

**AUDITING THE ENVIRONMENTAL MANAGEMENT SYSTEM
INTERIM GUIDANCE NOTE**

August 1998

INTRODUCTION

The Australian Minerals Industry Code for Environmental Management requires two forms of auditing. A regular audit of the Environmental Management System and environmental performance must be conducted by internal or external personnel. This Guidance Note has been prepared for this purpose. The EMS Audit Protocol is recognised to be comprehensive and may contain elements that are not relevant to individual sites. Signatory companies may choose to combine both audit requirements into a consolidated process.

In addition to EMS auditing, there is a requirement to audit Code Conformance. Implementation of the Code must be evaluated every two years by qualified, externally-accredited auditors from the signatory company, or by accredited external auditors appointed by the company.

Introduction: Using this Guidance Document

This guidance document is designed to help companies implement the principles, systems, and processes of the Australian Minerals Industry Code for Environmental Management. Specifically, it is a protocol for reviewing the design and implementation of an environmental management system (EMS) consistent with the Principles of the Australian Minerals Industry Code for Environmental Management and generally accepted components of an effective EMS. Figure 1 at the end of the document shows how each of the management system components and the specific underlying steps in this protocol align with the Principles of the Code.

Some key points to keep in mind when reviewing the adequacy and effectiveness of management systems:

Understand Context: It is critical to understand the context within which the organisation operates - different types of management systems can be equally effective depending on the specific organisation and its situation.

Interview the Right People: An EMS assessment requires information from a broad range of organisation levels and functions to understand how well environmental management is integrated in the overall management systems of the organisation.

Evaluate Design vs Implementation: Is the problem in the design of the system or in its implementation? You can have a well-designed system that is not being used or you can have a flawed system or practice which is ineffective (regardless of whether it has been fully implemented.)

Distinguish between Evidence of Deficiency vs Concern for Future: Do you have evidence that a system is not functioning (eg, past audit findings whose underlying causes point to a problem with the management system), or do you have a concern that it may fail in the future?

Compare Environment vs Health and Safety: You may find that the management systems for health and safety are at a different level of maturity/sophistication than environmental management systems. There may be opportunities to bring one up to the level of the other, or integrate their management to improve effectiveness and reduce costs.

Completing this protocol will help address the continuous improvement and performance review provisions of the Code. You will note that the protocol has two columns for taking brief notes. The first column provides space to jot down comments or reminders about protocol steps; the second provides a place to reference your more detailed notes. If protocol steps are not applicable, explain the basis for this determination in your working papers or under the column "Reviewer's Comments". Information gathered to complete each section should be recorded in your working papers and the page number recorded under the column "Working Paper Reference". If this review is completed in conjunction with an environmental compliance audit, information should be gathered from the entire team prior to developing conclusions regarding the design, implementation, and effectiveness of the EMS.

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A. Policy and Management Commitment

Policy

1. Determine if the organisation has formally adopted an environmental policy that is consistent with the Code.
2. Verify through interviews and reviewing newsletters, training programs, bulletin boards, etc., that the environmental policy has been communicated to and is understood by employees.
3. Evaluate whether the organisation is making a good faith effort to implement the policy and whether those efforts are being successful (i.e., in terms of results).

Management Commitment

4. Interview senior managers and others at lower organisational levels as appropriate to determine whether:
 - a. Senior managers have been assigned overall responsibility to oversee compliance and ensure implementation of an EMS consistent with the Code.
 - b. Senior managers routinely receive information on environmental performance and program status (e.g., incidents, results of inspections/audit and corrective action status, progress versus performance objectives and targets).
 - c. Senior managers participate in specific environmental initiatives/programs (eg, key meetings, development and/or review of important policy/program documents, development of waste reduction goals, training, inspections, incident investigations).
5. Confirm that senior management participates in a periodic formal review of the EMS for continuing appropriateness, adequacy, and effectiveness.

B. Organisation and Resources

Organisational Structure

6. Review the environmental function's organisational

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structure to determine if it is rationally designed in terms of layers of management and span of control and its placement in the overall organisation gives it adequate independence and organisational clout to effectively implement programs.

7. Consider whether the organisational rank of the person primarily responsible for environmental management is perceived to be similar in stature to other managers in line and staff functions.

