EOQ Environmental Personnel Registration Scheme

Rules & Handbook
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CHAPTER A The EOQ Environmental Personnel Registration Scheme

A.I Target

1.1 Creation of an EOQ Scheme for the Registration and Certification of Environmental Personnel.

1.2 Recognition of relevant schemes performed by EOQ Full Member Organizations within Europe.

1.3 Harmonization of qualifications of environmental personnel.

A.II Existing Qualification Schemes and Guidelines

In addition to the EOQ Personnel Registration Scheme, the following other schemes are analysed and taken into account:

- ISO 14001/ISO 14010/ISO 14011/ISO 14012
- IATCA Certification Criteria for Environmental Auditors (27.08.97)
- TGA Guideline for the Certification of Environmental Auditors (16/7/97)
- EAC WG3 Guidance on Auditteam competence definition for certification bodies EMS (11/6/97)
- UBV Classification and Registration of Qualified Environmental Auditors
- IdU (Germany) Intermediate Report of Expert Group “Education and Training”
- AEC Scheme for the qualification of Environmental Personnel
- AICQ Scheme for the qualification of Environmental Personnel
- DGQ Scheme for the qualification of Environmental Personnel
- ÖVQ Scheme for the qualification of Environmental Personnel
- SAQ Scheme for the qualification of Environmental Personnel
A.III Categories of Environmental Personnel Definition

These current rules define the following categories of environmental personnel:

Environmental Systems Manager (see A.IV)
Environmental Systems Auditor (see A.V)
**EOQ Environmental Personnel Scheme Flowchart**

1. **Practical experience in environmental matters and university degree or equivalent**

2. **Training in environmental management tools and techniques, including legislation (approx 150 hours)**

3. **Auditing knowledge (approx 40 hours)**

4. **ISO 14000 series or other associated regulations**

5. **Environmental Systems Manager**

6. **Environmental Auditor**

**Notes:**

[1] The number of training hours is a guide only. The EOQ recognizes that training must be sufficient to achieve successful evaluation.

[2] It is left to the discretion of the FMO Agents sharing the scheme to define equivalence (e.g. EMAS, international/national regulations)

[3] Practical experience may have been gained prior to auditing knowledge.
A.IV  Job Specifications EOQ Environmental Systems Manager

The Environmental System Manager is qualified to hold the responsibility for the creation and implementation and further development of an Environmental Management System (EMS).

4.1  Preconditions

Candidates for EOQ Environmental Systems Manager category should hold a university degree or equivalent, relevant to their fields of employment. The definition of equivalence is the responsibility of the FMO Agents sharing the scheme.

Before qualifying as an EOQ Environmental Systems Manager, the candidates should have accumulated appropriate practical workplace training and experience over a minimum period of two years. Some examples of the areas of workplace experience are as follow:

- Science
- Engineering
- Technology
- Manufacturing/Processing
- Design/Construction
- Maintenance
- Service
- Administration or economics

In addition they should have at least two years’ practical experience in environmental matters, part of which should, ideally, be in environmental systems management.

4.2  Personal Attributes

EOQ Environmental Systems Managers should be open minded, conscious of environmental matters, quality minded, honest, loyal, skilled and ready to accept and to learn new techniques. They should have managerial abilities, demonstrate the ability to work in teams and should be cost conscious.
4.3 Capabilities after the relevant training courses (see Chapter B)

EOQ Environmental Systems Manager shall have the ability to install EMS that meet the requirements of any size of company and to act as the management representative.

They shall be able to act as internal EMS Auditor.

They shall be competent in at least:

- Knowledge and understanding of environmental science and technology
- Ability to identify and assess technical and environmental aspects of facility operations
- Knowledge and understanding of the application of relevant standards, guidelines, regulations, laws and codes of practice
- Knowledge and understanding of the application of management system standards
- Awareness of integrated environmental management systems in general
- Knowledge of auditing methodology and the ability to manage the first party audit process

The body for registration/certification of environmental personnel shall ensure that applicants for registration/certification are able to demonstrate that they have achieved the necessary skills and knowledge in all competencies. Skills and knowledge may be demonstrated through education, training and work experience.
A.V Job Specifications for EOQ Environmental Systems Auditor

The Environmental Auditor is qualified to perform environmental audits (2\textsuperscript{nd} and 3\textsuperscript{rd} party audits).

5.1 Preconditions

The candidates for EOQ Environmental Systems Auditor category shall have met the qualification requirements of the EOQ Environmental Systems Managers.

They shall have a minimum of four years of appropriate, full time, practical workplace experience, at least two years of which should have been in environmental management activities.

