Integrated Environmental Management Information Series

Environmental Auditing

14

Department of
Environmental Affairs and Tourism

Other topics in the series of overview information documents on the concepts of, and approaches to, integrated environmental management are listed below. Further titles in this series are being prepared and will be made available periodically. Sequence of release and titles are subject to change.

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When referencing this document, it should be cited as follows:
DEAT (2004) Environmental Auditing, Integrated Environmental Management, Information Series 14, Department of Environmental Affairs and Tourism (DEAT), Pretoria.

ISBN 0-9584728-4-X

PREFACE

This document is one of a series of overview information documents on the concepts of, and approaches to, Integrated Environmental Management (IEM). IEM is a key instrument of South Africa's National Environmental Management Act (NEMA). South Africa's NEMA promotes the integrated environmental management of activities that may have a significant effect (positive and negative) on the environment. IEM provides the overarching framework for the integration of environmental assessment and management principles into environmental decision-making. It includes the use of several environmental assessment and management tools that are appropriate for the various levels of decision-making.

The aim of this document series is to provide general information on techniques, tools and processes for environmental assessment and management. The material in this document draws upon experience and knowledge from South African

practitioners and authorities, and published literature on international best practice. This document is aimed at a broad readership, which includes government authorities (who are responsible for reviewing and commenting on environmental reports and interacting in environmental processes), environmental professionals (who undertake or are involved in environmental assessments as part of their professional practice), academics (who are interested in and active in the environmental assessment field from a research, teaching and training perspective), non-government organisations (NGOs) and interested persons. It is hoped that this document will also be of interest to practitioners, government authorities and academics from around the world.

This document has been designed for use in South Africa and it cannot reflect all the specific requirements, practice and procedures of environmental assessment in other countries.

This series of documents is not meant to encompass every possible concept, consideration, issue or process in the range of environmental assessment and management tools. Proper use of this series of documents is as a generic reference, with the understanding that it will be revised and supplemented by detailed guideline documents.

ACKNOWLEDGEMENTS

The author acknowledges, with grateful thanks, the ongoing support and freely given assistance provided through on-going networking and co-operation that has been received from colleagues, peers and clients in his research, development and writing work.

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SUMMARY

Environmental auditing has become a valuable tool in the management and monitoring of environmental and sustainable development programmes. The information generated from audit exercises provides important information to many different stakeholders. Although seen primarily as a tool in commerce and industry, creative application of environmental auditing techniques can improve transparency and communication in many areas of society where there is a need for greater understanding of environmental and ecosystem interactions. This information document explains the basic background to environmental auditing. It further includes the basic requirements to conduct environmental audits.

CONTENTS

1. INTRODUCTION

Environmental auditing seems to date back, formally, to around the promulgation of the US National Environmental Protection Act (NEPA) in 1969. Interest amongst US regulators started with a draft report issued by the US Environmental Protection Agency which called for independent, certified third party environmental "auditors" who would visit plants, collect samples, perform analyses and report back results to government authorities. The draft report never developed beyond a draft stage but it did result in robust debate between government and the private sector (Greeno et al., 1987).

Early documentation on environmental auditing began to appear in the mid 1980s (Greeno et al., 1987; Greeno et al., 1988) and management consulting firms began to encourage their clients to undertake environmental audits as a means of quantifying their environmental liabilities.

It is interesting to note that differing forms of environmental auditing have been carried out by private firms in the USA as early as the 1930's. SC Johnson, a family-owned company, undertook social and ecological audits as a part of internal management operations in the 1930's but the information and ideas were not widely publicised.

The first publicly recognised environmental audits in South Africa began around 1989. ESKOM (The South African Electrical Utility) undertook a major environmental audit which was viewed by observers as having mixed success but it did succeed in getting various other companies to begin thinking about environmental auditing. There are no specific legal requirements for environmental audits to be carried out in South Africa. However, in order to achieve compliance with certain environmental legal requirements, environmental auditing as a tool is the most logical means of formally checking compliance.

2. PURPOSE OF THIS DOCUMENT

The purpose of this document is to provide a basic introduction to environmental auditing and its related activities. The text has been purposefully written for a wide audience and sets out to explain and discuss some of the key activities in environmental auditing.

The document also provides insights into different types of non-financial auditing. It is expected that this publication will be of use to academics, advocacy groups, civil society groups, environmental practitioners, government authorities, Interested and Affected Parties (I&APs), industry, project proponents, and students.

3. WHAT IS ENVIRONMENTAL AUDITING?

Environmental auditing is a process whereby an organisation's environmental performance is tested against its environmental policies and objectives. These policies and objectives need to be clearly defined and documented. However, in practice, first time environmental audits are often done less rigorously, because of the absence of appropriate documentation at this stage.

The tests carried out includes: questioning; studying documentation; policies; procedures; work instructions; manuals and other materials that form a part of management systems; and the observation of scenes, processes and events. Evidence which supports the tests carried out is also assembled. When questions are answered verbally, the answers must be supported by evidence in the form of references to work instructions, procedures, manuals, sampling and monitoring results. This evidence forms what is described as an "audit trail" and consists of copies or documents, photographs, references to sections of procedures and manuals, and notes on conversations and discussions. It should be possible to "follow an audit trail" afterwards and track how the findings and recommendations from an audit were arrived at.

Non-financial auditing (including environmental auditing, quality auditing and Safety, Health and Environmental auditing) could be viewed as a methodical examination (including tests, checks, and confirmation) of procedures and practices with the view of verifying whether they comply with internal policies, accepted practices and legal requirements (adapted from Greeno et al., 1987).

The International Chamber of Commerce (ICC, 1991) defines environmental auditing as:

"...A management tool comprising a systematic, documented, periodic and objective evaluation of how well environmental organisation, management and equipment are performing with the aim of contributing to safeguarding the environment by:

* *facilitating management control of environmental practices; and*
* *assessing compliance with company policies, which would include meeting regulatory requirements..."*

Management Tool

An environmental audit is but one of many environmental management tools which are used to assess, evaluate and manage environmental and sustainability issues. This tool can be used in various ways but also has its limitations. The audit is sometimes confused with an Environmental Impact Assessment (EIA). An EIA is a tool used to predict, evaluate and analyse environmental impacts before a project commences, whereas an environmental audit looks at environmental performance for an existing operation or activity.

