ENVIRONMENTAL AUDITING GUIDE

Doc 135/19

Revision of Doc 135/12

ENVIRONMENTAL AUDITING GUIDE

Prepared by WG- 5 Environment

Table of Contents

Amendments to 135/12

Section	Change
3.2	Former sections 3.3, 3.4, 4.6 and 4.9 were deleted, because these definitions are given in the audit guidelines.
Appendix 1	Appendix 1 is replaced to reflect the links to the renewed ISO14001 (2015).

NOTE   Technical changes from the previous edition are underlined

1   Introduction

This publication is a guide to auditing of environmental management systems and practices in the industrial gases industry*.*

2   Scope and purpose

2.1   Scope

This publication provides guidance for auditing environmental management systems and practices in the industrial gases industry. This publication does not give specific advice on health and safety issues, which shall be taken into account before undertaking any activity. On these issues the relevant EIGA documents, and/or national legislation should be consulted for advice.

2.2   Purpose

This publication is intended as a guide to environmental management systems and site auditing for industrial gas facility managers, internal auditors, environmental specialists and technical managers*.*

The publication provides an overview of the environmental auditing process that is an important element of a company's environmental management system and a necessary part of any certified environmental management system. The key points for ensuring success of an environmental audit process are identified. More details on the principles of applying environmental management system can be found in EIGA Doc 107 *Guidelines on Environmental Management Systems*, ISO 14001, *Environmental Management Systems – Requirements with Guidance for Use,* EU *Eco-Management and Audit Scheme* (EMAS) [1,2,3].[1]

The Appendices provide guidance in the form of checklists to assist in the practical conduct of a site environmental audit and a management systems audit. Refer to the EIGA Doc 88 *Good Environmental Management Practices for the Industrial Gas Industry*, which can be used as a site checklist [4].

General principles of an auditing system for occupational health, safety and environment and any other management systems can be found in EIGA Doc 102 *Audit Guidelines* [5].

3   Definitions

For the purpose of this publication, the following definitions apply.

3.1   Publication terminology

3.1.1 Shall

Indicates that the procedure is mandatory. It is used wherever the criterion for conformance to specific recommendations allows no deviation.

3.1.2 Should

Indicates that a procedure is recommended.

3.1.3 May

Indicates that the procedure is optional.

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[1] References are shown by bracketed numbers and are listed in order of appearance in the reference section.

3.1.4 Will

Is used only to indicate the future, not a degree of requirement.

3.1.5 Can

Indicates a possibility or ability.

3.2   Technical definitions

3.2.1 Environmental audit

Management tool consisting of a systematic, documented, periodic and objective evaluation of environmental performance, management systems and equipment with the aim of firstly, facilitating management control of environmental practices and secondly, assessing compliance with an operation's or activity's environmental policies, including meeting regulatory requirements. Examples include:

- internal auditing of systems and procedures for measuring, recording and reporting performance data;

- independent validation of systems and procedures for measuring, recording, and reporting performance data; and

- independent evaluations and commentaries by external experts regarding an organisation's economic, environmental, and social performance and/or management processes.

3.2.2 Environmental reporting

Management tool which assists the monitoring and assessment of the performance of a process or system.

The quality, usefulness, and credibility of reporting can be enhanced by verification and validation. Independent verification, for example it provides an additional level of assurance in regard to the reliability and completeness of an external environmental report and enhances the quality, usefulness, and credibility of information used within the company and the underlying management systems and processes.

3.2.3 Process

Set of interrelated or interacting activities which transforms inputs into outputs.

Plan

- Establish the objectives.

- Select the issue to receive attention (often based on priorities).

- Design a clear statement of purpose.

- Define the processes necessary to deliver results in accordance with the environmental policy.

- Then seek advice about expectations from the process; prioritise expectations, set performance measures, identify barriers to good performance, measure current performance, identify opportunities for improvement and develop solutions.

Do

Implement the process steps where practicable and seek the involvement of those affected by the change during the testing phase.

Check

Monitor and measure processes, objectives, targets, legal and other requirements and report the results.

Act

- Take actions to continually improve performance of the environmental management system.

- Standardise the improvement.

- Install the improvement.

- Leverage the improvement into other areas of the organisation.

The process should be:

- Documented and approved by senior management;

- Communicated to relevant staff.

Accountability for implementation and review should be established; performance should be monitored and reported with appropriate adjustment to the process where appropriate.

4   Environmental Auditing

4.1   Background

There is an increasing need for companies to demonstrate good environmental management practice to a wide range of interested parties. ISO 14001 and the EMAS require that participating organisations have their environmental performance measured and verified [2,3].

Environmental auditing is not a legal requirement under any specific law or regulation. Rather, it is a proactive management tool that is used to consciously identify environmental problems before they occur in order to take preventative measures. Environmental auditing is an internal management tool for use by an organisation or activity in carrying out its environmental management responsibilities.

Auditing all or part of that system can measure the performance of a company's environmental management system. The results of audits can assist companies in demonstrating their commitment to continuously improving their environmental performance. Full commitment from senior company management is essential if the audit process is to be a success. This commitment requires an involvement and interest in the whole audit process.