Prior to qualification, the candidates shall undergo training in the conduct and management of audits. They shall also have practical experience of at least five external audits, comprising not less than 20 audit days.

After qualification, the candidate shall read the current EOQ Code of Professional Conduct (see Appendix 1) and declare by signing it that he will entirely abide by its clauses.

5.2 Personal Attributes

EOQ Environmental Systems Auditors should be open minded, conscious of environmental matters, mature, possess sound judgement, analytical skills, tenacity, the ability to perceive situations in a realistic way, and the ability to understand complex operations from a broad perspective. They should also understand the role of individual units within the overall organization.

EOQ Environmental Systems Auditors should possess personal attributes and skills that include, but are not limited to, the following:

- Competence in clearly expressing concepts and ideas, orally and in writing
- Interpersonal skills conducive to the effective and efficient performance of the audit, such as diplomacy, tact and the ability to listen
- Ability to maintain independence and objectivity sufficient to permit the accomplishment of auditor responsibility
- Skills of personal organization necessary to the effective and efficient performance of the audit
• Ability to reach sound judgements based on objective evidence
• Ability to react with sensitivity to the conventions and culture of the country or region in which the audit is performed.

5.3 Capabilities after the relevant training courses (see Chapter B)

EOQ Environmental Systems Auditor shall have a sound and current knowledge of auditing practice and the capability to apply the necessary management skills required in the execution of an audit, as called for in ISO 14010 and 14011.

They shall be able to perform third party audits proving conformance with the relevant EMS standards.

They shall be competent in at least:

• Knowledge and understanding of env. science and technology (Basis: ISO 14012).
• Ability to identify and assess technical and environmental aspects of facility operations (Basis: ISO 14012)
• Knowledge and understanding of the application of relevant standards, guidelines, regulations, laws and codes of practice (Basis: ISO 14012)
• Knowledge and understanding of the application of environmental management system standards (Basis: ISO 14012)
• Awareness of non-environmental management systems
• Knowledge of auditing methodology and the ability to manage the audit process (Basis: ISO 14010/14011)
• Experience in auditing methodology and the ability to manage the audit process (Basis: ISO 14012)
• Ability to demonstrate the personal attributes necessary to the effective and efficient performance of an audit, including diplomacy, tact, objectivity and teamwork (Basis: ISO 14012 clause 7)

The FMO Agent for the registration/certification of environmental personnel shall ensure that applicants for certification are able to demonstrate that they have achieved the necessary skills and knowledge in all competencies. Skills and knowledge shall be demonstrated through education, training, work experience and auditing experience.

In the case of certification of EMS, the EMS certification body shall make sure that the auditor is familiar with its certification procedure.
A.VI Experienced Environmental Practitioners

The EOQ recognizes that there are mature and very experienced environmental practitioners, whose education and training pre-date the establishment of the EOQ Personnel Registration Scheme. These personnel may, nevertheless, be registered provided that:

- The FMO shall have rigorous procedures to evaluate the prior learning and experience of the applicant, to ensure that EOQ knowledge requirements (Chapter C) have been satisfied and such knowledge is current.

- Applicants for registration as EOQ Auditors shall prove that their knowledge of Standards and Auditing Practice is up to date.

Experienced candidates can satisfy the FMO of prior learning and experience, meeting EOQ requirements, by presenting evidence such as: certificates from relevant training courses and programmes of education and summaries of work-based technical reports, professional papers or technical reviews.

Furthermore, the FMOs shall take into account the guidance offered by the EOQ Secretariat governing this point.
A.VII Conditions for reregistration/recertification

Reregistration/recertification of Environmental Systems Managers shall be repeated every five years. Reregistration/recertification of Auditors shall be repeated every three years. The following requirements shall be met:

- The candidate shall read the current EOQ Code of Professional Conduct, as described in Appendix 1 and declare by signing it that he will continue to entirely abide by its clauses.

- The FMO Agent shall ensure that the Environmental Systems Manager or Auditor has demonstrated competence in his function during the past period.

- The candidate shall prove that he has kept his knowledge of standards and audit practice up to date. This can be achieved by following an appropriate refresher course or equivalent.

- The EOQ Environmental Systems Auditor shall prove that he has performed a minimum of three external audits in the re-registering period. The duration of these audits shall be no less than 12 days.
Chapter B Environmental Personnel Qualification/Registration

B.I Qualification Criteria for EOQ Environmental Systems Managers

The following contents of the qualification of Environmental Systems Managers should ideally be acquired within approximately 150 hours of training. In cases where the applicant already possesses qualifications as, e.g. EOQ Quality Systems Manager, the total corresponding training time may be proportionally adapted.