Systematic

The environmental audit is a systematic process that must be carefully planned, structured and organised. As it is part of a long term process of evaluation and checking, it needs to be a repeatable process which can be readily replicated by (if necessary) different teams of people in such a way that the results are comparable and can reflect change in both a quantifiable and qualifiable manner.

Documented

The base of any environmental audit is that its findings are supported by documents and verifiable information. The audit process will seek, on a sampled basis, to track past actions, activities, events, and procedures to ensure that they are carried out according to systems requirements and in the correct manner. Document trails are vital in verifying verbal answers to questions and ensuring that persons are carrying out their duties and tasks according the correct procedures and training.

Periodic

Environmental audits form part of a process. Although they are individual events, the real value of environmental audits is the fact that they are carried out, at defined intervals, and their results can illustrate improvement or change over time. It can sometimes take as long as three iterations of an audit before sustainable environmental change and improvement can be tracked clearly. This is because the audit will often identify the need for behavioural change which can not always be implemented immediately, particularly if training programmes have to be altered and terms and conditions of service changed.

Objective Evaluation

Although environmental audits are carried out using policies, procedures, documented systems and objectives as a test, there is always an element of subjectivity in an audit. This flexibility reflects the fact that different auditors have different life and professional skills and experience and they may bring different interpretations to site situations and circumstances. Having audit teams that include specialist skills and who come back annually to repeat audits, will tend to level out any variance caused by individual skills and experience.

Environmental Performance

The essence of any environmental audit is to find out how well the environmental organisation, environmental management and environmental equipment are performing. Each of the three components are crucial in ensuring that the organisation's environmental performance meets the goals set in its environmental policy. The individual functioning and the success of integration will all play a role in the degree of success or failure of the organisation's environmental performance.

Facilitating management control of environmental practices

Environmental practices can happen with or without direct or specific instructions. The key to good environmental performance is to ensure that these practices happen according to procedure, guidelines, training and systems requirements. For example, a tanker driver may be told to take a load of liquid waste to a licensed waste site. On the way, he may want to save his employers some money and discharge his load into a stream. He may have good intentions but if he has not be given clear instructions supported by training to follow specific instructions, the consequences of his actions can be severe.

Compliance with company policies and regulatory requirements

Compliance is traditionally thought of as meaning compliance with the law. However, compliance with corporate policies is the primary base, which will include legal compliance as a part of any organisation's governance policies. It could be argued that all legal compliance is the minimum requirement and that companies should have more stringent internal targets to take account of occasions when compliance is not possible due to mechanical breakdown, power failures or other emergency events. Thus there should be greater focus upon compliance with corporate policies which should include the requirement for environmental performance to be better than the minimum legal requirement.

4. DIFFERING TYPES OF ENVIRONMENTAL AUDITS

4.1 Environmental Management Audits

These are audits which are specifically designed to check and evaluate the effectiveness of environmental management systems. Sound environmental management at a site or in an operation depends upon procedures, work instructions, guidelines, specification, training programmes and monitoring systems being implemented by the employees of the organisation operating on the site. If these employees are not given the right instructions, training and procedures within the system, they cannot be expected to carry out their work effectively. Thus, the first stage in auditing an operation is to check the presence, absence and functioning of the environmental management system (which could be formal or informal). This then creates a baseline against which one can check the environmental functioning of an organisation more effectively and objectively.

4.2 Environmental Compliance Audits

Environmental compliance (or performance) audits are specifically designed to test compliance (which covers both legal compliance and corporate compliance) to environmental policies, objectives, laws, by-laws, ordinances, regulations and standards.
These types of audits will often also include more numerical testing and specific checks on, for example, compliance with requirements in water and air permits and licences.

4.3 Environmental Assessment Audit

An environmental assessment audit is an instrument used to check that an Environmental Impact Assessment complies with the minimum legal requirements and also checks to ensure that due legal process has been followed. This particular audit is not common in South Africa but

is used elsewhere in the world to assist in EIA quality control and to reduce unnecessary costs and inconvenience should the EIA be appealed against.

4.4 Waste Audits

Waste audits are environmental audits which specifically look at the waste management component of an operation or site. In such audits, the various aspects of waste management would be reviewed and the methods, procedures and systems checked and verified.

In cases where site management are reluctant to undertake full site environmental audits, it is often easier to motivate for a specialised waste audit because the results of this will often more readily generate data and actions which can save money.

4.5 Environmental Due Diligence Audits

Environmental due diligence audits are described in different ways but are essentially audits which look at the actual and potential environmental liabilities of a site or operation. They are most commonly carried out as a precursor to the purchase of property which has been or is likely to be used for industrial or commercial purposes. Often, they form a part of a wider financial due diligence audit which looks at the various business risks associated with the purchase of property.

The kind of issues that can emerge from environmental due diligence audits include past dumping or burying of hazardous waste which may result in pollutants contaminating the groundwater. In such circumstances, the owner of the land where the waste was buried could be held liable for the clean up costs. It is important, when purchasing property, to ensure that the new owner is not taking over someone else's hidden environmental liabilities.

4.6 Supplier Audits

A supplier audit is an audit carried out by a client to test the environmental compliance of a contractor or supplier. It should be an audit using the environmental conditions included in the contract document. In the absence of any specific conditions, it could be an audit of the supplier's environmental management system with special reference to the client's business. It is often said that in any organisation, one's contractors are the weakest link in the chain of operation. This is not necessarily a reflection on the quality of the contractor's service but acknowledgement of the fact that the contractor will not necessarily have the same goals and objectives as the client organisation. The contractor and client will have a contractual relationship which is often based upon the supply of a specific product or service. If the client wishes a contractor to have exactly the same approach to environmental policy and systems as his own, then this needs to be included in the contract. Furthermore, the compliance with such policies and systems need to be regularly audited. Thus a supplier or contractor audit is one where the contractor is audited against the environmental requirements of the contract.