4.2   Use of this Guide

These general guidelines can be used as a guide for implementation of environmental audits for an organisation or activity. The environmental audit is a voluntary action which can be undertaken by the manager of an organisation or activity or by a third party and which serves as an instrument for managing and monitoring the environment.

A guidance checklist for conducting a site environmental audit is provided in Appendix and a checklist for conducting a management systems audit is given in Appendix 3.

Several publications are also available which provide further guidance on conducting an environmental audit, see EIGA Doc 102 [5]. A guideline on land contamination issues, which can be used for auditing, is contained in the EIGA Doc 137 *Environmental Aspects of Decommissioning* [6]*.*

4.3 Why audit?

It is important to establish the purpose of the audit; this will help in deciding when to audit and what approach to use. An environmental audit can provide valuable information to help a company to meet the agreed standards of environmental performance (which should be defined in company policy) and stay ahead of the requirements placed on them by law.

The possible functions and benefits of an environmental audit include:

4.3.1 Management

- Demonstrate a visible commitment to improving an organisation's environmental performance.

- Use as a basis for the development of environmental management policies or efforts to improve existing plans <u>and improve environmental performance of the organisation.</u>

- Identify environmental risks, impacts and review of management controls and systems and associated liabilities, liabilities and risks from past and present activities of the site or surroundings and implementation of recommendations.

- Review process and plant operating procedures or activity's current environmental standards of operation and company environmental management procedures, including emergency response planning, monitoring and reporting systems and planning for future changes in Processes or Regulations.

- Increasing actions undertaken or needing to be undertaken by an organisation or activity to meet environmental goals such as sustainable development, Responsible Care®, recycling and efficient use of resources.

4.3.2 Financial

- Prevention of financial losses: through remediation or the closure of an organisation or activity; government restrictions or negative publicity caused by bad management or monitoring of the environment.

- Fair assessment of financial implications of environmental issues, liabilities and impact of new regulations.

- Highlight where costs can be saved (for example through energy conservation or minimisation, improved use of raw materials, process changes, waste reduction, reuse and recycling etc).

4.3.3 Legal

- To measure and improve an organisation's or activity's compliance with environmental legislation and regulations such as operating permits, air emission standards, effluent standards, waste management standards, transport regulations, etc, thus avoiding legal sanctions against an organisation or activity or its management under prevailing laws and regulations.

- Provision of evidence of the implementation of environmental management in court if requested.

4.3.4 Training

- To facilitate the sharing of best environmental practices and increase in the awareness of the management and staff of an organisation regarding environmental policies and responsibilities.

- Assessment of training, knowledge and awareness of employees.

4.3.5 Reporting

- Provision of an environmental audit report for use by an organisation, or activity in dealings with environmental groups, government and the mass media.

- Provision of information required by insurance companies, financial institutions, shareholders and other stakeholders.

It is also important to recognise the limitations of the audit process when deciding to conduct an environmental audit. The following points may be helpful to remember in this respect:

- An audit should not be used as a chance to tell the audited unit how to do their job.

- It is not a technical investigation in itself (although can be used in support).

- It should not be used to provide a public statement of performance (although it may be used to back up and support any such statements made).

4.4 Types of <u>environmental</u> audit

<u>General definitions of types of audit are covered in the auditing guide EIGA DOC 102 [5]. For environmental issues different type of audit may be chosen based upon why the audit is being conducted. Three broad types of audit can be identified:</u>

4.4.1 Self-audit / Self-assessment

Team members are selected from the staff of the business, operating unit or department to be audited.

4.4.2 Internal audit

Team members are selected from employees of the organisation, but not from the business, operating unit or department to be audited. In some circumstances it can be of benefit to have a representative of the unit on the audit team. They should not be team leaders.

4.4.3 External audit

Team members are drawn from outside the organisation, for example, consultants. The team may, be assisted by employees of the organisation such as business, operating unit or department manager acting as guide and advisor. This type of audit can be useful where third party benchmarking, certification and neutrality is required, or where company resources do not allow internal audits.

4.5 Basic principles of auditing

4.5.1 Basic characteristics

An environmental audit has the following characteristics;

4.5.1.1   Comprehensive methods

An environmental audit requires the use of detailed procedures and methodology. The environmental audit must be conducted using comprehensive protocols and fixed procedures to ensure collection of the required data and the documentation and verification of that information.

4.5.1.2   Evidence and verification

The concept of evidence and verification of environmental deficiencies is a main element in an environmental audit. The audit team must verify all procedures, collected data and information through direct field inspection.

4.5.1.3   Relevant measures and standards

The standards and measures of environmental performance must be adjusted to be relevant to the organisation or activity and the production process being audited. An audit is meaningless unless there are accepted standards against which performance can be compared.

4.5.1.4   Written reports

Reports should contain factual observations and reasoning, and the documentation of the processes. All findings should be presented clearly and accurately, based on valid and documented evidence.

