Technical Guidance Document for Environmental Audit Reports

EAD-EQ-PCE-TG-10

Environmental Quality Sector	*Corporate Management Representative	Secretary General
Originated By	Reviewed By	Approved By

* Refer to SG Circular S.G/C-08/12 Concerning Appointment and Responsibilities of the Corporate Management Representative at the Environment Agency – Abu Dhabi.

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List of Abbreviations

CEMP	Construction Environmental Management Plan
EAD	Environment Agency–Abu Dhabi
EAP	Environmental Action Plan
EAR	Environmental Audit Report
EIA	Environmental Impact Assessment
EMS	Environmental Management System
NOC	No Objection Certificate
OEMP	Operation Environmental Management Plan

Definitions of Terms

Audit—A systematic, independent, and documented review of operations and practices to ensure that relevant requirements are met. Qualified professionals with relevant auditing experience should conduct audits and, where possible, independent external auditors should also be used.

Audit Conclusion—Outcome of the audit provided by the auditor after consideration of the audit objectives and all audit findings.

Audit Criteria—The set of policies, procedures, or requirements used as a reference during an audit.

Audit Evidence—Records, statements of fact, or other information that are relevant to the audit criteria and verifiable.

Audit Findings—Results of the evaluation of the collected audit evidence against audit criteria. Audit findings can indicate either conformity or nonconformity with audit criteria.

Construction—The time period that corresponds to any event, process, or activity that occurs during the Construction phase (e.g., building of site, buildings, processing units) of the proposed project. This phase terminates when the project goes into full operation or use.

Corrective Action Plan—An action plan developed by the proponent, contractor, or facility owner and approved by the external auditor that describes how the contractor or facility owner intends to resolve the non-conforming item. The Corrective Action Plan should be specific, measurable, achievable, realistic, and timely. Note that the Environment Agency–Abu Dhabi (EAD) does not require that a Corrective Action Plan be submitted for review and approval before implementing a corrective action process.

Construction Environmental Management Plan—A document developed by an EAD–approved environmental consultant and approved by EAD prior to the commencement of construction activities. The Construction Environmental Plan (CEMP) outlines the possible impacts to the environment from the construction activities and describes mitigation actions that should be conducted to reduce the environmental impacts of these activities.

Environment Agency–Abu Dhabi—The legal authority in Abu Dhabi Emirate pertaining to the protection of the environment as decreed in Federal Law No. 24 of 1999.

Environmental Action Plan—A comprehensive plan that is submitted to EAD for review and approval to ensure that appropriate corrective and preventive action measures are taken to resolve problems identified during internal and/or external inspections and audits. EAD may require that an Environmental Action Plan be prepared and submitted for review and approval when an inspection or incident identifies an issue that has impacted or has the potential to impact human health or the environment.

Environmental Audit Report—A summary report prepared after an environmental audit that describes the attributes of the audit and the audit findings and conclusions.

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Environmental Component—An attribute or constituent of the environment (i.e., air quality; marine water; waste management; geology, seismicity, soil, and groundwater; marine ecology; terrestrial ecology; noise; traffic; socio-economic) that may be impacted by the proposed project.

Environmental Impact—A positive or negative condition that occurs to an environmental component as a result of the activity of a project or facility. This impact can be directly or indirectly caused by the project's different phases (i.e., Construction, Operation, and Decommissioning).

External Audit—An assessment of site works, processes, and Environmental Management Systems by an EAD–approved third-party environmental consultant. The external audit assesses compliance against the specific requirements levied by EAD or other regulatory authorities (e.g., permit, CEMP, Operation Environmental Management Plan).

Non-conformance—Issues that are in direct non-compliance with the requirements of permits, the No Objection Certificate, and/or the CEMP and that constitute a serious threat to the environmental conditions onsite. All non-conformances require the development of a Correction Action Plan for approval and implementation.

Minor Non-conformance—Less significant issues that do not cause a significant threat to the environment and can be remediated quickly and easily. The issue still requires a corrective action to be developed by the contractor to ensure that the issue does not escalate.

Major Non-conformance—Significant issues observed onsite that are causing or have the potential to cause major environmental or health damage or are resulting in the ineffective implementation of the environmental controls onsite. A major non-conformance may result from the occurrence of repeated or habitual minor non-conformance.

Observation—Minor issues that have been noted onsite that do not typically represent an immediate threat to the environment. However, these issues represent areas of poor environmental management onsite and have the potential to escalate to non-conformance issues in the future.

Operation—The time period that corresponds to any event, process, or activity that occurs during the Operation (i.e., fully functioning) phase of the proposed project or development. (The Operation phase follows the Construction phase, and then terminates when the project or development goes into the Decommissioning phase.)

