

SUMMARY OF WORKSHOP 1E/F: INFORMATION MANAGEMENT, REPORTING REQUIREMENTS AND SELF-MONITORING

Facilitators: Donna Campbell, New South Wales Department of Environment and Conservation, Australia

Markku Hietamaki, Ministry of the Environment, Finland

Rapporteurs: Markku Hietamaki, Donna Campbell

GOALS

- To share experiences to identify issues that regulators face in relation to self-monitoring, the reporting of self-monitoring information and the management of that information.
- To identify any work that INECE might do in the future to assist regulators address these issues.

1 INTRODUCTION

Key questions presented by the facilitators:

- What does the term “self-monitoring” mean?
- Why do regulators require operators to monitor performance?
- Wouldn't it be better for regulators to monitor performance to ensure compliance?
- How can the quality of monitoring data be assured?
- What approaches have countries used to improve the quality of data provided by operators?

2 DISCUSSION SUMMARY

2.1 What Does the Term “Self Monitoring” Mean?

The term "self monitoring" is misleading and often misunderstood. It is sometimes interpreted as meaning the operator volunteers to carry out the monitoring when in fact there is a legal requirement imposed on the operator to both carry out the monitoring and to carry it out in a particular way.

The panel discussion in the morning on “The Compliance and Enforcement Message” highlighted the importance of sending the community the right message. A better term is needed to describe monitoring that operators are required by law to carry out. The focus of the workshop was on environmental monitoring that operators are required by law to carry out.

2.2 Why Do Regulators Require Operators to Monitor Performance?

Monitoring data is required for a variety of purposes, including inventories for policy makers and public reporting, to ensure compliance with environmental laws (e.g., emission limits on a permit), and emissions trading.

The kind of data required, and its quality, will depend on the purpose for which it is collected. Broadly speaking, aggregated data used for inventories does not need to be as precise as data used to check compliance. Good regulators recognize the cost of monitoring requirements on industry and ensure that they only require what is necessary for the purpose for which the data is being collected.

2.3 Wouldn't It Be Better for Regulators to Monitor Performance to Ensure Compliance?

Compliance monitoring required by regulators today is generally around the clock. It would be prohibitively expensive to have a government inspector at every plant 24 hours a day, 7 days a week, monitoring compliance.

It was noted by some participants that operators are generally motivated to monitor their own performance. Operators want to ensure they don't cause environmental harm that may result in legal claims for damages or adverse publicity affecting their profitability. Poor environmental performance may also be costly to the operator because it generates unnecessary waste disposal costs.

Responsibility for monitoring must rest with the operator, both in principle and from a practical viewpoint.

2.4 How Can the Quality of Monitoring Data Be Assured?

It was agreed that assurance of the quality of monitoring data is the most difficult and pressing issue facing both regulators and operators.

The complexity and significance of environmental monitoring in today's world is generally underestimated. Countries have developed their monitoring requirements and their quality assurance systems from their own starting points. However, where pollutants cross national boundaries the need for information to be measured and collected in a transparent way is vital. Efforts should be geared towards reliable monitoring as well as principles of good approaches and standards for monitoring of industrial emission.

Emissions trading is increasing in importance. The quality of monitoring data is critical to make emissions trading schemes work. The data must be both accurate and comparable. There is a need for greater uniformity in the way countries require monitoring to be done in order for emissions trading schemes to work across national boundaries. Emission charges will

affect the future profits of the operator, and they will demand reliable monitoring of other operators in the trading scheme. This must drive the authorities to establish equitable measurement and reporting systems in order to create a level of playing field.

2.5 Approaches Countries Have Used to Improve the Quality of Data Provided By Operators

In Australia, the head of the company (CEO) holding a license is required each year to: 1) certify that all monitoring has been carried out in accordance with the license requirements and 2) identify all instances of non-compliance with license requirements. It is a very serious offense by the CEO personally if he or she does not certify honestly and correctly. This is consistent with the US approach that carries out inspections to ensure that operators have the necessary monitoring systems in place backed up with the threat of large fines if they are not. When the Australian scheme was introduced, there was an intensive education campaign to ensure that CEOs understood their obligations. A surprisingly large number did not. The education campaign, backed up with the threat of personal liability, resulted in a big improvement in the provision and quality of monitoring data.

In the European Union, for some industrial sectors such as large combustion plants and waste incinerators, there are very elaborate requirements for the quality control of continuous emission measurements. The directives set requirements relating to the uncertainty of the measurements and CEN standard EN 14148 stipulates how measurements and the quality control must be done. The IPPC directive stipulates that the environment permit must specify how the measurements are to be taken by operators.

Finland has implemented these requirements in national legislation and developed electronic procedures to collect and manage the operator's compliance monitoring data. The standard method is that the operator completes a report using

forms available on the Internet. There are 3 kinds of reports: 1) a report of disturbances, 2) a report of exceedance of limit values, 3) a report of compliance with permit conditions. The first two reports must be sent to the regulator immediately after the event has occurred. The third report is only required to be sent periodically. In addition, actual fuel usage and emissions to air, water and waste must be reported to the regulator. The inspector receives an electronic message every time a new report arrives. The checking of the data is done in the server that is outside of the regulator's system and only checked data is moved inside the regulator's system.

The latest method used in Finland is for the operator to have its own system for collecting all necessary data from its process control systems. The operator's system calculates results that can be compared to limit values and an operator sends this information to the regulator periodically. The regulator must audit not only the measuring system but also the data collection and management system to ensure that the whole system is reliable. This system is so far in use in only a few installations.

The Netherlands has recently adopted a scheme for accrediting inde-

pendent verifiers to check the quality of monitoring data used in emission trading schemes (CO₂ and also NO_x).

It was clear from the workshop that much could be learned from the experiences of other countries.

3 RECOMMENDATIONS FOR INECE

The most pressing need is for a comparison of:

- The monitoring methodologies for pollutants that cross national boundaries.
- The effectiveness of methods or schemes used to assure the quality of the monitoring data provided by operators. These could include the examples given above and an examination of schemes for the accreditation of independent verifiers in other fields of regulation.

Also, at the inspector level, there is a need for a simple checklist to ensure monitoring for a particular purpose is done correctly by the operator. This might already exist in training materials but the INECE website might provide a simpler more direct means of accessing it.