5. THE DEVELOPMENT OF ENVIRONMENTAL AUDITING

A number of international companies have subsidiaries in South Africa, who periodically conduct environmental audits. These audits are usually based upon the laws and regulations of the home country of the head office. Most experiences in this regard tend to relate to United States companies.

The United States of America (USA) has a strong "Command and Control" legal structure. The USA Environmental Protection Agency (EPA) and other State authorities have a strong monitoring and compliance function. This is in contrast to the South African governance system where negotiation between authorities and companies to gain consensus on legal compliance is preferred.

In order to protect the US companies from potential prosecution resulting from the information emerging from audits, environmental audits for US companies are normally conducted by the company's lawyers. The information gained from the audits is regarded as legally privileged information and cannot be released unless under a court order. Environmental audits in the US tend to focus primarily upon the issue of legal compliance, rather than continuous improvement.

The USEPA has begun to change its approach by encouraging companies to use self audits as a means of "self-policing". This new "self-disclosure" approach is an attempt by the authorities to encourage the correction of problems at an early stage. This avoids delays in disclosure through fear of prosecution which often ultimately results in serious environmental degradation which is more difficult and costly to remediate. If companies come forward with the results on self audits and volunteer their non-compliance with legislation, they can get some of their penalties reduced by as much as 75%.

The emergence of the ISO 14000 series on Environmental Management Systems has resulted in many international corporations seeking ISO 14001 certification for their national and international subsidiaries. Thus, an increasing number of many South African companies are becoming ISO 14001 certified and are being audited annually by local certification bodies.

5.1 Development of Safety, Health, Environment, and Quality Auditing

Non-financial auditing has developed as a business management tool and has resulted in the proliferation of audits in the annual calendars of various companies. Many companies have made the decision to combine non-financial audits such as health, safety, environment and quality in an effort to reduce costs, disruption and inconvenience in the workplace.

This approach has both advantages and disadvantages. The advantages include the fact that there are fewer audits and less likelihood of reduced productivity in the workplace. A disadvantage would be that by combining a number of audits, this could dilute the focus on the

individual components. If this were balanced by increasing the length of time of the audit, this would then begin to increase the disruptive element of the audit which may affect productivity.

The negative effect of the audits could be reduced if companies were to be able to utilise the "added value" from the audits which normally result in reduced wastage, reduced risk, improved performance and reduced incidents. It is not always possible to financially quantify these benefits and so the perception still remains that audits are time consuming and interfere with production.

5.2 Emergence of Sustainability Auditing and Corporate Social Responsibility

The broadening of the scope of environmental auditing to include "Triple Bottom Line" or sustainability auditing is a relatively recent development. The "Triple Bottom Line" concept puts forward the idea that the corporate sector should not focus solely on the financial "bottom line" of profit, but also consider "social bottom lines" and "environmental bottom lines" and incorporate these into their accounting structures.

There are fundamental differences between financial and non-financial auditing and this has been noted in practice by companies who have attempted to undertake broader based auditing exercises. For example, many aspects of the "social" part of the Triple Bottom Line are more difficult to quantify which creates a problem when contrasted with the more precise financial auditing structures.

Auditing guidelines for sustainability auditing have been developed to measure and monitor "Triple Bottom Line" performance (GRI, 2002). The Global Reporting Initiative (GRI) Guidelines provide the corporate sector with a model for "Tripe Bottom Line" accounting and business organisation. Included in these guidelines is a procedure for auditing compliance to the sustainability model.

5.3 Environmental Auditing Programmes

In South Africa detailed guidelines on managing an environmental audit programme can be found in South African Standard – Guidelines for quality and/or environmental management systems auditing (SANS 19011: 2003 Edition 1, ISO 19011:2002 Edition 1).

5.4 Roles, Responsibilities and Activities within Environmental Auditing

Detailed information on this topic can be found in the South African Bureau of Standards (SABS) ISO 14001:1996, Guidelines for Environmental auditing, Audit procedures and auditing of environmental management systems. The information presented below is provided as broad guidance.

Lead Auditor

The lead auditor is responsible for the organisation and management of the audit and liases with the client or the contact person in the case of an internal audit. The lead auditor is also responsible for the organisation, recruitment and management of the audit team and ensuring that the necessary deliverables from the audit, including the audit report, are delivered according to the agreed timetable and plan.

Auditor

The auditor will undertake auditing tasks, alone or as a member of a team, and must be conscious of the ethical and professional responsibilities of his task. This will include ensuring that the audit work is thorough, fair and accurate.

Technical expert

In some cases, a technical expert will be included as a part of an audit team to assist with understanding and interpreting technical aspects of the operation or site being audited. The technical expert does not necessarily have to be an auditor but it does help.

Audit team

The audit team must work together, under the leadership of the lead auditor, to ensure completion within the brief and scope of the audit. The team must be mindful that their activities could disrupt the normal operations of a site or plant and therefore must minimise the negative impact of their inquiries.

Client

The client is the individual or organisation that commissions the audit. In the case of an external audit, it may be the Chief Executive Officer of a company or the Environmental Manager. In the case of an internal audit, it could be the departmental head or the Audit Manager. The client and auditee can sometimes be the same individual, depending upon the structure and system within an organisation or company.

Auditee

The auditee is, nominally, the person who answers the questions put by the audit team and supplies the necessary support data and evidence to back up verbal responses to questions. In practice, the auditee's role is to manage the logistics of the audit.

Auditor Competency and Certification

Currently, the only South African organisation that is providing a formally recognised certification and competency framework for environmental auditors is the Southern African Auditor Training and Certification Association (SAACTA). SAACTA has established an Environmental Management System (EMS) Auditor Certification and Registration Scheme (see glossary reference for SAACTA for further details). There are also a number of private service providers who provide environmental auditor training which includes the provision for registration with overseas environmental auditor registration and certification bodies such as the UK-based, Institute of Environmental Management and Assessment (see glossary and Internet reference).

