

ISO 14001 4.5.1 MONITORING AND MEASUREMENT



Lesson Learning Goals

At the end of this lesson you should be able to:

- Explain the reasons for comprehensive monitoring and measurement in an EMS
- List at least three areas that **must be** routinely monitored and/or measured under ISO 14001
- Name at least five other areas that **should be** monitored routinely
- In small groups, map out a monitoring schedule for an operating facility

The Purpose of Monitoring and Measurement

- Keep track of progress in the EMS
- Catch problems quickly
- Ensure prompt corrective and preventive action if things go wrong
- Check performance in relation to regulatory compliance requirements
- Due diligence, self-regulation
- Meet commitments in Environmental Policy

ISO 14001 Monitoring and Measurement says:

The organization shall establish and maintain documented procedures to monitor and measure, on a regular basis, the key characteristics of its operations and activities that can have a significant impact on the environment. This shall include the recording of information to track performance, relevant operational controls, and conformance with the organization's environmental objectives and targets

ISO 14001 Monitoring Requirements

- Overall conformance with the EMS
- Track progress towards achieving environmental objectives and targets
- Environmental performance indicators
- Operation of production/manufacturing and pollution control equipment

Recommended Routine Monitoring Requirements

- Emissions to air, discharges to water, and solid waste disposal
- Environmental impacts on air, water, land, biota
- Energy consumption
- Chemical, fuel, and hazardous waste handling, storage, and disposal
- Training needs, training conducted, employee awareness and competence
- Communications from interested parties

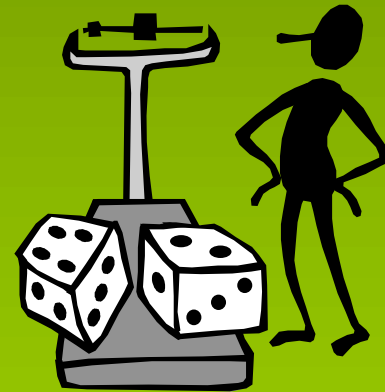
More Routine Monitoring Requirements

- Emergency response incidents
- Sampling and laboratory analysis quality assurance and quality control
- Effectiveness of corrective and preventive actions
- Environmental performance of contractors
- Documentation up to date
- Whatever ISO 14001 says “shall be maintained”

ISO 14001 Monitoring and Measurement also says:

Monitoring equipment shall be calibrated and maintained, and records of this process shall be retained according to the organization's procedures

CALIBRATION



- » Must calibrate instruments and equipment regularly to ensure accurate readings at all times

ISO 14001 Monitoring and Measurement one more thing:

The organization shall establish and maintain a documented procedure for periodically evaluating compliance with relevant environmental legislation and regulations

WHY?

- » Because compliance is a commitment in the Environmental Policy
- » And it's the right thing to do!

Concluding Thoughts

Important points to remember are:

- Monitoring and measuring are the keys to consistent environmental performance and continual improvement
- ISO 14001 says you **must** track compliance with legal requirements
- A result is only as valid as the sample it is made on, and the calibrated accuracy of the measuring equipment
- Everything that ISO 14001 says must be “maintained” must be monitored or measured