# Environment Agency Operator Monitoring Scheme Updated to Include Water Releases

**From April 2008 the PPC regulations in England and Wales were replaced by the Environmental Permitting Regulations (EPR). EPR is a Better Regulation initiative designed to reduce costs to business and regulators, without changing levels of protection for the environment and human health. All existing PPC permits were automatically transferred to EPR on 1 April 2008 and no action was required by the operator. All new permits are under EPR.**

The EA regulates EPR by using a risk-based approach, taking a view of the environment as a whole. The onus is on the operator to take responsibility for their process and for the monitoring of emissions from it.

Operator Monitoring Assessment (OMA) was introduced to strengthen the EA's auditing of operators' self-monitoring arrangements. OMA auditing helps to give the EA confidence that self monitoring is robust, accurate and that the data received from operators can be trusted.

OMA has been applied for several years to the monitoring of emissions to air from industrial installations regulated under EPR. Significant improvements in air emission monitoring have taken place following the introduction of OMA.

The EA use the OMA scheme to:

- assess the quality and reliability of operators' self-monitoring (including monitoring undertaken on behalf of operators by contractors) as required by their permit
- identify monitoring shortfalls and potential areas for improvements
- contribute to the targeting and prioritisation of independent monitoring of point source emissions.

## What has changed

The OMA scheme has been updated/reviewed using feedback from OMA audits. Version 3 of the guidance is available via www.mcerts.net

Apart from updating, some aspects of the previous OMA scheme have changed, some parts have been merged and some have been removed to make the audit process more efficient and effective. The basic structure including the scoring system has not been changed. If operators have had an OMA audit in the past they should not be surprised by this updated scheme. The most significant change is that OMA Version 3 extends the scheme to discharges from EPR installations to controlled waters - including groundwater and public sewers. There is a common structure and scoring system for releases to air and water. An OMA audit of both emissions to air and discharges to water will be carried out at relevant installations. Some parts of the audit should be common for both water and air. This will help minimise repetition and will save time.

Plans are also in place to extend OMA to, for example, final effluent discharges from sewage treatment works operated by the Water Undertakers. Other installations and/or regulations will be considered in the future.

## When an OMA is required

An OMA is required at an EPR permitted industrial installations if:

- there are scheduled release points
- they have monitoring requirements
- there are limit values for the release points.

## OMA guidance

The EA will use Version 3 of the OMA guidance when undertaking an OMA audit to ensure that they make the assessment of operators' self-monitoring arrangements in an objective and consistent manner. Their Officers will carry out the OMA audits. Although the OMA guidance is primarily intended for use by them, it is recommended that others use it, for example, when carrying out internal audits, or in preparation for the EA audit of your self monitoring.

## How OMA works

There are four OMA sections containing a series of elements, against which the OMA auditor will assess and score the operator's monitoring arrangements and record explanatory comments.

The four OMA sections and their elements are:

**OMA 1 - Management, training and competence of personnel**

- **A** Management structure
- **B** Schedules
- **C** Use of results
- **D** Understanding of requirements
- **E** Competence of personnel

**OMA 2 - Fitness for purpose of monitoring methods**

- **A** Sampling facilities (Fundamental element)
- **B** Measurement techniques (Fundamental element)
- **C** Use of relevant methods
- **D** Certification of equipment
- **E** Performance characteristics of the method

**OMA 3 - Maintenance and calibration of monitoring equipment**

- **A** Documentation of maintenance and calibration procedures
- **B** Frequency of maintenance and calibration
- **C** Equipment reliability
- **D** Breakdown response
- **E** Traceability
- **F** Acceptability of calibration methods (Fundamental element)

**OMA 4 - Quality assurance of monitoring**

- **A** Documentation of monitoring procedures
- **B** Quality control schemes
- **C** Auditing of monitoring
- **D** Audit compliance
- **E** Reporting

## Scoring

Guidance is provided to enable the score for each element to be determined. Scores and relevant information gathered during the audit, for example, details of intended actions to improve monitoring will be recorded.

Each element will be scored 1, 2, 3, 4 or 5, with 1 being poor, 3 being acceptable and 5 being excellent – as good as it gets. A score of 1 or 2 would usually require improvements to be made. "Not applicable" will only be used in exceptional circumstances and will require justification.