4.6   Scope

An environmental audit should be conducted in a manner that allows for the provision of information regarding:

4.6.1 Background

The history of an organisation, land or activity including information on the setting, previous environmental damage/spill at the site, environmental practices, monitoring records and known environmental issues from the site and neighbours including soil and underground water.

Any changes in the environmental setting that have occurred since the establishment of the organisation or activity up to the time of the last audit.

The natural resources used as input, processing of materials and all finished products (energy, water, raw material use) and wastes including hazardous and toxic wastes.

4.6.2 Compliance with environmental management policy and objectives

Compliance with environmental management policy and objectives includes:

- Environmental risk assessment including compliance to regulations, soil; underground water, solids wastes, emissions, waste waters, hazardous products & nuisances.

- Emergency response plans and procedures.

- Waste minimisation and environmental pollution control plans.

- The utilisation of energy, water and other natural resources.

- Recycling programs and product life cycle considerations.

4.6.3 Training

Plans for management and employees training (fundamental environmental concerns, regulations, permits, and policy), objectives and environmental awareness.

4.6.4 Practices

Practices include:

- The handling and storage of chemicals, hazardous and toxic materials and any potential environmental hazards;

- Waste management control systems, transportation route for materials and waste disposal, including facilities to minimise waste disposal impacts and accidents;

- Measure of the effectiveness of pollution control equipment as indicated in inspection reports, maintenance logs, emission test results and routine analytical reports;

- Records regarding waste disposal licenses and compliance with laws, regulations and environmental quality standards;

- Environmental practices of contractors and sub-contractors.

4.7 When to audit?

The need to conduct an audit, and the timing and frequency of such an audit, should be determined by considering the following factors:

- hazard and risk ranking;

- history of past incidents;

- past performance against standards (results of previous audits, incidents on site);

- environmental associated costs, including energy, insurance, waste disposal;

- legal requirements;

- availability of resources;

- review before acquisition or sale of sites;

- changes in process, organisation or activity; and

- third party certification requirements.

4.8 Confidentiality

Internal audit reports are the confidential property of the organisation or activity that has been audited and often contain a disclaimer. However, the organisation or activity can, at their discretion, submit the environmental audit reports to the authorities, the public or other organisations for the purpose of:

- publicising their environmental management efforts;

- responding to the requirements for performance rating of the business; and

- any other purposes as defined by the organisation activity.

This confidentiality policy should not be interpreted as in any way limiting the following.

The rights of authorities to:

- verify the audit results;

- carry out routine or special inspections of an organisation of activity;

- carry out investigations of an organisations or activity suspected of violations or non-compliance with laws and regulations;

- request specific information as the basis for any scheme for environmental performance ranking of an organisation or activity; and

- remove the responsibility of the organisation or activity to provide environmental management and monitoring data as prescribed usually under regulations.

4.9 Training of the auditors

To ensure that environmental audits are conducted in a reputable and professional manner, business activities and non-governmental organisations are recommended to establish and implement a code of ethics and certification of environmental auditors. The environmental auditors should have suitable education and professional experience to carry out their duties. The skills needed by environmental auditors include those in the areas of:

- environmental auditing processes, procedures and techniques;

- characteristics and analysis of management systems;

- laws, regulations and environmental policies, environment health and safety protection systems and technology;

- operation of facilities to be audited; and

- potential environmental impact and worker health and safety risks.

Auditors should also have training and demonstrated ability in areas needed to perform the audit including:

- communication skills;

- work scheduling and planning;

- data analysis and finding; and

- audit report writing.

Environmental auditors should exercise professional care in ensuring accuracy, consistency and objectivity in the performance of audits. Auditors should conform to a recommended code of ethics.

5 References

Unless otherwise specified the latest edition shall apply.

[1]   EIGA Doc 107, *Guidelines on Environmental Management Systems*, www.eiga.eu.

[2]   ISO 14001, *Environmental Management Systems – Requirements with Guidance for Use*, www.iso.org.

[3]   EU *Eco-Management and Audit Scheme* (EMAS), www.ec.europe.eu.

[4]   EIGA Doc 88 *Good Environmental Management Practices*, www.eiga.eu.

[5]   EIGA Doc 102 *Audit Guidelines*, www.eiga.eu.

[6]   EIGA Doc 137 *Environmental Aspects of Decommissioning*, www.eiga.eu.

6   Additional references

[1]   ISO 14004, *Environmental Management Systems – General Guidance on principles, systems and supporting techniques*, www.iso.org.

[2]   ISO 19011, *Guidelines for quality and/or environmental management systems auditing*, www.iso.org.

[3]   Responsible Care, International Council of Chemical Associations, www.icca.org/responsible-care.