5.5 Process involved in undertaking an Environmental Audit

There are many different plans and processes for audits. Different circumstances require different approaches and plan frameworks. Box 1 below provides a simple model from which to develop or customise audit plans for a variety of different circumstances.

Box 1: Outline of a simplified model for planning an audit

* Clarification of audit scope and brief
* Pre-audit meeting with auditee
* Second pre-audit meeting to clarify points and logistics (optional)
* Audit team meeting (optional)
* Audit
  - Opening meeting
  - Site tour
  - Questioning, documentation review, consolidation of findings
  - Exit meeting
* Draft Audit report
* Final Audit report
* Audit findings Action Plans
* Next audit

The steps in the auditing process are discussed in more detail, below.

Scope of Audit

The scope of the audit determines exactly what will be done during the audit and what the deliverables of the audit will be. In the case of an environmental management systems (EMS) audit, a typical scope or set of objectives would cover: conformance with EMS criteria; whether or not the EMS has been fully implemented and the system maintained; areas of potential improvement for the EMS; and effectiveness of internal management review.

Planning of Audit

The effective planning and logistics of an audit is critical to ensure a successful audit. Apart from ensuring that the appropriate staff are available to answer audit questions, the logistics of an audit needs to be organised to prevent wasting time.

Pre-Audit Meeting

A pre-audit meeting is an important prerequisite for the audit because it is the first opportunity to meet the auditee and deal with any concerns. It is also the opportunity to gather any documentation that the audit team can study before arriving on site. The audit protocol and audit plan can be handed over at this meeting and discussed in advance of the audit itself. The meeting also presents the opportunity to reinforce the scope and objectives of the audit and discuss practicalities associated with the audit (e.g. access to key staff, photographs on site, site tour, access to documentation, etc.).

Second pre-audit meeting (optional)

Sometimes, auditees may have concerns and questions arising from the pre-audit meeting which cannot be dealt with telephonically or by email. This type of follow up meeting is entirely optional but may assist in bolstering confidence in the audit process and providing support for the auditee's efforts to establish internal auditing systems and processes.

Auditor Meeting

With more complex audits, it is useful to have an auditor meeting before the audit to allocate specific assignments to auditors and confirm details and deadlines. The logistics of this will vary enormously.

Opening meeting

The opening meeting is the first activity of the on-site audit and is the opportunity to introduce the audit team to the site staff.

Audit

Site Tour

The next part of the audit is the site tour which is designed to familiarise the audit team with activities and operations.

Questioning, document review and evidence gathering

The core work of the audit is working through the audit protocol, asking questions, checking answers against site documentation (manuals, reports, monitoring data, work instructions, procedures, training schedules etc.), reviewing documentation against standards, policies and action plans and gathering evidence to support the answers to the questions.

Consolidation, audit findings and review

Time must be allowed for the team to consolidate its findings and prepare the basis for the preliminary report back to be given at the exit meeting.

Exit meeting

The exit meeting is run by the lead auditor and is the mechanism to feedback broad, preliminary findings to site management and staff before the audit team leaves the site.

Draft Audit report

The information gathered by the audit team is consolidated and written up as a draft audit report. This draft report will then be circulated to the audit team and those directly concerned with the audit. The purpose is to check the report for accuracy.

Final Audit report

The final audit report is the corrected final document which contains the findings and recommendations of the audit. It will also form one of the bases of future audits because the information it contains informs some of the tests and analyses that need to be performed in the future. Box 2 below provides an example of the content of an audit report.

Follow up and Action Plans

Environmental audits form part of an on-going process of continuous improvement. They build upon information from previous audits and create a baseline for future audits. For this reason, follow up work in the form of analyses of recommendations and action plans is a crucial part of an audit.

Next Audit

In order to promote continuous improvement it is recommended that the idea of the next audit be discussed during the exit meeting.

5.6 Environmental Audit Reports

The format and content of an environmental audit report will vary enormously, according to the scope of the audit, the requirements of the client and the context of the audit.

The reports should be kept initially as simple and as readable as possible. The most basic of audit reports consists of two columns headed “Findings” and “Recommendations” and each finding is linked to a specific question or heading taken from the audit protocol. This can be made more manageable by including an executive summary at the beginning and the detail in the report can develop from here onwards. Guidelines for formal audit report format and content can be found in ISO 19011:2002 – Guidelines for quality and/or environmental management systems auditing. Box 2 provides an example of the generic contents of an audit report.

Box 2: Example of the contents of an audit report

Executive summary
* Key findings and commentary
* Commentary on site tour and photographs
* Full list of all recommendations

Scope of Audit
* Areas audited, site location, audit focus

Date of audit and participants

Detailed report
* Sections based upon topics covered in audit protocol

Conclusions and Recommendations

Appendices
* Copy of audit protocol
* Photo log
* Supporting documentation (may be included in a separate volume)

6. SOME OF THE TOOLS AND TECHNIQUES USED IN AUDITING

6.1 Checklists

Checklists are very useful tools to use to ensure that different tasks or topics are included during the audit. They are very useful in specialised cases where a complex range of issues and questions need to be asked to ensure that nothing is missed.

One of the limitations of checklists is that there is a tendency to rely too much on a checklist and not look at matters that arise beyond the contents of the checklist or secondary questions and issues that may develop as a result of other information or observations. A checklist

with all the sections carefully ticked off is not necessarily a true reflection of, say, a fully compliant site. If questions or check items have, for some reason, been left off or forgotten, this could have a significant impact upon the conclusions of the audit. It is for that reason that additional information needs to be used in support of checklists.

6.2 Questionnaires (Audit Protocols)

Audit protocols or audit questionnaires provide the basis and structuring for most audits. They are based upon checklist questionnaires but are more complex and include more detail and sometimes logistical information and data relating to the audit and the site being audited.

