

PETRONAS TECHNICAL STANDARDS
HEALTH, SAFETY AND ENVIRONMENT

ENVIRONMENTAL ASSURANCE GUIDE

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PREFACE

PETRONAS Technical Standards (PTS) publications reflect the views, at the time of publication, of PETRONAS OPU/Divisions.

They are based on the experience acquired during the involvement with the design, construction, operation and maintenance of processing units and facilities. Where appropriate they are based on, or reference is made to, national and international standards and codes of practice.

The objective is to set the recommended standard for good technical practice to be applied by PETRONAS' OPUs in oil and gas production facilities, refineries, gas processing plants, chemical plants, marketing facilities or any other such facility, and thereby to achieve maximum technical and economic benefit from standardisation.

The information set forth in these publications is provided to users for their consideration and decision to implement. This is of particular importance where PTS may not cover every requirement or diversity of condition at each locality. The system of PTS is expected to be sufficiently flexible to allow individual operating units to adapt the information set forth in PTS to their own environment and requirements.

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CONTENTS

SUMMARY

1. INTRODUCTION
2. DEFINITION, OBJECTIVES, SCOPE AND RESPONSIBILITIES
 - 2.1 Definition
 - 2.2 Objectives
 - 2.3 Scope
 - 2.4 Responsibilities
3. OUTLINE OF ENVIRONMENTAL AUDITING PROCEDURE
 - 3.1 Pre-visit activities
 - 3.1.1 Request for an environmental audit
 - 3.1.2 Formation of audit team
 - 3.1.3 Pre-visit information package
 - 3.1.4 Visit programme
 - 3.1.5 Information to employees
 - 3.2 On-site visit
 - 3.2.1 Kick-off meeting
 - 3.2.2 Inspection of facilities
 - 3.2.3 Interviews of staff
 - 3.2.4 Evaluation of audit findings
 - 3.2.5 Draft audit report
 - 3.2.6 Wrap-up meeting with management
 - 3.3 Post visit activities
4. FOLLOW-UP
 - 4.1 Implementation of recommendations
 - 4.2 Frequency
5. REFERENCES

ANNEX I: Environmental Audit Questionnaire

ANNEX II: Example of contents of an Environmental Audit Report

SUMMARY

Environmental auditing is a systematic way of evaluating the environmental performance of operations, facilities or activities, ranging from a single production unit to the integrated facilities of a whole company.

Environmental auditing thus helps local management to control the quality of existing operations and develop strategies for improvements in anticipation of future needs by:

- identifying and reducing actual or potential company exposure to environmental liabilities;
- providing assurance that operations do not have unacceptable environmental effects, or giving timely warning of situations that may need improvement;
- transferring know-how on cost effective environmental technologies, measures and procedures; and
- documenting the company's environmental status.

Environmental auditing programmes may involve both internal and external audits. Both types of audit are similar in principle. External audits are less frequent but more extensive, and are carried out by an independent team including staff from the service companies, and usually also from another operating company and the company to be audited. The audit team comprises specialists covering organisational, technological and environmental aspects.

Topics covered during an environmental audit may include environmental policy and plans, legal requirements, emission/discharge permits, responsibilities, internal controls and procedures, functioning of installations relative to environmental specifications, planning, housekeeping, communication, awareness and training, waste management, air, water and soil pollution, impact on the local environment, complaints and claims.

The essential steps of an environmental audit are:

1. the preliminary collection of basic data about the site and operations;
2. inspections and interviews at the site to extend, evaluate and verify information obtained;
3. formulation of conclusions and recommendations.

The findings and recommendations of the audit team are discussed fully with management before the final audit report is produced. From this report, operating company management, with the assistance of the service companies if required, develops an implementation programme.

Experience has confirmed that environmental auditing improves environmental

performance, safeguarding company interests and helping relations with the public and authorities.

Operating companies are therefore encouraged to develop environmental auditing programmes, consistent with their general auditing philosophy, to cover all operational activities.

1. INTRODUCTION

The Environmental Management Guidelines outline procedures and measures to achieve effective environmental management. Environmental auditing is such a procedure which appraises the environmental status of existing operations and activities. It is a practical tool to assist local management to assess and, where necessary, improve the environmental performance of their operations.