Appendix 1 - EIGA Document Links to ISO 14001

Doc No	Title of EIGA Document	ISO 14001 SECTIONS	Clause
107	Guidelines on Environmental Management Systems [1]	Context of the organization	4
		Understanding the organization and its context	4.1
		Understanding the needs and expectations of interested parties	4.2
		Determining the scope of the environmental management	4.3
		Environmental management system	4.4
		Leadership	5
		Leadership and commitment	5.1
		Policy	5.2
		Organization roles, responsibilities and authorities	5.3
		Planning	6
		Actions to address risks and opportunities	6.1
		General	6.1.1
106	Environmental Issues Guide [1]	Environmental aspects	6.1.2
108	Environmental Legislation Applicable to Industrial Gases Operations within the EU [1]	Legal requirements and voluntary obligations	6.1.3
		Environmental objectives and planning to achieve them	6.2
		Environmental objectives	6.2.1
		Environmental improvement programmes	6.2.2
		Support	7
		Resources	7.1
		Competence	7.2
		Awareness	7.3
		Communication	7.4
		General	7.4.1
		Internal communication	7..4.2
		External communication and reporting	7.4.3
		Documented information	7.5
		General	7.5.1
		Creating and updating	7.5.2
		Control of documented information	7.5.3
88	Good Environmental Management Practices for the Industrial Gas Industry [1 and 2]	Operation	8
30	Disposal of Gases		
85	Noise Management for The Industrial Gases Industry [1]		
109	Environmental Impacts of Acetylene Plants		

Doc No	Title of EIGA Document	ISO 14001 SECTIONS	Clause
84	Calculation of Air Emissions from Acetylene Plants		
05	Guidelines for the Management of Waste Acetylene Cylinders		
166	Guidelines on Management of Gas Cylinders		
94	Environmental Impacts of Air Separation Units		
110	Environmental Impacts of Cylinder Filling Plants	Operational planning and control	8.1
117	Environmental Impacts of Customer Installations		
101	The Carbon Dioxide Industry and the Environment		
106	Environmental Issues Guide		
111	Environmental Impacts of Carbon Dioxide and Dry Ice Production [2]		
122	Environ. Impacts of Hydrogen Plants		
112	Environ. Impacts of Nitrous Oxide Plants		
113	Environmental Impacts of Transportation of Gases		
137	Environmental Aspects of Decommissioning		
		Value chain planning and control	8.2
		Emergency preparedness and response	8.3
		Performance evaluation	9
		Monitoring, measurement, analysis and evaluation	9.1
		General	9.1.1
		Evaluation of compliance	9.1.2
135	Environmental Auditing Guide [1]	Internal audit	9.2
		Management review	9.3
		Improvement	10
		Nonconformity and corrective action	10.1
		Continual improvement	10.2

NOTES

1   Specific document relevant to CO_2 and dry ice.

2   General document useful to CO_2 and dry ice.

Appendix 2 - SITE AUDIT CHECKLIST

The following table provides a starting point for assisting auditors in preparing for a site audit. In most cases additional questions supporting information and clarification from site staff will be necessary. As much information should be gathered in advance of the site visit. Verify that the items are present or documented, in particular environmental impact and risk assessments, operating permits and other licences during Audit Preliminary Meeting and Site Inspection.

			Yes/No	Comments	Responsible	Date
	Site Inspection (Walk-Around)	The purpose of the site inspection is: • to get an overview of the site and of the process; • to assess visually the conditions of implementation of the basic environmental management plan; • to communicate with the employees in order to evaluate the level of understanding of the environmental plan and their motivation; • to note the conditions of the following items during a tour of the site in order to compare with the information and environmental SOPs discussed during the audit meeting. If appropriate, use additional sheets to clarify an item or identify any other unusual conditions. Are the site grounds generally free from obvious staining or discoloured soil, concrete or floors? Is the site clear of: • old equipment? • other uncontained debris? Is the site well organised and maintained in good condition? Are quantities of chlorinated solvents (for example 1,1,1-trichloroethane) used on site and recorded? Is every effort made to minimise use and recover spent solvents? Are quantities of cylinders with toxic/flammable residuals held on site kept to a minimum?				
	General					

			Yes/No	Comments	Responsible	Date
	General	Are boundaries and areas surroundings fences in appropriate good environmental conditions?				
		Have surroundings sites and activities for past and present, good environmental records and management systems?				
		Is any information concerning suspected or known contamination classified according to relevant standard in quality and quantity for intended future use of the site?				
		Are suspected, detected or declared to the administration pollution defined or analysed with request for remediation?				
		Are the conditions, processes, contamination acceptance level estimated or defined and at which cost?				
	Air Emissions	If the site requires official approval for emissions to air are these available and up to date? (In the form of permits, licences, consents or authorisations). If relevant, are authorised limits and conditions (for example monitoring data) being met?				
		Are site processes and operations free of significant fugitive air emissions? Are all sources of polluting emissions to air authorised where required? Are efforts being made to control such emissions? Are refrigeration/air conditioner equipment containing Ozone Depleting Substances (ODS) removed from the site? Are fluorinated greenhouse gases compliant with the current regulation? Are equipment containing fluorinated greenhouse gases labelled and controlled? Is the use of solvent based paint minimised, and are water based paints being used to the maximum extent possible? Is the site free of products which could give rise to uncontained dust and fibres (for example asbestos)? Are boilers properly maintained? Are measurements of air emission of boilers performed?				