When developing protocols, every effort should be made to avoid generating questions that can be answered by a simple "yes" or "no". The purpose of questions in protocols is to trigger supplementary questions, additional information not specifically asked in the question and encourage a two-way dialogue.

6.3 Questioning

Questioning is one of the most crucial aspects of auditing yet from a training and awareness point of view, it is often given the least attention. Questions should be posed in a neutral, friendly manner to prevent the auditee feeling defensive or threatened by the nature and content of the questions. The purpose is information gathering in nature and not an interrogation. The questioner must therefore be sensitive to the perspective of the auditee and avoid making the questions accusatory, judgemental or aggressive.

6.4 Observation

Observation is a vital component of an auditing exercise. Observation is a disciplined activity which must be carried out in a very deliberate and controlled manner. Human behaviour being what it is, there is often a tendency to "see what we want to see rather than see what is there". Similarly, one may make an observation and see a fragmentary part of a scene or activity and assume the rest, rather than checking the entire scene. The idea of looking at something twice is important because it is part of the process that checks that the observation is accurately noted, analysed and recorded.

6.5 Photographs

Photographs are a very valuable aid in the audit process. However, in order to use them, a number of important practical points must be borne in mind.
The first point is that formal approval to bring a camera on to site for the audit must be obtained before the audit begins.

6.6 "Drill Down" Sampling

Drill down sampling refers to the process of investigating data as far back as possible, going right back, for example, to the point where the operator read the pressure dial and wrote the reading down on a clipboard. It is necessary, on a sampled basis, to drill down to information or action source in a number of situations to check whether a system is working and that the data being generated through the system's requirements, is actually being generated, recorded and utilised.

Generally, as one finds more errors, faults and non-conformances, one tends to increase the size and scope of the drill down sampling to explore whether the problems are of an isolated nature or whether they reflect a systems breakdown.

6.7 Research

It is useful to try and undertake some background research and investigation into the site or company to be audited. Familiarisation with the operations, products, raw materials reports, press material and newspaper articles all provides useful background information to supplement questioning sessions and help understand the operational processes.

7. THE PRACTICALITIES OF ENVIRONMENTAL AUDITING

7.1 Psychology of auditing

Psychology is the heart of good auditing. If the "people management" of auditing (i.e. auditors and auditees) is done correctly, then the information generated from the audit will be of a high quality and "value added". The following important points need to be borne in mind.

Fear of the unknown

Many people fear the unknown and audits often fall into this category. The reaction to the unknown is to become defensive and suspicious of all questions and queries. If auditors present themselves as open and transparent, this contributes towards better co-operation and communication.

Home Territory

If the auditor recognises that he is venturing on to someone else's " home territory", and gives appropriate respect and recognition to the superior status that fact places upon the auditee, then there is greater impetus on the part of the auditee to share his knowledge and expertise and be magnanimous and free in his sharing of information and experience during the audit.

Emotions

The auditor needs to recognise that he may be subject to a wide range of emotions which are a defence to the audit and what it may bring upon the auditee. Anger, aggression, and fear are all reactions to an audit, particularly if the audit has been "imposed" on a site by "head office" or if the auditee has the view that audits are a waste of time. If the auditor spends time explaining, reassuring and informing the auditee of what the audit is about and how it can benefit the auditee, these emotions will decrease and be less of a hindrance to the audit process.

Use of the Pre-audit meeting

The pre-audit meeting is an ideal opportunity to create a positive view of the audit event by the auditee. If the auditor lays all the facts out on exactly what the audit is about, why it is being carried how it will be carried out, how the results will be used, the benefits, the questions that will be asked and exactly what is to happen, then the auditee has less to fear. Furthermore, the auditee will feel more confident and willing to co-operate. It is important to encourage the auditee to ask questions about the audit process and deliverables to ensure that there is willingness to volunteer all the necessary information to make the audit a success.

7.2 Policing versus Continuous Improvement

Experience has shown that if auditor and auditee work together and share their respective knowledge and experience, both can benefit from the audit exercise. Auditees are often consciously, and sometimes unconsciously, aware of the environmental issues and concerns that need to be addressed in a particular factory, operation or site. By persuading the auditee to share those perspectives with the auditor more detailed information and insights can be acquired.

If the auditor presents himself as a "policeman" looking for errors or faults, the psychological response of the auditee will be to hold back information for fear of being penalised for doing things wrong.

It has been shown frequently that the practical suggestions, alternatives, and observations that have resulted from audits have added positive value to the audited organisation. An outside view, perspective and opinion often helps staff who have been too close to problems or methods to see the value of alternative approaches. An audit report is a very powerful and valuable communications tool to use when working with various stakeholders who need to be convinced that things are running smoothly and systems and procedures are coping with natural changes and modifications that occur.

7.3 A Snapshot in Time

It is important not to lose sight of the constraints associated with environmental audits. They are essentially "snapshots in time". In other words, they reflect a situation and assessment at the time that the audit was conducted. Circumstances will change as activities and developments in the audited operation change. An audit merely samples activities and systems and reflects the status at a particular point in time. It gives indications, suggestions, directions and options, it does not solve problems. Problem solving develops from the findings and recommendations of an audit.

7.4 Quality Control

As in any operation, it is vital to ensure that activities and processes during the audit have some form of quality control to ensure that high standards are maintained. There are many different means of maintaining quality control and their use will vary according to the circumstances of the audits undertaken.

8. ENVIRONMENTAL AUDITING AND DECISION-MAKING

8.1 Transparency

An environmental audit report is one of the useful means of demonstrating an organisation's commitment to openness and transparency. If an organisation believes it has nothing to hide from its stakeholders, then it should feel confident enough to make it's environmental audit reports freely available to those who request them.

8.2 Audit report distribution

As a basic rule, environmental audit reports should be made available to all stakeholders. In such circumstances, the information contained within the report should be written in such a manner that all stakeholders are able to understand it. Should the report be excessively technical, there should be non-technical summaries or appendices included.
Some reports are specifically written for internal organisational consumption and for use as baseline information and guidance for the purpose of continuous improvement.

