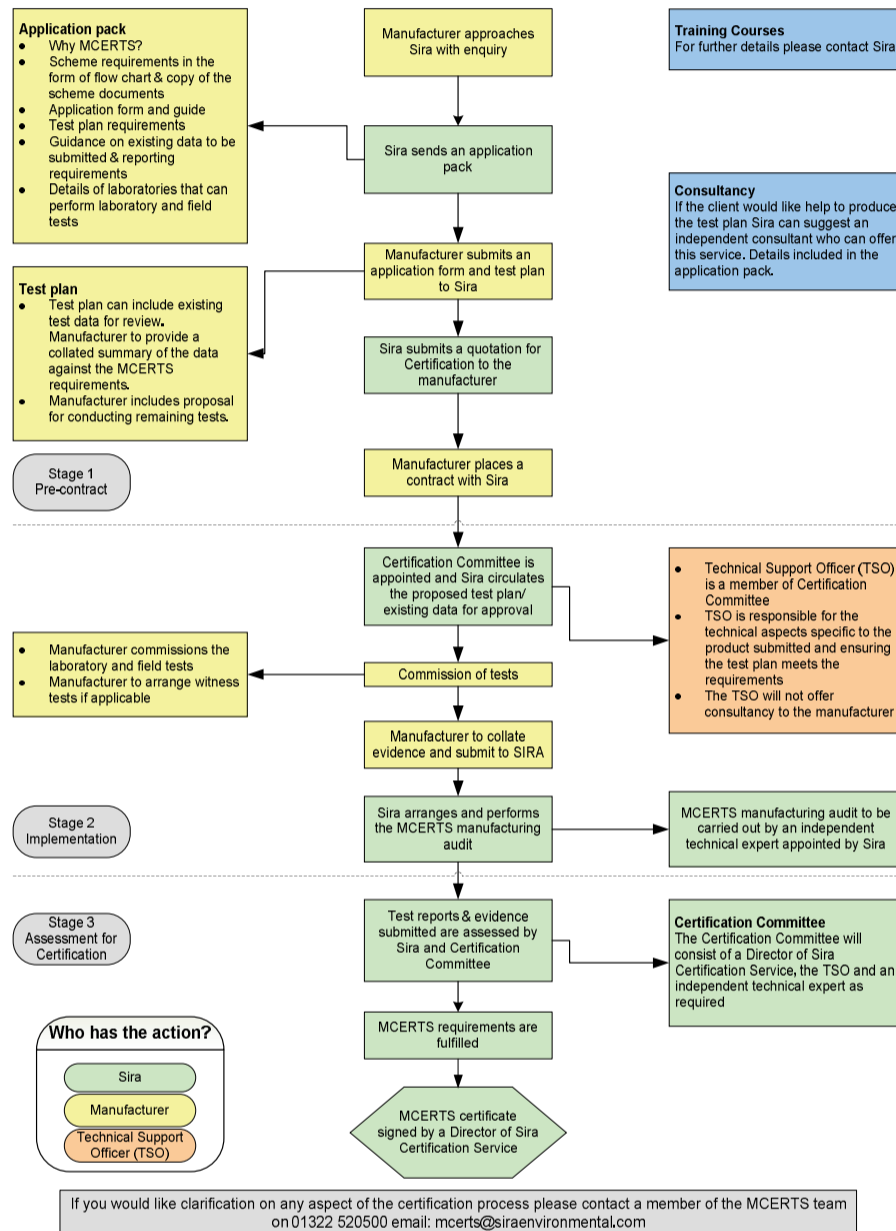


Environment Agency Monitoring Certification Scheme (MCERTS) for the Water Industry

The Environment Agency has established its Monitoring Certification Scheme: MCERTS to deliver quality environmental measurements. The scheme provides for the product certification of instruments, the competency certification of personnel, an inspection scheme and the accreditation of organisations based on international standards. The term 'organisation' is used generically. It includes commercial 'test houses', laboratories, and industrial operators' in-house monitoring arrangements. MCERTS has progressively been extended to cover all regulatory monitoring activities including water industry applications as detailed in the following sections.