Formal environmental auditing evolved from less structured approaches in the mid 1970's when some, industrial companies in the USA developed environmental audit programmes as internal procedures to help review and evaluate the environmental status of operating units. An important reason for these developments was the proliferation in regulatory requirements and the increasing complexity of legislation. Environmental audits are now common practice in all operations throughout the world and is in line with ISO 14000. Experience has confirmed that environmental auditing brings improved environmental performance (e.g. better compliance record) which in turn provides reassurance to management, helps to safeguard Company interests and assists in relations with the public and authorities (e.g. a broader acceptance of existing and future activities).

Complementary to technical and safety auditing, environmental auditing especially address the possible impact of activities on the environment outside the company premises. Environmental auditing can be integrated with safety and occupational health and hygiene auditing which particularly addresses impacts on workers within the site.

Environmental Auditing complements Baseline Studies and Environmental Impact Assessments, both of which are recommended for the planning phase of projects. Environmental audits provide a means for monitoring and validating the implementation of previous Environmental Impact Assessment recommendations.

When an operation is to be terminated or a site relinquished, Environmental Impact Assessments and Environmental Audits provide data for decommissioning including requirements for clean-up operations and/or landscaping.

An environmental auditing programme involves various types of inspections which may differ in scope and frequency but the essential principles are the same in all cases. The procedures should be tailored to the scale and nature of the facility or activity and the type of audit conducted. The scope of an environmental audit may range from managerial aspects only to the technical environmental aspects of a particular operation.

Within PETRONAS, two main types of environmental audit can be distinguished:

1. a external or Group environmental audit, and
2. an internal environmental audit

Group environmental audits are requested by Operating Company management and are a service offered by the Corporate HSE Unit (CSU).

The principal differences between internal and external audits are:

- an external environmental audit is led by a Corporate HSE Focal Point specialist or a third party consultant jointly appointed by OPU and Corporate HSE Unit.
- a PETRONAS led environmental audit generally involves other PETRONAS staff and staff from other Operating Companies in addition to representatives of the Company to be audited, while the internal audit involves Operating Company staff only;
- the PETRONAS led environmental audit assists Operating Company management to evaluate compliance with the policies and standards recommended for general use/application by PETRONAS in addition to the Operating Company policy and targets which are addressed specifically by the internal audit;
- Based on the Company environmental audit programme internal and external audits are carried out according to an appropriate time schedule. Generally, the internal audits would have a higher frequency.

Suitably adapted, the procedures described in this Guide may be applied in pre-acquisition environmental audits. Such audits may provide a basis for estimating potential environmental costs and liabilities.

2. DEFINITION, OBJECTIVES, SCOPE AND RESPONSIBILITIES

2.1 DEFINITION

In this guide the definition of Environmental Auditing agreed by the Working Group on "Environmental Auditing" of the International Chamber of Commerce is adopted:

An Environment Audit is:

"a management tool comprising a systematic, documented, periodic and objective evaluation of how well environmental organisation, management systems, and equipment are performing with the aim of:

- facilitating management control of environmental practices;
- assessing compliance with company policies, including meeting regulatory requirements.

Industrial activities are usually subject to regulations and permits intended to limit their impact on the environment, for example consent levels for effluent discharges, emissions to air and waste disposal.

Monitoring compliance with these regulations is an important continuing activity. Environmental audits, however, go further and include a comprehensive review of policies, management systems, organisation and practices and compliance with own standards. During the audit strong emphasis is given to verification of findings. Nevertheless, an audit cannot bring all anomalies to light as it is a sampling process limited by manpower and time constraints.

2.2 OBJECTIVES

In general terms, environmental auditing should ascertain whether:

- company operations are in compliance with its policy and meet the requirements of laws, regulations, permits and self-imposed standards.
- environmental policies and procedures are clearly defined and responsibilities of individual staff indicated throughout the organisation.
- potential liabilities resulting from the company's environmental performance are being recognised in good time and controlled effectively.
- resources and staff for dealing with environmental matters are appropriate and applied effectively.
- existing facilities to minimise environmental impact are adequate and cost