			Yes/No	Comments	Responsible	Date
	Water Discharges	If the site requires official approval to discharge liquid effluent to ground, surface water (including streams, rivers and lakes) or to underground watercourses are these up to date and available for inspection? (Note: can be in the form of a discharge consent, permit or licence). Are all discharges identified and, if required, authorised, licensed or permitted? Are all liquid discharges and free water (i.e. rain water pools) free from unusual water conditions such as obvious oily sheen, discolouration. etc.)? If applicable, are truck wash waters treated in any way prior to discharge to prevent oils and harmful chemicals entering the drainage system and are any necessary discharge authorisations in place? <u>Is rain water from traffic and parking areas treated prior to discharge to prevent dust and oils entering the drainage system and are any necessary discharge authorisations in place?</u> Are spill prevention and control procedures being implemented? Is appropriate spill clean-up material and equipment readily available and in an easily accessible location? Is all drainage from site well maintained and routed to authorised discharge points? If the site requires official approval to discharge liquid effluent to sewer or drainage connected into a treatment facility are these up to date and available for inspection? (Note: can be in the form of a discharge consent. permit or licence). If relevant, are discharge monitoring reports available for the last 3 years? If relevant, are authorised limits for discharges being met? If relevant, are records of discharge samples kept for the last 3 years? Does the site have up to date procedures in place for spill prevention and control? Is the site supplied by a well, lake, river or municipal source? If relevant, is it authorised?				

			Yes/No	Comments	Responsible	Date
	Waste	Does the site have details of where wastes are finally disposed of (including waste contractor and disposer licence details)?				
		Are signed copies of hazardous waste documentation covering waste transfer and disposal available for the last 3 years?				
		Are copies of data relating to waste composition available for the last 3 years?				
		Does the site have an inventory of all the waste generated for the last year?				
		Does the site have a hazardous waste minimisation/contingency plan in place and is it up to date?				
		Does the site have a waste minimisation/pollution prevention plan in place and is it up- to-date?				
		If the site requires legal authorisations licences for storing and handling waste, are these up to date?				
		Does your company generate hazardous waste?				
		Does your company monitor and document usage, volumes and disposal of any hazardous waste generated?				
		Does your company have (a) specific program(s) to minimise hazardous waste?				
		Does the company investigate the environmental performance of its hazardous waste disposal by suppliers?				
		Does your company monitor and document sites involved in remediation of contaminated soil or water, and their associated costs? Are records available of on-site hazardous waste storage area inspections?				

			Yes/No	Comments	Responsible	Date
	Waste	Has your company identified your non-hazardous waste streams?				
		Does your company monitor and document trends in non-hazardous waste management (for example production, disposal, recycling, reuse) and are there programs in place at your company to minimise non-hazardous waste streams?				
		Has your company phased out the use and emission of ozone depleting chemicals targeted by the Montreal Protocol?				
		Has your company removed all PCB-filled transformers?				
		Do you monitor and document oil spills, chemical spills, and other accidental releases (for example effluent spills?) to all media (land, water, air).				
		Are all waste containers properly labelled with an adequate description of the waste and date of filling?				
		Are hazardous waste collected and stored in properly constructed, undamaged, and closed (except during transfer) containers?				
		Is secondary containment and weather protection provided for hazardous waste containers where necessary?				
		Is waste oil recycled through a licensed or approved recycler, and are licence details held?				
		Are containers of hazardous waste held on site for the minimum time possible, and less than any legally specified maximum?				
		Are only company approved waste haulers/disposal companies being used ?				
		Is there evidence of an active programme for eliminating, minimising and/or recycling waste to the extent practicable?				

				Yes/No	Comments	Responsible	Date

		Storage	Are containers storing hazardous materials:
			• In good condition and fit for purpose and labelled properly?
			• Are liquid hazardous materials stored as follows:
			    ○ On impervious surface?
			    ○ With secondary containment (capable of volume of the largest stored container prevailing regulations and guidance) ?
			Are storage areas:
			• well maintained;
			• clearly identified;
			• protected from weather as necessary?
			
			Is a list of tanks available, showing chemical stored, location, condition, date and result of last inspection, date of next test?
			
			Where required by law, are up to date storage tank registrations available?
			
			Is documentation available detailing storage tank leak detection and inventory control practice on site?
			
			Are all storage tanks in good condition, free of leaks and provided with adequate secondary containment (for example bunding) where necessary?
			
			Are tanks clearly marked (for example contents, capacity, test marks) in accordance with documentation?				

			Yes/No	Comments	Responsible	Date
Emergency planning and community relations	Are emergency actions clearly posted in all areas, with relevant telephone contact numbers?					
	Are the site emergency procedures regularly reviewed and exercised?					
	Is spill clean-up and containment equipment easily available?					
	Is an up-to-date inventory of hazardous chemicals kept on site available?					
	Does the site have a documented plan for dealing with emergencies that may have an environmental significance?					
	Has your company procedures to identify the potential for, and response to, environmental incidents, accidents and emergency situations?					
	Does your company have procedures to report on environmental incidents, accidents and emergency situations and in terms of implementing corrective actions?					
	Are the procedures communicated to suppliers?					
	If necessary, have the relevant details of this plan been communicated with site neighbours?					
	Hazardous substances Is there a programme to eliminate, or if not possible reduce the use of hazardous substances?					
	Is there a list of the hazardous substances on site, plus information on handling, disposal, SDS etc.					
	Does your company, routinely or in specific circumstances, track chemical use through materials accounting or some other method as distinct from, or in addition to, tracking environmental releases?					