At the commencement of the audit process, it is advisable to ascertain who the potential audience of the audit report will be and to get consensus on the format, content, circulation and status.

8.3 Confidentiality

The external auditor is an "outsider" and, as such, must be given access to strategic, sensitive and proprietary company information in order to be able to carry out the audit. In order to protect proprietary company secrets and information that ensures a company's competitive advantage, an external auditor may be required to sign some form of secrecy agreement to reinforce the need to safely manage information during the course of the audit. As a basic principle of professionalism, the auditor should keep all information gathered confidential, unless given permission to release information by the client.

8.4 Participation of Stakeholders on Audits

Stakeholders such as neighbouring communities are often very suspicious of the industrial operations that they live next to. This suspicion often stems from a lack of knowledge and understanding of what goes on inside the factories and sites. Inviting representatives of these neighbouring communities to participate in the routine internal audits, and even the less frequent external audits, is a means of demonstrating good faith and openness.

8.5 Audit Follow-up

Audits are exercises which generate considerable quantities of valuable management information. The time and effort and cost involved in this exercise is often considerable and in order to be able to justify this expenditure, it is important to ensure that the findings and recommendations of the audit are considered at the correct level within the organisation and that action

plans and implementation programmes result from the findings.

Audit follow up is part of the wider process of continuous improvement. Without follow-up, the audit becomes an isolated event which soon becomes forgotten in the pressures of organisational priorities and the passing of time.

8.6 Auditing and Formal Systems

Many companies are taking the route of establishing environmental management systems which are based upon the ISO 14001 standard for EMS. The choice of whether to actually certify the system formally is dependent upon cost benefit and associated demand from customers and clients. Whilst it may be seen to be desirable to certify, many organisations will align their internal environmental management systems to ISO 14001 and delay the formal certification until there is a business motivation to certify.

The ISO 14000 series contains a number of standards which expand upon the primary ISO 14001 system, notably ISO standards 14004 (General guidelines) 14010 (Auditing principles), 14011 (Audit procedures), 14012 (Auditor qualification criteria), 14041 (Life Cycle Analysis) and 14050 (Vocabulary).

The voluntary European Eco-Management and Audit Scheme (EMAS) is an initiative designed to improve companies environmental performance. It is generally agreed to be more rigorous that ISO 14001.

9. CONCLUSIONS

Environmental audits can "add value" to the management approaches being taken by companies and organisations and is a way of identifying, evaluating and managing environmental risks (known and unknown). It can be undertaken at various levels of sophistication and detail which can be tailored to the needs of the client organisation.

The current focus on shifting business priorities from just a financial profit bottom line to a broader "Triple Bottom Line". This means that organisations need to collect more data and evaluate performance on a wider and more diverse basis. The environmental audit assists in the process of testing performance in the environmental arena and is fast becoming an indispensable aid to business decision making.

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Eco-Management and Audit Scheme (EMAS) – main European site - http://europa.eu.int/comm/environment/emas/index_en.htm

Environment Canada – Environmental Auditing – Useful source point for Canadian approach to environmental auditing – http://www.on.ec.gc.ca/pollution/fpd/auditing/into-e.html

Institute of Environmental Management and Assessment (IEMA) – Environmental Auditor registration body - http://www.iema.net/htmlpage.php?pname=about

Interactive Environmental Management Tools – International Network for Environmental Management (INEM) – http://www.inem.org/tools/index.html

ISO 14000 main site - http://www.iso.ch/iso/en/iso9000-14000/iso14000/iso14000index.html

Quality of Life Capital Toolkit – Includes checklists and other tools to audit environmental and sustainability issues – http://www.qualityoflifecapital.org.uk/toolkit.htm

South African Human Rights Commission (Promotion of Access to Information Act Unit) http://www.sahrc.org.za

11. GLOSSARY

Definitions

Affected environment
Those parts of the socio-economic and biophysical environment impacted on by the development.

Affected public
Groups, organizations, and/or individuals who believe that an action might affect them.

Alternative proposal
A possible course of action, in place of another, that would meet the same purpose and need. Alternative proposals can refer to any of the following but are not necessarily limited thereto:
* alternative sites for development
* alternative projects for a particular site
* alternative site layouts
* alternative designs
* alternative processes
* alternative materials

In IEM the so-called “no-go” alternative also requires investigation.

Auditee
Term used to describe the person being audited. Where an organisation is being audited, it is normal to have an individual act as the auditee and coordinate responses to auditor questions, bringing in specific internal organisation experts and specialists to answer questions that the auditee cannot personally respond to.

Auditor
The auditor is the person who poses audit questions to the auditee and carries out inspections, information and document reviews. The auditor may be alone or a part of a team.

Authorities
The national, provincial or local authorities, which have a decision-making role or interest in the proposal or activity. The term includes the lead authority as well as other authorities.

Baseline
Conditions that currently exist. Also called “existing conditions.”

Baseline information
Information derived from data which:
* Records the existing elements and trends in the environment; and
* Records the characteristics of a given project proposal

Certification Audit
A certification audit (in the context of the ISO 14000 series) is an audit which is carried our specifically to verify that an organisation can be awarded a certificate that confirms that the organisation's environmental management systems meet the minimum requirements to formally conform to a specified ISO standard or EMAS.

Compliance Monitoring
Compliance monitoring is a continuous and systematic process to ensure that the conditions in the Environmental Management Plan (EMP) are adhered to. (modified from Heydenrych R & Claassen P (compilers) (1998), page 49)

Continuous Improvement
Continuous improvement is a philosophy that dictates that processes, procedures, practices, operations and activities are continually reviewed and revisited to look for opportunities to improve with such expected results as reduced energy and water consumption, reduced or removed negative environmental impacts, improved safety and health operations, reduced hazards and risks. Continuous improvement features as an important part of Responsible Care® principles, ISO 14001, and EMAS.)

Decision-maker
The person(s) entrusted with the responsibility for allocating resources or granting approval to a proposal.

Decision-making
The sequence of steps, actions or procedures that result in decisions, at any stage of a proposal.