Key

A To understand and to be able to explain
B In addition to A, to be able to indicate relevant methods and to apply them
C In addition to A and B, to elaborate and integrate relevant methods and to interpret the results

1. Introduction to Environmental Science and Technology

1.1 Global ecological coherence A

1.2 Ecosystems A

1.3 Environmental effects of all operations A

- Free access to environmental information (see 3.3)
- Material and energy flow
- Emissions into the atmosphere
- Drainage in waters or into the sewage system
- Origin and elimination of wastes
- Utilization of soil, waters, fuels and energy as well as other resources
- Release of heat, noise, smell, dust, disruptions and optical effects
  - on the environmental media and the human being
  - under controlled and uncontrolled conditions
  - Consideration of working conditions and local conditions
  - Incidents, accidents, and possible emergencies from former, recent and planned activities.
1.4 Responsibilities of the organization

- In relation to the installation
- In relation to authorizations and information
- In relation to documentation
  - Survey maps of installation and industrial enterprises
  - Survey maps of dangerous materials and emissions
  - Manuals and diaries
  - of examinations, first time and repetitive supervisions
- Measurements
  - Analyses of substances, emissions, sewage and waste
  - Continuous measurements with registration
- Precautionary duties
- Responsibilities of reporting, information and organization
  - Responsibilities of the management, representation and delegation of duties
- Liability

1.5 Methods and procedures to the recording and judgement of environmental effects and environmental impacts of operations

- Measurement and evaluation procedures
  - Analytical procedures
  - Prognosis procedures
  - Statistical procedures
  - Cost-benefit considerations

2. Identification and review of technical and environmental aspects of facility operation

2.1 Environmental technology

- Basis of the environmental technology
- End-of-pipe technologies
- Ecological media related technologies
- Production and product-integrated environmental technologies

2.2 Best Available Techniques (BAT)

- Life Cycle Assessment

2.3 Risk management, organizational precautions and management of disturbances
2.4 Protection of resources

2.4.1 Atmosphere

- Basis of air pollution
- Measures to reduce emissions at installations and products
- Noise protection (active and passive measures, protection against vibrations, incl. Noise from vehicles and machinery)
- Energy usage/consumption and minimization
- Measures to avoid or reduce olfactory, light, radiation emissions
- Planning instruments at supervising authorities, e.g. spatial planning, clean air planning, noise decrease planning

2.4.2 Water

- Water economy / water protection
- Water waste avoidance
- Sewage treatment
- Sewage cleaning (physical, chemical, biological cleaning)
- Sewage equipment installation
- Problems with industrial sewage
- Problems with sewage from other sources
- Measures to reduce water consumption

2.4.3 Soil

- Avoidance of soil waste and contamination
- Protective measures against soil contamination
- Identification of soil contamination and its decontamination

2.5 Waste management

- Basis of waste economy
- Types of waste
- Origin, avoidance and utilization of waste
- Operational waste economic concepts and balances
- Branch specific logistics (separation, preparation, labelling, collection, transportation, storage and disposal)
- Treatment
- Return systems
- Precautions in raw material and waste economy
- Waste minimization/cleaner production, design and production. Special attention aimed at dangerous waste.
- Measures to avoid waste and use of waste
2.6 Handling, storage and transportation of dangerous or hazardous materials

- Origin and effects of environmental relevant materials
- Material with dangerous effects to water
  - Definition and division into classes
  - Requirements for installations regarding contact with water endangering materials
- Hazardous materials
  - Characteristics
  - Storage
  - Substitute materials
  - Toxicological and ecotoxicological aspects
  - Substitution of products and processes
- Handling and transportation of environmentally relevant materials
  - Labelling and marking
  - Transportation of dangerous goods or materials
- Inflammable liquids

2.7 Restrictive and Preventive Technologies

3. The application of relevant standards, guidelines, regulations, laws and codes of practice

3.1 General environmental laws

- Basic environmental legislation
- Structure of environmental laws and its contexts in related fields
  - Goals and principles of environmental laws
  - EC environmental laws and relation to the national, regional and municipal environmental laws
- Technical regulations/standards
- Responsibilities of persons in environmental protection (environmental representatives)

3.2 Particular environmental laws concerning industrial installations, air, water and soil pollution, waste, chemicals and dangerous and hazardous materials
• Definitions
• International conventions and rules as far as applicable
• Structure and characteristics
• National laws and regulations
• Objectives
• Directives and prohibitions
• Technical regulations specifying the laws
• Requirements and procedures for authorization
• Prerequisites of legal authorization
• Legal effects of authorization
  • Authorization of official agencies

