

## MCERTS Bulletin 6 – Inspection Report Format

This bulletin has been prepared by the MCERTS Project Steering Committee. It lists the information an MCERTS Site Inspection Report shall contain to be compliant with the Environment Agency's MCERTS Standard 'Minimum Requirements for the Self-Monitoring of Effluent Flow'. This standard specifies the evidence required for the issue of an MCERTS Site Conformity Inspection Certificate. It is the same evidence that is required by Consent/Permit holders to permit them to hold technical discussions with the Environment Agency about the basis for the compliance of their effluent flow monitoring arrangements with the Agency's regulations.

**All MCERTS Site Inspection reports prepared after 1 January 2005 must comply with these requirements.**

This bulletin lists the requirements for an MCERTS Site Inspection Report on a compliant system or for a non-compliant system for which the Consent/Permit holder is seeking a dispensation from the Agency. It should be noted that a request for a dispensation has to be supported by additional information, as specified in the MCERTS standard, but that the provision of this additional information is not within the remit of an MCERTS Inspector or an MCERTS report.

The MCERTS scheme does not specify the format or content of reports on non-compliant flow monitoring arrangements for which a dispensation is not being sought. The MCERTS scheme does not require such inspections to be carried out by an MCERTS Inspector, or for any such reports to be impartially prepared and issued under the aegis of the MCERTS Certification Body and the MCERTS scheme. If a Consent/Permit holder wishes to obtain the added assurance provided by the issue of an MCERTS report under the MCERTS scheme, then it is the responsibility of the Consent/Permit holder to specify this requirement.

### General requirements & report content

An MCERTS Site Inspection Report shall be produced for each Consent/Permit holder and shall contain the following (minimum) information:

- MCERTS Inspector's name, address and postcode
- Consent/Permit holder name
- site name
- **site contact (name & telephone/email)**
- site address
- site reference or postcode
- National Grid reference (for site entrance)
- a unique inspection report number. *Where a report is revised or amended, it shall be uniquely identified and contain a reference to the original that it replaces e.g. Report 12345-rev1*
- Consent/Permit No.
- date(s) of inspection

The above information shall be reproduced on the front page of the inspection report as shown in **Appendix 1**.

## References

Include a list of any other MCERTS Reports or Certificates that contain information used to demonstrate compliance of the site. Each reference shall include the MCERTS Report or Certificate number and issue date.

## Site review

Broadly describe the flow monitoring arrangements and include the following:

- a schematic hydraulic/process flow diagram showing the location of each flowmeter
- **a photograph of each flowmeter showing its location and (where possible) a close-up photograph showing the flowmeter Serial No.**
- a description of how flow monitoring arrangements measure total discharge flow
- details of all known returns, bypasses, etc, that could affect the flow measurement
- storm and emergency overflow arrangements including whether the flow is measured in the certified structure
- identification and qualification of any risks that might jeopardise the integrity of the flow monitoring arrangements (e.g. comment on any security arrangements for bypass valves). If no such risks are identified during the site inspection then this shall be included as a positive statement

## Site information – provided by the Consent/Permit holder

- diurnal flow data – representative dry weather average flow data for every 15 minutes in a 24 hour period, as required by the MCERTS standard. The date the data was taken shall be reported, together with any other relevant information, eg whether data was recorded on a weekday or at a weekend. Diurnal flow data to be provided for each flowmeter on a multi-flowmeter site.

***Note: Where representative dry weather flow is not available, a standard diurnal flow curve may be applied to the consented flow by the MCERTS Inspector.***

- the maximum uncertainty associated with data treatment/ telemetry (this figure to be added in quadrature to the overall uncertainty in Total Daily Volume).

## Inspection of flow monitoring system(s)

- type of flowmeter
- relevant details of all primary and secondary instrumentation, including the flow computer (eg manufacturer, model, serial number, size, range, etc)
- calibration data, as applicable (eg copy of factory calibration certificate or verification certificate for an electromagnetic flowmeter)
- confirmation that all calibration factors/data programmed into instrumentation have been verified by the MCERTS Inspector for relevance and consistency
- a record of all critical dimensions of the flow measurement system (primary and secondary device)
- details of any in-situ calibration undertaken (eg by use of verification, drop-tanks, dilution techniques, etc)
- description of installation noting any hydraulic disturbances upstream or downstream, including relevant dimensions and any estimated measurements made (eg for buried meters/pipework), whether any evidence that air entrainment can occur, whether velocity is sufficient to avoid fouling, etc

**Maintenance of flow monitoring system(s)**

Confirm the adequacy of site maintenance arrangements. Any evidence of inadequate maintenance should be recorded for subsequent investigation during the Management System audit.

**Measuring equipment used**

All measuring equipment used by the MCERTS Inspector shall be listed, together with its identification/serial number, date of last calibration and a statement of overall measurement uncertainty associated with its use.

**Comparison with published standards**

Provide evidence of compliance of a flowmeter/flow measurement structure with the relevant national, international and MCERTS standards and with any manufacturer's requirements (preferably in a tabular format with a 'pass/fail' statement to assist ease of use). Whenever a parameter which exceeds a published 'failure' limit is accepted by an MCERTS Inspector the basis for exercising professional judgement shall be reported, together with a statement of any additional element to be included in the calculation of the overall uncertainty

**Calculation of flow -v- uncertainty curve**



The derivation of the discharge-uncertainty curve shall be reported showing:

- the data used for the development of any head/discharge curve
- any uncertainty associated with the calibration of a flowmeter or use of calibration factors, etc
- the data used for estimating the uncertainty associated with each influence condition (eg ambient temperature effect, drift, etc)
- what uncertainty has been allowed for assumptions made (eg for hydraulic perturbations)
- the uncertainties allowed for each deviation from published acceptance criteria

**Statement of compliance**

A statement that the site is considered to meet the MCERTS minimum requirements for the self-monitoring of effluent flow (pending compliance with Management System requirements).

Appendix 1 – Example front page of inspection report

## MCERTS Site Inspection Report

**Report prepared by:** *Flowcheck Ltd*

**Consent/Permit holder:** *Severn Trent Water*

**Site Name:** *Abbots Bromley STW*

**Site Contact:** *Fred Bloggs 01322 520500*

**Site Address:** *Off Goose Lane  
Abbots Bromley  
Rugeley  
Staffs*

**Site Ref or postcode:** *WS1 53A*

**Grid ref:** *SK 0782 2403*

**Inspection report No:** *CFS/RRN/1107*

**Consent/Permit No:** *T/06/35611/R*

**Date of Site inspection:** *29-Feb-08*

*If more than one site visit, include the date of the most recent one*

*Consent/Permit No. as it appears on the permit*

*a unique inspection report No.*

*grid reference for site entrance*

*Water Utility site reference or postcode (for a PPC site)*

*site address (as shown on permit)*

*site name (as shown on permit). For a PPC site thi could be the same as "Consent/Permit holder"*

*permit holder (as shown on permit)*

*MCERTS Inspector (Service Provider) Co. name*

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