Environment
The surroundings within which humans exist and that are made up of -
i. the land, water and atmosphere of the earth;
ii. micro-organisms, plant and animal life;
iii. any part or combination of (i) and (ii) and the interrelationships among and between them; and
iv. the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being. This includes the economic, cultural, historical, and political circumstances, conditions and objects that affect the existence and development of an individual, organism or group.

Environmental Assessment (EA)
The generic term for all forms of environmental assessment for projects, plans, programmes or policies. This includes methods/tools such as EIA, strategic environmental assessment, sustainability assessment and risk assessment.

Environmental Audit
An environmental audit is a methodical examination (including tests, checks, and confirmation) of environmental procedures and practices with the view of verifying whether they comply with internal policies, accepted practices and legal requirements (adapted from Greeno J Ladd, Hedstrom GS, & Diberto M, 1987)

Environmental Compliance Audit (Environmental Performance Audit)
An environmental compliance audit is an audit which focuses primarily upon assessing legal compliance and compliance to specific systems and procedures.

Environmental Consultant
Individuals or firms who act in an independent and unbiased manner to provide information for decision-making.

Environmental Due Diligence Audit (also "Due Diligence Audit")
An environmental due diligence audit is an audit that is normally carried out before acquisition or sale of a business or property to check the extent to which the business may have known or unknown (or visible or hidden) environmental liabilities. If a business has undeclared environmental liabilities, then these could materially affect the value of the business as at some later point, the business may be required to deal with those liabilities (e.g. clean up buried waste which has caused pollution) and thus its assets could be diminished. An environmental due diligence audit may identify one or more environmental liabilities and this may result in a re-negotiation of the price paid for the business because the liability is seen as a potential charge against the business.

Environmental Impact Assessment (EIA)
A public process, which is used to identify, predict and assess the potential environmental impacts of a proposed project on the environment. The EIA is used to inform decision-making.

Environmental Management Audit
An environmental management audit is an audit which explores the extent, nature and format of environmental management systems that are in place. It is normally carried out to evaluate operations which may be considering certification for formal EMS systems such as ISO 14000 or EMAS and require an indication of how well their existing system is functioning and what is needed to bring them up to conforming to a formal EMS system requirement.

Environmental Management Systems Audit
An EMS audit, where an established EMS is in place, is an audit that would be carried out to test the effectiveness and appropriateness of the EMS against the context of current operations and activities or to comply with EMS audit requirements of ISO 14001 or EMAS.

Fatal flaw
Any problem, issue or conflict (real or perceived) that could result in proposals being rejected or stopped.

Finding
A Finding is the term used to describe an item raised in a surveillance audit or a certification audit associated with an ISO system which requires some correction in order to ensure certification or continued certification.

Impact
The positive or negative effects on human well-being and/or on the environment.

Institute of Environmental Management and Assessment (IEMA)
The Institute of Environmental Management and Assessment (IEMA) is a not-for-profit organisation established to promote best practice standards in environmental management, auditing and assessment. Its origins lie in the merger in 1999 of the Institute of Environmental Management, the Institute of Environmental Assessment (IEA), and the Environmental Auditors Registration Association (EARA).

Integrated Environmental Management (IEM)
A philosophy which prescribes a code of practice for ensuring that environmental considerations are fully integrated into all stages of the development and decision-making process. The IEM philosophy (and principles) is interpreted as applying to the planning, assessment, implementation and management of any proposal (project, plan, programme or policy) or activity - at the local, national and international level - that has a potentially significant effect on the environment. Implementation of this philosophy relies on the selection and application of appropriate tools to a particular proposal or activity. These may include environmental assessment tools (such as Strategic Environmental Assessment and Risk Assessment); environmental management tools (such as monitoring, auditing and reporting) and decision-making tools (such as multi-criteria decision-support systems or advisory councils).

Interested and affected parties (I&APs)
Individuals, communities or groups, other than the proponent or the authorities, whose interests may be positively or negatively affected by a proposal or activity and/or who are concerned with a proposal or activity and its consequences. These may include local communities, investors, business associations, trade unions, customers, consumers and environmental interest groups. The principle that environmental consultants and stakeholder engagement practitioners should be independent and unbiased excludes these groups from being considered stakeholders.

Lead authority
The environmental authority at the national, provincial or local level entrusted in terms of legislation, with the responsibility for granting approval to a proposal or allocating resources and for directing or coordinating the assessment of a proposal that affects a number of authorities.

Mitigate
The implementation of practical measures to reduce adverse impacts.

Non-governmental organizations (NGOs)
Voluntary environmental, social, labour or community organisations, charities or pressure groups.

PCBs
Stands for “Polychlorinated biphenyls”. These are a diverse mixture of aromatic compounds that were used in the past as insulating and cooling agents in electrical transformers, in the manufacture of paper and as plasticizers in waxes. They are very stable, difficult to break down and found widely in the environment. They have mostly been removed from use but still persist in the environment and need monitoring. They have been withdrawn from general use because of diverse and significant health impacts which include cancer inducement.

Permit Audit
A permit audit is an audit carried out, usually as a formal permit condition, to externally check the compliance of an organisation to the terms and requirements of a permit such as a water licence.

Proponent
Any individual, government department, authority, industry or association proposing an activity (e.g. project, programme or policy).

Proposal
The development of a project, plan, programme or policy. Proposals can refer to new initiatives or extensions and revisions to existing ones.

Proprietary information
Proprietary information is information belonging to a company or commercial enterprise which is kept confidential because if it got into the hands of their competitors, it could affect competitive advantage (including technical, financial, environmental), market share and the ability to remain in business and remain profitable. Auditors must ensure that when they work with proprietary information, it cannot, as a result of their use and handling of such information, get into the hands of the auditee’s competitors and be used against the firm or to the firm’s disadvantage.

Public
Ordinary citizens who have diverse cultural, educational, political and socio-economic characteristics. The public is not a homogeneous and unified group of people with a set of agreed common interests and aims. There is no single public. There are a number of publics, some of whom may emerge at any time during the process depending on their particular concerns and the issues involved.