	Noise	Does the site have the correct permits or authorisations for noise? Are they complied with? Are regular noise surveys carried out? Has the site received any complaints about noise?				

Appendix 3 - MANAGEMENT SYSTEMS AUDIT CHECKLIST

1	Policy		Yes/No	Comments	Responsible	Date
	Management Policy	Are the environmental responsibilities of the chief executive and executive members of your company reasonably clear? Is a company environmental policy posted in an obvious place? Is there evident that this is endorsed by the site management (by signature, or by specific site policy)? Does your company have a systematic and documented process by which it identifies and responds to the current environmental policy of the government including its laws, regulations, guidelines etc? Are the responsibilities of the chief executive of your company in regard to the environment adequately documented and agreed with the relevant authorities?				
	The Environmental Framework	Has your company developed a comprehensive framework of policies, practices, procedures, systems and relevant management information to support environmental management? (for example ISO 14001, EMAS, Responsible Care, ICC) Is an organised and up-to-date manual or other document present which sets out the following: • Site environmental protection policy organisation, responsibilities and procedures. • Environmental responsibilities within the company. Are they up-to-date? • The extent to which environmental management has been integrated into the overall business management processes of the company? How does your company identify, allocate and review human, technical and financial resources to meet its environmental objectives and targets?				

1	Policy		Yes/No	Comments	Responsible	Date
		Has your company adopted the principles of the Environmental Management System (for example ISO 14001) Has your company assessed the costs and benefits of certification under the standard and has a business case been prepared in support of any decision and has certification been considered /sought/obtained? How does your company collaborate with other departments or agencies in relation to environmental management? How does your company collaborate with non-government stakeholders in the community and business sectors? How has your company assessed the financial cost of managing the environment?				
	The Environmental Policy	Does your company have a documented environmental policy and is this consistent with other corporate policies? Has top management defined and committed to the policy? Is (does) the policy: • appropriate to the nature and scale and environmental impacts of its activities, products or services; • commit to continuous improvement, prevention of pollution, Ecological Sustainable Development (ESD); • comply with relevant environmental legislation and regulations and other environmental mandates; • provide a basis for objective and target setting by setting organisational goals which will drive discrete and measurable outcomes; • communicated to and understood by employees of all business units; • commit to transparency and openness in reporting your company's management of the environment available to and accessible by, the public?				

1	Policy		Yes/No	Comments	Responsible	Date
	The Environmental Policy	Are the policies of your company reviewed periodically to ensure their continuing relevance in light of changing standards, technology, and emerging concerns? What level of management is responsible for maintaining your corporate environmental policies? Are the views of stakeholders taken into account in developing the policy? By what methods are policies communicated throughout your company and stakeholders and do the methods make the best available techniques?				
2	**Management Issues**					
	Planning	**Environmental aspects** How has your company established a systematic and documented process describing the methods to identify, monitor and evaluate environmental aspects of your company's activities, products or services? How does the process: • Drive the development, application and operational aspects of environmental policy? • Identify in an ongoing way all those aspects over which the company has control, or over which it can be expected to have an influence? • Include an environmental risk assessment to evaluate those aspects, which may have a significant impact on the environment in a positive and negative way? • Include the scale, frequency, severity and sensitivity of the environmental impacts? • Ensure that aspects which have a significant impact are considered in setting environmental objectives? • Determine the significance of those impacts using a recognised risk management approach?				

			Yes/No	Comments	Responsible	Date
2	**Management Issues**					
	Planning	• Establish environmental objectives and targets? • Establish programs for achieving those objectives and targets? • Monitor and measure those operations that can have a significant impact on the environment? • Describe how environmental responsibilities and risks will be managed, documented and communicated to appropriate management and staff? • Provide for the audit and review of the process to confirm that planned arrangements are properly implemented and maintained? **Legal and other requirements** Do your operations require compliance with environmental, health or safety regulations at either the national or state level? For example site permits, authorisations and notifications Is there a documented process to: • identify the legal and other regulatory requirements associated with environmental impacts of activities, products or services; • provide access to the legal and other regulatory requirements; • evaluate compliance with the legal and other regulatory requirements? How does your company keep track of (changes to) legal and other requirements? **Objectives and targets** How are your environmental objectives established for each relevant business function and level? Do the objectives identify significant legal aspects and other requirements?				