MCERTS PRODUCT CERTIFICATION PROCESS



Form 1284 Issue 1 November 2006

MCERTS - Continuous water monitoring equipment

The Environment Agency is interested in the monitoring of waste-water discharges and receiving water quality as a means of assessing the environmental impact of the industries it regulates. Actions can then be taken to prevent, or minimise, any impact and prevent potential harm from occurring.

Continuous water monitoring equipment must be of an acceptable standard to ensure that the environment remains properly protected. Regulations such as Pollution Prevention and Control (PPC) require operators to use MCERTS approved products.

Equipment is certified and tested under the MCERTS Continuous Water Monitoring Equipment scheme, which covers three types of equipment:

- Automatic wastewater sampling equipment
- On-line analysers for turbidity, pH,

COD, TOC, dissolved oxygen, total phosphorous, nitrates and total oxidised nitrogen

- Water flowmeters

Manufacturers over the last two years have been gaining certification and these include;

1) **Aquamatic Ltd** for the following products:

Aquacell P2 Coolbox
 Aquacell P2 Compact
 Aquacell P2 Multiform
 Aquacell S100
 Aquacell S2R
 Aquacell S510, S510H, S520 & S520H
 Aquacell S310, 310H, S320 & S320H

2) **HACH LANGE GmbH** for the following products:

HACH LANGE BUHLER Automatic Wastewater Sampler Models 4010 to 4013, 4210 to 4213, 4410 to 4413

HACH LANGE BUHLER Automatic Wastewater Samplers installed in Model 4110 to 4123

Model 6010 Measuring Stations

3) **SIRCO Controls Ltd** for the following products:

GENIE-B/UWWTR, GENIE-B, GENIE-J/UWWTR, GENIE-J Portable Wastewater samplers

GENIE-M/UWWTR, GENIE-M, GENIE-M/R, GENIE-M/VBV, GENIE-M/R/VBV, GENIE-K Automatic Wastewater samplers

4) **Teledyne Isco Inc** for the following products:

ISCO 6712FR Refrigerated Automatic Sampler

Glacier Refrigerated Automatic Sampler
 Glacier Portable Automatic Sampler with Ice-pack cooler

Certified products - On-line analyser

1) **Partech Instruments** for the following products:

Turbi-Tech 2000LS Sensor & 7200 Monitor Continuous Turbidity Monitoring System

2) **Pollution & Process Monitoring Ltd** for the following products:

Protoc 300 TOC Analyser

Certified products - Water Flowmeters

1) **GE Sensing EMEA** for the following products:

Panametrics DF868 Ultrasonic Liquid Flowmeter

Siemens Milltronics Process Instruments Inc. for the following products:

HydroRanger 200 non-contact level flow monitor & Echomax XRS-5 ultrasonic transducer

OCM III non-contact level flow monitor with TS-2 Temperature Sensor & Echomax XRS-5 ultrasonic transducer

There are many manufacturers equipment going through the scheme and these include;

1) **Sontek (YSI Hydrodata)** for pH, turbidity, DO analysers and sensors

2) **Sontek (YSI Hydrodata)** for doppler flowmeters

3) **Emerson Process Management (Rosemount Analytical)** for pH analyser and sensors

4) **HACH LANGE GmbH** for automatic waste water sampler





MCERTS - Portable water monitoring equipment

The requirements for certain types of portable water monitoring equipment are also addressed. Portable water monitoring equipment is used for the monitoring of water and waste-water, rivers, lakes and estuaries, reservoirs, boreholes and trade effluents. The determinands covered include temperature, pH, conductivity, dissolved oxygen, turbidity, ammonia, nitrate, nitrite, orthophosphate and chlorophyll a. This list of determinands may grow in the future if there is sufficient support from manufacturers and/or user groups.