Responsible Care®
Responsible Care® is a voluntary, international chemicals industry programme which calls on all chemical companies to demonstrate their commitment to continuously improving their performance in the protection of health, safety and the environment. It has been adopted in 41 countries around the world and by 120 companies in South Africa. The initiative is a profound cultural change for the industry in that it demands greater openness, education and communication and sends a message to a sceptical public which says, “Don’t trust us, track us”. The tracking element is done through regular reporting of progress, auditing and performance improvement.

The custodian of Responsible Care® in South Africa is the Chemical and Allied Industries’ Association (CAIA). Supporter companies of the Responsible Care® programme are required to sign a formal, public pledge which obliges them to:- operate in a manner which minimises negative environmental impacts, communicate with neighbours; customers and the public on their activities, promote the principles of Sustainable Development, provide information about their products, regularly audit their activities and performance and seek to continuously improve their knowledge and performance with regard to health, safety and environmental efforts.

Role-players
The stakeholders who play a role in the environmental decision-making process. This role is determined by the level of engagement and the objectives set at the outset of the process.

SAATCA
SAATCA (South African Auditor and Training Certification Association) is a section 21 company which was established to develop and implement a registration scheme for the certification of non-financial auditors. Initial certification was for Quality Auditors in terms of the ISO 9000 Quality Management Series and this, since 1998, has expanded to include Environmental Management Systems (EMS) auditors. Certification is carried out in terms of a SAATCA Administrative manual, "SAATCA Environmental Management System (EMS) Auditor Certification & Registration Scheme", Reference SAATCA\EMS.001\1998, February 1999 Rev 2.

Scoping
The process of determining the spatial and temporal boundaries (i.e. extent) and key issues to be addressed in an environmental assessment. The main purpose of scoping is to focus the environmental assessment on a manageable number of important questions. Scoping should also ensure that only significant issues and reasonable alternatives are examined.

Screening
A decision-making process to determine whether or not a development proposal requires environmental assessment, and if so, what level of assessment is appropriate. Screening is initiated during the early stages of the development of a proposal.

SHEQ Audit
A Safety, Health, Environment and Quality (SHEQ) Audit is carried out by many organisations who wish to reduce the costs and inconvenience of having a number of separate audits and, instead, combine these audits into one exercise.

Significant/significance
Significance can be differentiated into impact magnitude and impact significance. Impact magnitude is the measurable change (i.e. intensity, duration and likelihood). Impact significance is the value placed on the change by different affected parties (i.e. level of significance and acceptability). It is an anthropocentric concept, which makes use of value judgements and science-based criteria (i.e. biophysical, social and economic). Such judgement reflects the political reality of impact assessment in which significance is translated into public acceptability of impacts.

Stakeholders
A sub-group of the public whose interests may be positively or negatively affected by a proposal or activity and/or who are concerned with a proposal or activity and its consequences. The term therefore includes the proponent, authorities (both the lead authority and other authorities) and all interested and affected parties (I&APs). The principle that environmental consultants and stakeholder engagement practitioners should be independent and unbiased excludes these groups from being considered stakeholders.

Stakeholder engagement
The process of engagement between stakeholders (the proponent, authorities and I&APs) during the planning, assessment, implementation and/or management of proposals or activities. The level of stakeholder engagement varies depending on the nature of the proposal or activity as well as the level of commitment by stakeholders to the process. Stakeholder engagement can therefore be described by a spectrum or continuum of increasing levels of engagement in the decision-making process. The term is considered to be more appropriate than the term "public participation".

Stakeholder engagement practitioner
Individuals or firms whose role it is to act as independent, objective facilitators, mediators, conciliators or arbitrators in the stakeholder engagement process. The principle of independence and objectivity excludes stakeholder engagement practitioners from being considered stakeholders.

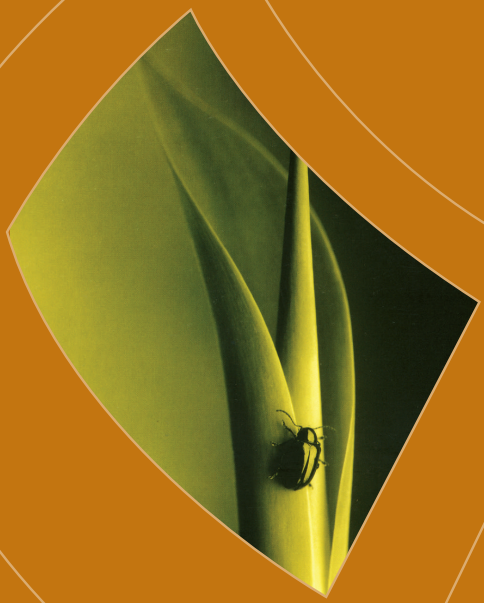
Surveillance Audit
A Surveillance Audit: A surveillance audit is the term used to described an audit undertaken to verify that an organisation with an existing (ISO) certification is still meeting the minimum requirements of certification. A certificate is valid for 12 months and surveillance audits are usually carried out every six months.

Third Party Audits
Third party audits are external audits carried out by "a third party" and are a means of independently verifying internal audits carried out by an organisation. They also add credibility to the effective functioning of organisations' environmental management systems. These audits would be carried out by specialised audit consultants rather than auditors from an organisation's other sites.

Verification Audit
A verification audit is often carried out as a means of checking the validity and accuracy of the information contained in a report, or more specifically an environmental report. Verification statements at the back of environmental reports reflect a verification exercise which has tested a sample of data in the report for accuracy and appropriateness. The verification exercise might also be carried using for example, the GRI Guidelines or EMAS reporting requirements as a reference point.

ABBREVIATIONS

CBO	Community-based Organization
EA	Environmental Assessment
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EMS	Environmental Management Systems
I&AP	Interested and Affected Party
IEM	Integrated Environmental Management
NGO	Non-governmental Organization
SEA	Strategic Environmental Assessment



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