Responsibilities and Accountabilities

8. Interview staff who have specific responsibility for managing environmental program development and implementation. Determine if the roles and responsibilities cover:
 - Tracking legal/regulatory requirements.
 - Identifying, characterising and evaluating the significance of environmental issues and risks.
 - Identifying stakeholders concerns and responding to external requests for information, etc.
 - Developing policy and procedures.
 - Identifying training needs and implementing training programs.
 - Conducting routine site inspections/audits.
 - Following up on inspections/audits.
 - Reporting to management on EMS implementation and overall environmental performance.
9. Verify through these interviews as well as by reviewing job descriptions and annual performance goals that the roles listed above are clearly defined, documented, and understood and that there are no redundancies or gaps in coverage. If there is some misunderstanding, determine the underlying-a cause (e.g., inadequate communication, undefined responsibilities).
10. Interview line management to determine if their job descriptions and/or performance goals have explicit statements regarding their responsibility for

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environmental performance (e.g., staying in compliance, implementing the EMS, achieving selected performance targets, ensuring that staff receive appropriate environmental training, reporting incidents). Evaluate whether they behave as if environmental compliance and performance improvement are part of their personal responsibility.

11. Determine whether there are systems for recognizing good environmental performance or taking disciplinary action for poor performance.

Resources

[Note: This section is best addressed towards the end of a review, in the context of all other findings.]

12. Determine whether staffing levels are adequate to implement the environmental policy and attain the organisation's defined environmental objectives and targets. (For example, do actual performance results [i.e., compliance audit results, incidents, progress versus goals] indicate a human resource shortage; is there an excessive amount of overtime by environmental staff; is there an over-reliance on contractors to perform environmental tasks; have requests for additional staffing been postponed and why?).
13. Determine whether dedicated environmental staff have the relevant background, training, and capabilities to effectively carry out their responsibilities (e.g., review hiring qualifications for key positions, training profiles, certifications, performance reviews). If no, assess why.
14. Determine whether there are sufficient physical (facilities and equipment) and financial resources (including accruing for future reclamation/closure activities) to implement the environmental policy and defined objectives and targets.

C. Communications and Public Policy/Outreach

Internal Communications

15. Interview environmental staff and line managers to determine if systems are in place for routinely

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reporting environmental information. For example, determine whether:

- a. There are defined circumstances that require immediate reporting to environmental or senior line management (e.g., unintended or uncontrolled releases, permit exceedances, regulatory actions).
 - b. There is routine reporting on environmental issues and performance to key line managers and staff (e.g., progress versus objectives and targets, program status, resolution of significant matters) including reporting to employees and the Board of Directors.
 - c. There are mechanisms for cross-functional and cross-site information sharing (e.g., lessons learned, proposed regulations, new technologies).
16. Evaluate whether there are systems in place to identify and address employees' environmental concerns and provide employees a mechanism to report environmental deficiencies/non-conformances without fear of retribution.

External Communications

17. Evaluate whether there is an effective process to identify the information/communication needs of key external stakeholders (e.g., environmental groups, investors, communities).
18. Determine whether the organisation has established community liaison(s) appropriate for each stage of operations.
19. Evaluate whether the organisation's external communication fosters openness and dialogue with communities. Determine whether the organisation communicates with local communities e.g., to:
- Coordinate on emergency response activities,
 - Inform them on relevant risks/impacts from facility operations,
 - Solicit their input on major new projects/developments,
 - Promote environmental successes/achievements.

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20. Assess whether there is a professional, positive, and open relationship with relevant regulatory agencies.
21. Determine whether the organisation prepares and distributes an annual public report that includes information on:
- environmental policy, objectives and targets,
 - environmental management systems,
 - performance in relation to regulatory requirements and internal objectives and targets,
 - significant environmental incidents or prosecutions,
 - strategies for addressing key environmental issues/risks.

Public Policy and Outreach

22. Determine whether the organisation supports research to expand scientific knowledge, develop improved technologies to protect the environment and mitigate damage from past/current practices, and promote sustainable resource development.
23. Determine if environmental practices and technologies are shared with others outside of the organisation ("technology transfer").
24. Determine whether the organisation (possibly in conjunction with an industry or other association) works proactively with governmental organisations to develop new/improved environmental regulations and standards.

D. Environmental Issues and Risks (identification of Environmental Aspects).

25. Determine if the organisation has systems in place to identify, characterise, and evaluate the significance of the relevant environmental issues and risks associated with its activities, products, and services. These environmental issues and risks may include:
- Discharges,
 - Emissions,
 - Consumption of materials and natural resources, including land,

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- Degradation of soil and groundwater quality,
 - Impacts on biodiversity.
26. Evaluate whether these systems are comprehensiveness in scope. Do they address:
- Normal operating conditions on site,
 - Emergency/off-normal situations,
 - Problems from past operations/practices,
 - Exploration activities,
 - Proposed developments and operations,
 - Closure, decommissioning and rehabilitation activities,
 - Supplier/vendor hazards,
 - Risks/issues associated with customer use and disposal of products.
27. Evaluate whether these systems:
- a. Use accurate, quantitative data on environmental releases, resource consumption, and environmental quality to characterise environmental issues and risks.
 - b. incorporate a consistent, credible process for identifying the most significant environmental issues and risks.
 - c. Include a process in place to update the information to reflect changing regulations, activities on site, new materials/supplies, new projects, etc.