MCERTS - Self-Monitoring of effluent flow

MCERTS for the self-monitoring of effluent flow has been introduced to ensure that flow data sent to the Environment Agency is reliable and accurate. It already applies to the Water

Utilities regulated under the Water Resources Act 1991 and is being extended to PPC installations. If you have a PPC permit and effluent flow monitoring is included as one of the conditions, for example, as a requirement to report total volumes discharged, the scheme will apply to your installation. It is your responsibility to ensure effluent flow monitoring is being carried out properly. Effluent flow monitoring includes discharges to river, water-courses, the sea and public sewers.

The scheme operates as follows:

- MCERTS Inspectors are appointed by Sira Certification Service who run the scheme on behalf of the Environment Agency. The scheme is delivered through a number of companies operating in a commercially competitive market. Operators place a contract with one of the companies employing MCERTS

Inspectors. Details of companies employing MCERTS Inspectors can be found at www.sira.co.uk/mcerts

- The Environment Agency has set a total daily volume target of better than $\pm 8\%$ uncertainty for effluent flow monitoring systems. MCERTS Inspectors will check this during their inspection.
- Following the inspection, the MCERTS Inspector prepares a report, including a recommendation based on their expert opinion as to whether the flow monitoring arrangements meet the MCERTS requirements. This includes an assessment of the flow application, type of flow measurement device and the effectiveness of the site maintenance arrangements.
- The QMS for flow monitoring also needs to be assessed. Currently, only Sira can conduct a QMS audit. In future, other UKAS accredited Certification Bodies that have MCERTS for flow included in their scope will be able to conduct QMS audits. This can be, for example, your existing ISO 14001/9001 auditor.
- Sira checks the Inspector's report and the QMS audit report. If the MCERTS requirements are met Sira will issue an MCERTS Site Conformity Inspection Certificate, valid for five years.

Detailed guidance on what is expected can be found in the MCERTS standard "Minimum requirements for the self-monitoring of effluent flow". This can be found at www.mcerts.net Additional guidance can be found in MCERTS bulletins at www.sira.co.uk/mcerts

The scheme is being implemented for PPC installations from February 2007. All PPC installations with an effluent flow requirement in their permit will have to be inspected under the MCERTS scheme by 31 December 2008. Any corrective actions that are necessary to achieve the MCERTS standard will be introduced as an improvement condition, time scale to be agreed with your local Environment Agency Officer. From February 2007 any new or replacement flow monitoring arrangements covered by the permit must meet the MCERTS standard when installed.

Additional advice can be obtained by contacting the Environment Agency, Sira or any of the MCERTS Inspection companies. Contact details can be found at www.mcerts.net and www.sira.co.uk/mcerts.

MCERTS has now become an accepted means of demonstrating quality by manufacturers, industry and regulators. For more information contact;

Contacts for scheme operators and technical support for the MCERTS schemes

For general information visit www.mcerts.net

MCERTS air schemes for:

- Continuous emissions monitoring systems
- Portable systems for air emissions monitoring
- Continuous ambient air quality monitoring systems
- Manual stack emission monitoring

Scheme operators;
SIRA Environmental Ltd
www.sira.co.uk
Telephone +44 (0) 1322 520500

UKAS for Manual stack monitoring organisation accreditation
<http://www.ukas.com/>
Tel +44 (0) 20 89178400
Technical support
Source Testing Association
www.s-t-a.org
Telephone +44 (0) 1462 450705

MCERTS water schemes for:

- Continuous water monitoring equipment
- Portable water monitoring equipment
- Self-Monitoring of effluent flow

Scheme operator;
SIRA Environmental Ltd
www.sira.co.uk
Telephone +44 (0) 1322 520500
Technical support

WRC
www.wrcplc.co.uk
Telephone +44 (0) 1793 865000
MCERTS - Chemical testing of soils
Scheme operator

UKAS
<http://www.ukas.com/>
Tel +44 (0) 20 89178400

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