				Yes/No	Comments	Responsible	Date
2	**Management Issues**						
		Planning	Have targets been set for environmental objectives?				
			Have objectives and targets been communicated to all relevant business functions, employees, contractors and suppliers?				
			Has your company established key performance indicators to demonstrate progress against environmental objectives and targets?				
			Does your company have the capability to identify and track KPIs and other data, necessary to achieve its environmental objectives and targets?				
			How are these targets or objectives linked to the organisation's corporate or business plans to ensure accountability or follow up?				
			How are your company's objectives and targets reviewed and revised to ensure they: • Reflect your company's environmental policy? • Reflect significant environmental impacts associated with your company's operations? • Support continual improvement in environmental performance and best practice?				
			Environmental management programme How have programmes been developed to achieve objectives and targets established for each relevant business function and level?				
			Do these programmes respond to your company's environmental policy and the risk assessment?				
			Do these programmes support or contribute to the authorities or Governments overall environmental outcomes or programs?				

			Yes/No	Comments	Responsible	Date
2	**Management Issues**	Do the programmes nominate: • Personnel with specific responsibilities resource needs? • Strategies and timeframes objectives and targets at each relevant business function and level? Are the programmes monitored to track progress against objectives and targets? Is someone responsible for tracking progress towards achieving objectives and targets? Does the programme include an environmental review for new activities? Has the programme been amended to reflect changes for new activities? Does your company monitor and revise its environmental management programs?				
	Implementation and Operation	**Structure and Responsibility** Is there an executive committee or board to oversee the environmental monitoring and reporting of your company's activities? Has top management defined the roles, responsibilities and authorities of personnel for environmental management in the context of the company's Environmental Management System (EMS)? Do the roles, responsibilities and authorities extend to establishing, implementing, maintaining and reporting on the EMS? Have the roles been documented and communicated to relevant people responsible for environmental management and are the relevant people aware of the roles assigned to them? Has management provided adequate resources to implement and control its EMS?				

			Yes/No	Comments	Responsible	Date
Implementation and Operation		To what extent does your company integrate an awareness of Ecological Sustainable Development (ESD) into its culture?				
		To what extent does your company integrate the principle of ESD in decision making process through the appraisal and evaluation of policies, programs, plans and projects?				
		Are there written guidelines on how to conduct operations in a manner that is responsible in accordance with the principles of ESD?				
		Has your organisation taken measures to gain assurances that systems of internal control for managing the environment:				
		• re appropriate to your company's corporate plan or business charter; • provide timely and useful management information; • include an effective internal audit function?				
		Training, awareness and competence				
		Has your company conducted a training needs analysis for environmental management including ecological sustainable development, (ESD), issues?				
		Is there adequate expertise in your company to deal with the ESD issues?				
		What is your systematic and documented process to ensure that personnel who carry out tasks that have a significant impact on the environment are adequately trained and experienced?				
		How does your company assess the adequacy of resources and training of staff with designated responsibilities for environmental management and/or protection?				
		Are employees' responsibilities for environmental management identified in their accountabilities (for example position descriptions, annual performance goals)?				

			Yes/No	Comments	Responsible	Date
		Are employees encouraged to take the initiative, submit suggestions for improvement, and to suggest actions or policies to reduce your company's environmental impact?				
		Does the training include response to emergencies and drills, and working with external agencies such as fire brigade?				
		Does the company sponsor scientific or policy research devoted to environmental technology, management, and performance issues or other relevant research areas at educational or research institutions?				
		Does the company participate in external activities designed to share the results of such scientific and policy research?				
		Document control Has your company established and maintained procedures for controlling all key documents?				
		Are the procedures adequate so that the documents can be located, are at relevant locations essential to the effective functioning of the EMS, are periodically reviewed and revised as necessary and approved for adequacy by those authorised to approve alterations to documentation?				
		Are obsolete documents removed from all points of issue?				
		Are obsolete documents retained for legal and other reasons and suitably identified?				

			Yes/No	Comments	Responsible	Date
		Communication How does your company communicate with key stakeholders in regard to significant environmental aspects and is this process documented? How does the system take into account specific communications such as required under Seveso (sub-contractors, employees, etc), EMAS etc.? How do you identify, monitor, evaluate and understand the needs and expectations of stakeholders? Does your company have a process to: • record and maintain communications between key employees (in your company) responsible for environmental management, • receive, record and respond to communications from interested parties about environmental impacts associated with your company's operations? Does your company proactively seek the advice of independent community groups (for example through newsletters, regular meetings, open forums, or community oversight committees) regarding possible risks posed by the operations of your company? Are these processes maintained? Have you established documented procedures to monitor and evaluate the effectiveness and efficiency of its communication strategy/plan/methods? Has your company established, and does it maintain, information to describe the core elements of the EMS and their interaction, provide direction on where to obtain more information on specific parts of the EMS? Does the information describe how the elements interact with each other? Does the documentation contain: the environmental policy, objectives and targets (and describe the means of achieving objectives and targets), the key roles, responsibilities and procedures, follow-up or actions or response?				