3.3 Overlapping rules of the environmental laws

• Environmental impact assessment
• Free access to environmental information
• Environmental liability
  • Duties and liability of the management
  • Connection to product liability
  • Laws concerning dangerous substances, industrial laws
  • Environmental penalties
  • Industrial pollution control and risk management

4. Knowledge and understanding of the application of environmental management system standards

4.1 General environmental management

• Basis of the environmental management
• Historical aspects of environmental management
• Environmental oriented business strategies
• Benefits of an environmental management system vis-à-vis interested parties
• Operative and strategic environmental controlling ISO 14031
• Organization of operational environmental protection

4.2 Environmental Management System (EMS) Standards

• International standardization activities and EMAS
• Standards for environmental management systems
  • Council Regulation (EEC) No. 1836/93
  • ISO 14000 and relevant national standards
  • Combination of environmental management systems
• Combination of EMS with management systems in general (i.e. ISO 9000)
  • CEN 12968: Comparison document between Council Regulations


5. Consideration of generic management systems and management tools

5.1 Basics of management

- Management systems
- Management methods
- Company policies
- Basics of organization development (organizational teaching)
- Personnel development
- Qualification structures
- Organisational, decision-making, information and communication structures

5.2 Internal audits

- Audit types and definitions
- Audit goals
- Organization of internal audits
- Performing an internal audit (e.g. as co-auditor)
- Acting as auditee in an external audit
- Interpretation of audit reports (of 2nd and 3rd party audits)
- Preparation of corrective actions
B.II Qualification Criteria for EOQ Environmental Systems Auditors

The following contents of the qualification of Environmental Systems Auditors should ideally be acquired within approximately 40 hours of training. In cases where the applicant is already a qualified auditor, his knowledge base has to be taken into account. However, in all cases, it should be assured that the necessary knowledge of environmental legislation is demonstrated.

Note: The applicant for registration as EOQ Environmental Systems Auditor shall prove that he has experienced 5 external audits with a minimum duration of 20 days, in accordance with ISO 14000. Some of these audits may have taken place within the three years prior to achieving full qualification.

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Key

A To understand and to be able to explain
B In addition to A, to be able to indicate relevant methods and to apply them
C In addition to A and B, to elaborate and integrate relevant methods and to interpret the results

1. Knowledge of auditing methodology and the ability to manage the audit process (basis: ISO 14010/14011)

1.1 General C

- Audit definitions
- Audit types (system audit, performance audit, Compliance audit, product audit, internal audit, external audit)
- Audit goals
- Determining the scope of audit / subject matters
- Organization and resources
- Tasks and responsibility

1.2 Auditors C
• Technical prerequisites
• Personal qualities
• Maintenance of competencies

1.3 Planning and preparation of the environmental audit

• Preparation of an audit plan
• Contents of the audit plan, timing
• Composition of the audit team
• Preparation of the methods and the necessary records
• Selection of the information census technologies
• Lists with questions / Checklists
• Preparation of the audit (project conversation, evaluation of the records)
• Communication techniques
  • Motivation
  • Transaction analysis
  • Transactions
  • Function analysis
  • Interview techniques
  • Conversation development
  • Judgement behaviour

1.4 Transaction (methods, aids, technologies of the environmental audit)

• Introductory conversation
• Collection of audit evidence
• Transaction of information census
• Audit findings
• Completing conversation

1.5 Audit findings and audit report

1.6 Corrective actions of environmental audits

1.7 Establishing the frequency of required audits

1.8 Cross references to environmental reviews and environmental audit (EMAS)

1.9 Relationships between environmental audit, environmental statements (EMAS) and EMS audits (EN ISO 14000)

1.10 Cross references to work security
APPENDIX 1 Code of Professional Conduct

1 Note

The following pages contain the EOQ Code of Professional Conduct mentioned earlier in these present Rules and Handbook.

The EOQ recognizes that the FMO Agents will be required to produce the Code in their own local languages, especially with regard to comprehensibility by the Auditor candidates and also according to the requirements of the various courts of law.

The EOQ further recognizes that adaptations to the source may be necessary when translating into the target languages, due to cultural, social and legal considerations. It may, for example, be abbreviated in accordance with local custom.

The following Code in the English language should, therefore, be considered as a guide to the FMO Agents. The EOQ only requires that the elements of the Code be adopted wherever possible and that no major alterations to its fundamental message or additions are made in the translated versions.

2 Introduction

This Code and Disciplinary Procedure have been formulated to promote ethically sound professional conduct within all areas of environmental management. Whilst its wording does not refer specifically to environmental management, the topics covered have been carefully selected as those especially relevant to this professional field. Care has also been taken to avoid weighting it toward any type of industry or any specific professional role, but to be generally applicable to EOQ Environmental Auditors who occupy many and widely varied positions in a broad spectrum of sectors and organizations.