[NB: This section deals with identification of issues and risks; section G, Management Programs and Plans, focuses on the programs designed to address these issues and risks.]

E. Legal and Other Requirements

28. Verify by interviewing staff and reviewing procedures that the organisation has a system in place to keep abreast of new and proposed regulatory requirements or other performance criteria (such as group or corporate standards,

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industry or association practices and/or standards, contracts, and other documents that may create binding obligations).

- 29. Determine how the organisation evaluates these changes, communicates these changes to appropriate personnel, and incorporates them into its operations. (Identify a recent regulatory change and assess how the organisation handled it.)
- 30. Based on a review of the significant environmental issues and risks, determine if the organisation develops its own standards or programs to manage aspects that are not addressed by the existing legal and other requirements.

F. Objectives and Targets

- 31. Determine whether the organisation has established a documented set of environmental objectives and targets and communicated them effectively throughout the organisation.
- 32. Verify by comparing and contrasting relevant documents that the environmental objectives and targets:
 - a. Are consistent with the organisation's environmental policy, significant environmental issues and risks, and scope of applicable legal/regulatory requirements, technological options, business challenges, and the concerns of relevant internal and external stakeholders.
 - b. Reflect a commitment to continuous improvement
 - c. Address sustainable development issues and pollution prevention opportunities (e.g., reuse and recycling of mineral products and continuous improvement in operational efficiencies and waste minimization).
- 33. Determine whether these objectives and targets are reflected in the organisation's performance appraisal process and key performance indicators for responsible managers (particularly for line management).

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G. Management Programs and Plans

34. Determine whether the organisation has prepared and implemented an appropriate range of management programs and plans to meet its environmental objectives and targets. Consider whether these programs and plans are sufficiently specific including identifying responsibilities for actions needed to achieve the objectives and targets and addressing required resources and schedules.
35. Evaluate the extent to which the design and implementation of the programs reflect an attempt to integrate the EMS and its underlying programs with other existing management systems (eg, procurement, health and safety, production process design).
36. Determine if these programs and plans were prepared in conjunction with line management or other non-environmental staff members, especially if these personnel are required to implement designated tasks.
37. Verify that the organisation has a "change management" program in place to review the full range of capital projects, new construction, maintenance modifications, process changes, new exploration initiatives, and R&D initiatives to identify and address potentially significant environmental issues and risks. Consider whether these reviews:
 - a. Are performed by appropriately trained professionals using a formal methodology.
 - b. Evaluate the impacts of alternative project concepts and provide an opportunity for stakeholder input.
 - c. Are done in a timely manner to ensure that issues and risks are identified and addressed prior to the change being implemented.
38. Determine whether the organisation has effective programs to handle decommissioning and rehabilitation of sites. Verify that these programs:
 - Analyse and incorporate decommissioning options during conceptual design.

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- Estimate and periodically review decommissioning and rehabilitation costs.
- Update decommissioning strategies to incorporate changing requirements, public expectations, or data.
- Review rehabilitation performance against clearly-defined objectives and refine these criteria where appropriate.
- Provide for progressive rehabilitation consistent with site operations and disturbance.
- Address long-term responsibility for land management.

H. Operational Control

39. Verify by reviewing standard operating procedures or other documents and interviewing staff that the organisation has clearly defined guidance for managing operations and other activities that have the potential to lead to "non-conformances" with the environmental policy, objectives and targets, and legal requirements (this could include standard operating procedures, stipulating operating criteria, engineering standards, designation of stop work authority, warning systems).
40. Select a sample of these operational control procedures and verify that they are being effectively implemented.
41. Confirm that the organisation has systems in place for monitoring and measuring key characteristics of its operations and activities that have environmental impacts or are regulated by environmental laws. Determine whether these mechanisms can identify potential emergency scenarios (or simply upset conditions) and transfer that information to appropriate staff in a timely fashion.
42. Determine whether appropriate physical sampling protocols, locations, and laboratories are used. Verify that the monitoring equipment is calibrated and maintained, records of these activities are prepared, and the information is tracked and evaluated.

I. Training, Awareness, and Competence

43. Determine whether the organisation has systematically identified training needs for positions

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This document is provided for guidance only and is non-mandatory. It is recognised that best practice will differ from site to site and from company to company.

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whose activities can impact environmental performance.

44. Determine whether the scope of the training includes:
 - Environmental awareness (eg, policies, issues, risks, roles and responsibilities, EMS overview).
 - Regulatory requirements and performance targets.
 - Operational control procedures.
 - Emergency response and preparedness.
45. Based on a review of a sample of training courses, determine whether courses are delivered by competent instructors, include examinations or other mechanisms to verify learning, and attendance at training sessions is documented.
46. Identify a sample of personnel who perform tasks that can cause significant environmental impact. Verify that these staff members have received appropriate environmental training relative to the job functions/tasks performed.
47. Verify that there are mechanisms to ensure that new and transferred employees, as well as visitors and contractors receive orientation training on relevant environmental topics including emergency response procedures.
48. Confirm that steps are taken to ensure contractors are competent to complete their tasks and familiar with company practices and procedures with which they must comply (e.g., through the procurement process).
49. Determine whether the organisation promotes environmental awareness through periodic memoranda, use of bulletin boards, environmental newsletters, communication meetings, videos, etc. Based on interviews assess the overall level of environmental awareness at the site.