			Yes/No	Comments	Responsible	Date
		Operational control Has your company identified operations and activities that are associated with significant environmental aspects of your company's operations? (for example using the EIGA documents) Are these operations and activities carried out under controlled conditions and in accordance with operating criteria to ensure compliance with environmental policy and the achievement of objectives and targets? Does your company have a formal written policy regarding materials/resource conservation, reduction, re-use and recycling? Have you established specific targets for material/resource conservation programs for energy, water or waste avoidance, or other emerging issues or activities? Have you established specific targets for each conservation strategy? Does your company monitor and document trends in energy consumption by source? Does your company have a program to maximise the use of environmentally safer and more sustainable energy sources? Does your company, routinely or in specific circumstances, track chemical use through materials accounting or some other method as distinct from, or in addition to, tracking environmental releases? Has your company addressed issues of habitat protection and stewardship (such as watershed management, wilderness protection, biodiversity, etc.) in areas affected by your operations? FOR DETAILED OPERATIONAL SITE CHECKLIST REFER TO APPENDIX 2				

			Yes/No	Comments	Responsible	Date
		Green procurement				
		Does your company have a policy to incorporate ESD criteria in the selection of suppliers/(sub) contractors/service providers goods and services?				
		Does your company have a green transport plan and does it cover transport initiatives and your motor vehicle fleet?				
		Does your company monitor and document trends in fuel consumption by the company's transport fleet?				
		Are there guidelines specifying how (sub) contractors, suppliers, service providers and consultants hired by your company must perform with respect to environmental stewardship?				
		Are there documented environmental monitoring systems including inspections or audits of suppliers/ (sub) contractors/ service providers sites/operations?				
		Community involvement				
		Does your company seek to protect vulnerable or at-risk groups in communities directly affected by your operations?				
		(Environmental justice refers to actions in support of populations most negatively affected by environmental factors, as they tend largely to be those populations most vulnerable due to economic, political, racial or other factors.)				
		Does your company communicate with stakeholders in order to encourage increased participation and understanding in environmental decision making by your company?				

			Yes/No	Comments	Responsible	Date
		Monitoring and measurement Does your company have procedures to regularly monitor and measure the significant operations and activities that can have a significant impact on the environment? Does your company have systematic and documented procedures to evaluate compliance with relevant environmental legislation and regulations? Are periodic audits carried out using established programs and procedures? Does your company have data collection and information management systems adequate to support ESD reporting needs? How is the performance of your company regularly monitored in relation to the principles of ESD and best practice? Do you have a policy/guidelines that sets standards for the quality of Environmental Impact Statements and supporting research? Do you compare and publicly report predictions made in Environmental Impact Statements (EIS) with actual outcomes? Does your company have auditing programs for workplace health, safety and environmental auditing? Does your company monitor and document trends in consumption of natural resources? Are your company's environmental audit programs reviewed by an independent organisation? Does your company seek independent verification of data collection and information management systems? Are your audit results available to the public?				

			Yes/No	Comments	Responsible	Date
		Checking and corrective action Does your company have the financial and non-financial management systems, practices and information to measure the cost and quality of environmental protection services and the use of resources entrusted to the company? To what extent does your company use internal environmental cost information to support internal decision-making? Is this done through a managerial cost accounting system or other financial management system that routinely compiles, analyses, and reports on environmental costs? Which environmental costs are so identified (for example, management costs, resource use, waste disposal, permitting, monitoring, training, auditing, insurance)? At what level are costs aggregated (for example, product, process, facility, division, corporate)? For what purpose is this cost information compiled? **Non-conformance and corrective and preventative action** Do documented emergency/contingency plans exist for rectifying significant environmental mishaps? Does your company have procedures to establish and maintain responsibility and authority for handling investigations of non-conformance and taking corrective and preventative action? Has the cost of rectifying specific environmental mishaps/repercussions been estimated in order to prioritise your risk assessment? **Records** Does your company have procedures for the identification, maintenance and disposition of environmental records?				

			Yes/No	Comments	Responsible	Date
		Management review Does the executive committee or board regularly receive key information, such as performance information, major initiatives or investigations of issues affecting the environment? Does your company have a process to demonstrate how recommendations and feedback from the EMS review have been implemented and contribute to improvement in environmental performance? Does your company review on a regular basis the extent to which objectives and targets have been met, the results of audits undertaken, any changed circumstances, and take into account continuous improvement? Are the results of the reviews documented, reported to, and considered by, the board and/or chief executive? What action is taken on the results of the reviews? Does your company review on a regular basis its EMS (or management arrangements where EMS has not been developed) to ensure: • its continuing suitability, adequacy and effectiveness; • systems conform to planned arrangements; • systems have been fully implemented; • systems are properly maintained; • the views of interested parties and stakeholders are taken into account? Is accountability for ESD performance, environmental compliance and operational decision making principally handled in a centralised, mixed or decentralised fashion?				

			Yes/No	Comments	Responsible	Date
		Reporting Does your company report to regulators? Does your company contribute to National or International reports? Does your company normalise environmental information (for example, chemical releases, energy usage, greenhouse gas emissions) by an activity or unit within your company (for example, per unit of output, per unit of input, per labour hour, per employee)? Does your company produce an annual environmental report? Does this report address the issues of ESD? Is the report externally verified or validated? Does your company report to the governmental authorities and/or the public on the fulfilment of its environmental responsibilities?				