IEMA Introduction to EMS Supplement

IEMA Introduction to Environmental Management Systems

Introduction

This Supplement has been prepared to augment and update your study material for the IEMA Introduction to Environmental Management Systems course. You should read it in conjunction with your existing course material.

Please note that the case studies in this Supplement are additional examples designed to help you in studying the course, rather than essential changes to the content of the course which you need to be aware of.

User Guide

Please add the following **Case Study** box to the **User Guide** at the beginning of your course:

Case Study

Case study boxes contain examples of real-life scenarios and situations related to the main content and they are very useful for gaining a deeper understanding of the topic.

Element 1: Overview of the Background to EMAS and the ISO 14000 Series

The Benefits of Implementing an EMS

At the end of this section, please insert the following **Case Study** box:

Case Study

EMS Benefits

Apeks Marine Equipment Ltd, in Blackburn, designs and manufactures a range of products for divers. From the development of an environmental management system to ISO 14001 the company has been able to minimise energy consumption, reduce waste and improve compliance with environmental legislation. For example, the key use of water on site is for cooling the plastic injection moulding machines. These machines used an 'open-loop' cooling system. Changing to a 'closed-loop' system has led to water and effluent savings of > 4,000m^3 per annum, which is equivalent to > £7,700 in cost savings.

Element 2: Key Components of ISO 1400

Assessable Elements

Planning and Policy

Techniques to Identify Aspects and Impacts

At the end of this subsection, immediately below the table entitled "**Table 3: Example of Consequence Scoring Scheme**", please insert the following new subsection:

"Examples of Significant Aspects

Significant aspects for a company manufacturing signs and labels:

- Use of solvents and solvent-based inks.

- Solid waste, e.g. rejects and overs.
- Electricity consumption.
- Management of hazardous waste.

Significant aspects for a company installing and servicing vending machines for drinks and snacks:

- Waste plastic cups and cans by customers.
- Use of diesel and petrol by vehicles.
- Waste paper and cardboard from offices.
- Use of refrigerant in machines.
- Electricity consumption in offices."

Environmental Policy

At the end of this subsection, immediately before the subheading "Objectives and Targets", please insert the following:

"A sample environmental policy has been provided on the following page."

Then insert this example of an environmental policy:

Sample Ltd
Environmental Policy Statement

Sample Ltd assembles and distributes aerospace components. The company is based in a modern manufacturing unit in Malton, County Durham, which consists of two assembly lines, painting facilities, a warehouse and an office. We recognise that our activities have an impact on the environment in a number of ways and we are committed to ensuring that the impacts of such activities are minimised.

In particular we shall:

- Ensure that employees work in a manner that protects the environment. We will continue to train our workforce by providing up-to-date environmental awareness training to reduce our organisation's environmental impact.
- Implement environmental requirements into our operations so that pollution is prevented. We are committed to continual environmental improvement in all areas of potential environmental impact.
- Comply with all relevant legal and other requirements associated with our activities.
- Undertake environmental audits of our facility to identify our environmental strengths and weaknesses and identify actions to improve our environmental performance.

More specifically we intend to reduce our environmental impact by improvements in:

- Containment and storage of oils and paints.
- Reducing the consumption of electricity and so reducing our carbon footprint.
- Minimising the generation of hazardous waste.
- Recycling initiatives including office paper and packaging.
- A management system has been developed to implement this policy statement in line with the requirements of ISO 14001:2004.

Signed: *G. Barbara*

G.Barbara

Managing Director
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Legislation

Please amend the 5th paragraph under this subheading to read:

"A sample page of a legal and other requirements register for a manufacturing company can be seen in the Appendix at the end of this element."

Then, immediately before the **More** box in this subsection, please insert the following **Case Study** box:

Case Study

Legal Cases

A £30,000 fine was issued to a dairy distribution depot in Essex which caused milk to escape from its site, leading to pollution of a watercourse in Barking. The company was found guilty of causing a water discharge activity by breaching Regulation 12(1)(b) of the **Environmental Permitting (England and Wales) Regulations 2010**.

A haulage company deposited more than 10 tonnes of waste soil in order to fill a lake and allow a miniature railway to be re-routed. The company pleaded guilty to depositing controlled waste at a site without a permit or exemption and was fined £27,500 and ordered to pay costs of £7,796.

Implementation and Operation

Emergency Preparedness and Response

At the end of this subsection, immediately before the heading "**Checking**", please insert the following **Case Study** box:

Case Study

Emergency Preparedness

The potential emergency situations for a food manufacturing company in the UK include:

Fire	Resulting in release to atmosphere, surface/foul water pollution, contamination of land.
Spillages	Arising from: • Deliveries in bulk. • Failure of tanks or pipelines (e.g. bunds). • Transfer of hazardous substances.
Air releases	Arising from: • Air pollution abatement equipment failure. • Pipeline failures.
Waste water releases	Arising from: • Plant failure. • Monitoring equipment failure.

Checking

EMS Auditing

Immediately below the table entitled "**Table 5: Audit Terminology**", please insert the following example:

Example EMS Audit Frequencies for a UK Automotive Parts Manufacturing Company

Audit Title	ISO 14001 Clause	Audit Frequency
Environmental policy	4.2	1 year
Environmental aspects	4.3.1	1 year
Legal and other requirements	4.3.2	1 year
Objectives/targets/programmes	4.3.3	3 months
Resources, roles, responsibility and authority	4.4.1	1 year
Training, awareness and competence	4.4.2	1 year
Communication	4.4.3	1 year
Environmental documentation	4.4.4	1 year
Document control	4.4.5	1 year
Operational control	4.4.6	3 months
Emergency preparedness and response	4.4.7	1 year
Monitoring and measurement	4.5.1	3 months
Evaluation of compliance	4.5.2	3 months
Non-conformance and corrective action	4.5.3	3 months
Control of records	4.5.4	3 months
Internal audit	4.5.5	3 months
Management review	4.6	1 year

Element 4: Interface Between EMAS, ISO 14001 and Other Management Systems

BS 8555

At the end of this section, please add the following **Case Study** box:

Case Study

BS 8555

The STEM project is a three-year programme that is assisting 270 small and medium-sized organisations to achieve UKAS accredited certification to BS 8555 phase 3 in Northern Ireland/the Republic of Ireland. The SMEs participating in the project come from a mix of business sectors including electricians, a quarry, a hotel and butchers.