J. Emergency Preparedness and Response

50. Confirm that the organisation has emergency

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preparedness and response procedures in place and periodically tests such procedures. Determine the extent to which employees are involved in developing contingency plans and emergency response procedures.

51. Review the plans and procedures to determine if they address:
- A full range of potential accidents and emergency situations.
 - Prevention of emergencies.
 - Responses to accidents and emergency situations (e.g., physical response responsibilities, internal information exchange and reporting, communication with the public).
 - Prevention/mitigation of the impacts associated with accidents and emergencies.
 - Interrelation/linkage to corporate or other crisis management plans.

52. Confirm that the procedures have been updated, as appropriate, in response to new information/developments (e.g., changes to operations), program reviews, or as a follow-up to incidents.

K. Documentation and Records

- 53 Determine whether the organisation has documented the core elements of its EMS (e.g., policy, significant environmental issues and risks, objectives and targets, management programs, inspection/audit program, roles and responsibilities, and operational control procedures, etc.).
54. Determine whether document control and records retention procedures are in place to address creation, revision/update, distribution and storage of EMS-related documents and records. Through a sampling process, verify that documents and records are maintained in accordance with the organisation's document and records management policies.
55. Evaluate whether there are systems in place to ensure that all required reports are sent to

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regulators in a timely fashion.

L. Performance Assessment and Improvement

56. Verify that the organisation conducts periodic environmental audits.
- a. Determine if the audit scope includes the full range of regulatory and internal requirements.
 - b. Determine if the audits cover not only conformance to requirements, but also the effectiveness of associated management systems (including managing risks not covered by regulations or internal requirements).
 - c. Determine whether the audits are completed by competent staff using formal checklists or protocols to ensure consistent quality.
 - d. Verify that audit results are documented and reported to appropriate management including responsible line managers.
57. Determine whether corrective/preventative action plans are developed and implemented to address audit findings. Determine whether these plans:
- Provide adequate detail on action steps, responsibilities, required resources, and schedule/milestones.
 - Are sent to and reviewed by site management.
 - Are tracked through completion.
58. Assess whether additional routine inspections are warranted to complement the audit process and provide a higher level of assurance to management.

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Figure 1

Code Principal	Guidance Document Section	Key Steps
<i>Sustainable Development</i>	Comm & Public Policy/Outreach	22
	Environmental Issues and Risks	25
	Objectives and Targets	32
	Management. Programs and Plans	37
<i>Environmentally Responsible Culture</i>	Policy and Commitment	1-5 (all)
	Organisation and Resources	8
	Comm & Public Policy/Outreach	19
	Training, Awareness, Competence	4--1,44,46-49
<i>Community)@ Partnership</i>	Organisation and Resources	8
	Comm & Public Policy/Outreach	16 - 21, 24
<i>Risk Management</i>	Comm & Public Policy/Outreach	19
	Environmental Issues and Risks	25-27 (all)
	Management. Programs and Plans	34, 37
	Emergency Prep. & Response	50-52 (all)
<i>Integrated Environmental Management</i>	Policy and Commitment	1-5 (all)
	Organisation and Resources	8
	Comm & Public Policy/Outreach	15,16,21
	Environmental Issues and Risks	25-27 (all)
	Legal and Other Requirements	28
	Management. Programs and Plans	34-38 (all)
	Operational Control	39-42 (all)
	Emergency Prep. & Response	50-52 (all)
	Performance Assessment	56,57
<i>Performance Targets</i>	Organisation and Resources	8, 9
	Legal and Other Requirements	28-30 (all)
	Objectives and Targets	34, 37, 38
	Management. Programs and Plans	34
	Training, Awareness, Competence	44
<i>Continuous Improvement</i>	Policy and Commitment	5
	Comm & Public Policy/Outreach	22, 23
	Environmental Issues and Risks	25-27 (all)
	Legal and Other Requirements	30
	Objectives and Targets	32
	Emergency Prepn & Response	52
Performance Assessment	56	

<i>Decommissioning and Rehabilitation</i>	Organisation and Resources	14
	Environmental Issues and Risks	26
	Management Programs and Plans	34, 37, 38
<i>Reporting</i>	Policy and Commitment	4
	Organisation and Resources	8
	Comm & Public Policy/Outreach	15,17,19,21
	Performance Assessment	56