The guidance for each element is split into three sections indicating when scores of 1, 3 or 5 are applicable. A score of 2 or 4 will be given in circumstances that fall between the 1, 3 or 5 guidelines. A best-fit pragmatic approach will be taken when deciding on the scores. As an example, OMA 1A "Management Structure" is detailed below and is taken from the OMA guidance document. The complete document is available at www.mcerts.net.

| Element | Qualification for OMA scoring | OMA score |
|---|---|---|
| **AIR**<br>**OMA 1A**<br>**Management structure** | There is a poorly defined management structure for monitoring issues.<br>Posts are not clearly identified as having responsibility for monitoring issues.<br>There are inadequate resources available for monitoring. | **1** |
| | There is an acceptable management structure for monitoring issues.<br>Monitoring is the responsibility of defined personnel. This is not documented in detail.<br>Sufficient resources are normally available for monitoring. | **3** |
| | There is a well-defined and formally documented management structure for monitoring issues.<br>Posts are clearly and formally identified as having responsibility for monitoring issues.<br>Sufficient resources are always available for monitoring. | **5** |

To allow comparisons between sections in OMA the score for each section is calculated as a percentage rounded up to the nearest whole number. This helps to identify of areas where improvements could be made . The overall OMA score is calculated as the mean of the four OMA section scores.

The following example explains the scoring system in more detail.

Assume the scores for the various elements of OMA 1 were as follows:

**OMA 1 - Management, training and competence of personnel**

| Element | SCORE 1 - 5 |
|---|---|
| A. Management structure | 1 |
| B. Schedules | 5 |
| C. Use of results | 4 |
| D. Understanding of requirements. | 3 |
| E. Competence of personnel | 2 |
| **TOTAL =** | **15** |

The OMA 1 score is calculated as:

**actual score ÷ maximum possible score x 100%**

OMA 1 has five elements. The maximum possible score is 5 (elements) x 5 (maximum score) = 25.

In this example the percentage score for OMA 1 is:

Actual score (15) ÷ maximum possible score (25) x 100.

**OMA 1 score therefore = 60%.**

The above process is repeated for each OMA section. The overall OMA score is then calculated as the mean of the section scores rounded up to the nearest whole number. For example:

| Section | Score |
|---|---|
| OMA 1 | 60% |
| OMA 2 | 28% |
| OMA 3 | 60% |
| OMA 4 | 40% |
| **Overall OMA score 188 ÷ 4 =** | **47%** |

If both continuous and periodic monitoring are assessed during the same visit, two different scores may be given for specific elements. Both scores will be recorded on the OMA report with explanatory comments. The lowest score will be used in calculating the OMA score. Scores will not be averaged. The same procedure will be applied if the OMA audit includes, for example:

- a number of analysers
- more than one emission point
- a combination of in-house monitoring and contractor monitoring
- periodic or continuous and surrogate monitoring.

### Fundamental elements

All of the OMA elements are key components of a monitoring regime. However, three of them are regarded as fundamental to monitoring with low scores indicating critical flaws in the monitoring arrangements. If a score of 1 or 2 is given then appropriate action should be taken to ensure that the identified shortcomings are addressed as a matter of priority. The three fundamental elements are:

- OMA 2A: Sampling facilities
- OMA 2B: Measurement techniques
- OMA 3F: Acceptability of calibration methods

### Multiple emission points

Some installations have multiple emission points. These sites may need an initial assessment, using a risk-based approach, to determine what emission points are assessed, for example those with the highest potential impact on the environment. This will be an installation based decision by the EA.

Consideration should also be given to assessing a variety of stacks, discharges to controlled waters including public sewers, monitoring points and substances. If more than one emission point is assessed then the lowest of the scores shall be applied. Scores will not be averaged.

### Health and safety

If issues are identified which could affect the health and safety of personnel, the operator will be informed immediately. If appropriate, the Health and Safety Executive will also be notified.

### MCERTS

The EA Monitoring Certification Scheme (MCERTS) has a key role to play in delivering quality environmental measurements. The scheme provides for the product certification of instruments, the competence certification of personnel and the accreditation of test houses and analytical laboratories.

Details of equipment and laboratories that meet the MCERTS standards can be found via: www.mcerts.net

MCERTS is integral within OMA. In order to achieve the maximum score of five for specific elements of OMA, for example, "OMA 2D Certification of equipment" MCERTS equipment and/or services must be used.

### How often will OMA be carried out

An OMA for air and/or water will be carried out at least once every four years. This frequency may be increased using a risk-based approach. Significant changes, for example, to the monitoring arrangements or the process will require an OMA review of the changes.

Monitoring deficiencies requiring improvement, identified during an OMA, will be reviewed and decisions made on an ongoing basis by the EA's Regulatory Officers.

AUTHOR DETAILS

**Dave Curtis, STA and WMA**
Tel: (01462) 457535
Email: adve@s-t-a.org

CONTACT DETAILS

**Paul Wiggins**
Tel: (01772) 714362
Email: paul.wiggins@environment-agency.gov.uk
Web: www.mcerts.net