As experience is gained in applying the Code to real life situations and as the Auditors raise questions with the EOQ on ethical matters, other areas may warrant elaboration, either in interpretative or elaborative notes or as modifications to the Code itself.
2.1 General professionalism

- EOQ Environmental Auditors shall apply their professional skill and judgement to the best of their ability at all times, legally and with honesty and integrity, holding the valid interest of parties to whom they are contracted, whether employers, customers or clients, above personal considerations.

- EOQ Environmental Auditors shall take all reasonable steps to develop their own professional competence and maintain themselves abreast of current thinking and developments in their professional field.

- EOQ Environmental Auditors shall lay claim only to such memberships and qualifications as are valid at the time.

2.2 Responsibilities to the general public

- EOQ Environmental Auditors shall take all reasonable precautions to safeguard the public interest in matters of health, safety and environmental impact.

2.3 Responsibilities to the profession

- EOQ Environmental Auditors shall act at all times so as to maintain the dignity and reputation of their profession.

- All advertising shall be decent, legal, honest and factual and shall not make comparisons with other professional services.

2.4 Responsibilities to clients, customers and employers

- EOQ Environmental Auditors shall avoid professional employment or assignments which may give rise to conflict of interest without prior written notification of and agreement by all parties to the potential conflict.

- EOQ Environmental Auditors shall not knowingly undertake work for which they do not have sufficient and appropriate competence or authority.
• EOQ Environmental Auditors shall maintain strict confidentiality with regard to information acquired in the course of their professional work, unless disclosure either is with the consent of the employer/client from whom the information was acquired or is required by law.

• EOQ Environmental Auditors shall avoid any improper use for their own advantage, or that of a third party, of information acquired in the course of professional work.

• EOQ Environmental Auditors shall not take unfair advantage of an employer's or client's lack of knowledge or expertise.

• EOQ Environmental Auditors shall at all times give advice to clients and employers that is professionally objective, relevant and timely, along with any pertinent caveats, reservations or cautionary observations.

• EOQ Environmental Auditors shall behave at all times with the utmost financial probity, ensuring that, insofar as is possible, contracts and financial arrangement are unambiguous and protect the valid interests of the all parties concerned.

2.5 Responsibilities to subordinates

• EOQ Environmental Auditors shall maintain adequate supervision over persons working under their professional authority or supervision and shall encourage them to develop their professional competence.

2.6 Responsibilities to fellow Auditors

• EOQ Environmental Auditors shall take care not to publish or otherwise communicate unjustified and unreasonable criticism of another members professional work.

• An EOQ Environmental Auditor shall not knowingly place a fellow Auditor in a position in which he or she may unwittingly breach any part of this Code of Professional Conduct.
2.7 Declaration

I have read the above EOQ Code of Professional Conduct and hereby declare that I will entirely abide by its clauses:

Place and date ........................................................................................................................................

Name and signature ..................................................................................................................................
3 Additional Remarks

3.1 Complexity and dilemma
In the life of a modern professional there will inevitably arise situations in which it is difficult to decide precisely how the Code applies. An EOQ Environmental Auditors may even face dilemmas in which two items in which the Code appear to pull in opposite directions. In a complex world it is impossible to cover every eventuality in such a document. Where there is uncertainty as to a proper course of action, a true professional will (1) wherever possible, ensure appropriate debate of the issues and (2) consider basic professional values such as fairness, truth, respect for human dignity, trustworthiness and integrity, taking serious account of these alongside other factors in technical and business decisions.

3.2 Specific professional roles and circumstances
The Code has been formulated so as to be of the widest general applicability to EOQ Environmental Auditors. It is recognised, however, that, in some positions, Auditors will need to give particular emphasis to certain parts of it. In future, supplementary notes may be developed to expand on individual clauses. At present the only area in which this has been done is that of financial probity, as follows:

- An EOQ Environmental Auditor shall not offer, give, request or receive any financial or other material inducement with a view to improperly influencing any technical, professional or commercial decision and shall disclose, in advance of entering into a legally binding agreement with a client, details of any third-party fees or commissions related to the agreement.

- Before entering into a legally binding agreement for a professional assignment, an EOQ Environmental Auditor shall provide the client with a written estimate of the likely fee or agree a process within the exercise by which this will be established and shall ensure that estimates are not exceeded except within an agreed process.
• Where payment is made by a client in advance of a service being supplied or where monies are not beneficially owned by the Auditor, secure arrangements shall be made to protect the client's financial interest.