Operation Environmental Management Plan—A site-, project-, or facility-specific plan developed to ensure that environmental management practices to eliminate and control environmental impacts are followed during Commissioning and Operation phases.

Proponent—The person, company, or agency that is the primary responsible party for a development project and that is the permit applicant/holder for the project.

Purpose of This Guidance Document

This Technical Guidance Document outlines the requirements for developing an Environmental Audit Report (EAR) for submission to the Environment Agency–Abu Dhabi (EAD) for review and approval. This document is intended to provide guidance to project proponents, facility owners, and consultants on the preparation of an appropriate report following an environmental audit. Particularly, this guidance document provides an overview of the proper format and contents of an EAR to meet EAD's requirements, help the proponent/consultant prepare this report, make the review process easier and consistent for EAD.

Section I of this Technical Guidance Document provides background information, the definition of an EAR, the objectives of an EAR, and information on how to prepare and submit an EAR. Section II describes the contents and format of an appropriate EAR.

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Section I. Background Information

An environmental audit is a tool used by EAD to provide oversight of the management of environmental impacts from development projects and industrial activity. The EAR is a summary report that provides the findings from the environmental audit. The EAR is required to be submitted to EAD for review and approval on a periodic basis as outlined in a permit, a Construction Environmental Management Plan (CEMP), an Operation Environmental Management Plan (OEMP), or another EAD–required document. The following sections provide more detail on the definition, objectives, and preparation and submission requirements of an EAR.

Definition of an Environmental Audit Report

An EAR documents an independent, accurate, and detailed assessment of environmental performance for a development project or industrial facility. An EAR describes the project or process being audited, lists the environmental audit findings associated with that project or facility, details the audit procedures that were followed, and identifies the relevant environmental requirements that were used during the assessment. The EAR is used to assess the implementation of a project's or facility's Environmental Management System (EMS) and compliance with EAD–issued permits, certificates, licenses, or approved plans (e.g., CEMP, OEMP). Accordingly, audit reports should be clear, timely, concise, and objective; provide a fair summary of all the relevant facts; and demonstrate conformity with the related EAD–approved environmental studies. Audit issues that have been reported should be properly analyzed and concluded, and all reported findings and conclusions should be supported by adequate, reliable, and fair audit evidence.

Objectives of an Environmental Audit Report

The objective of an EAR is to provide interested parties (e.g., EAD) with a clear indication of the environmental performance or the project or facility for the period covered by the audit. The primary objectives of the EAR are as follows:

- Provide an objective analysis of the environmental impacts arising from a project or facility
- Establish that the requirements of the No Objection Certificate (NOC), CEMP, OEMP, and other Environmental Impact Assessment (EIA) are appropriately implemented
- Determine that mitigation measures are effective in minimizing or removing environmental impacts
- Identify opportunities and make recommendations for improvements in environmental performance of the project or facility
- Provide the information required to develop an Environmental Action Plan (EAP) in the event of any significant findings of negative impacts to the environment
- Provide an objective, third-party report that meets EAD's requirements.

The findings and recommendations of the audit effort should be documented clearly and concisely in the EAR. The usefulness of an EAR is measured by how well the problems are identified, evaluated, documented, and addressed by adequate and straightforward mitigation measures and corrective actions.

Preparation and Submission of the Environmental Audit Report

The proponent of a project or the facility owner is responsible for the EAR, which must be prepared and submitted by an EAD–approved and registered consultant who operates within Abu Dhabi Emirate. A current list of registered consultants can be obtained from the EAD Web site at https://eservices.ead.ae/portal/page/portal/ead_portal/Information%20Services. The environmental audit must be conducted according to the scheduled frequency outlined by EAD in the facility/project permit, NOC, CEMP, OEMP, or other directive, and the EAR must be submitted to EAD within 30 days of completion of the audit of the project or facility.

Section II of this Technical Guidance Document provides an overview of minimum contents and required format of the EAR. This framework of information presented should be followed for all EARs submitted; however, depending on the scope of the

audit and particular issues identified, some sections of an EAR may be expanded or contracted as is relevant to the project or facility issues.

Section II. Environmental Audit Report Contents and Format

The EAR should communicate the relevant information clearly and concisely and should therefore

- Be presented to make information accessible to the non-specialist, avoiding technical terminology where possible
- Have information presented in summary table format to the extent possible and use quality maps, charts, diagrams, and other visual aids whenever possible
- Be presented in a logical and easy-to-understand manner, with a clear Table of Contents to allow the reader to find and assimilate information quickly.
- Present information without bias and discuss issues with the appropriate emphasis regarding their importance as in the overall context of the environmental audit.

The following sections describe the minimum content and format requirements for an EAR.

Table of Contents

The EAR should have a title page and a Table of Contents. This Table of Contents should adhere to the layout provided in **Table 1**. Note that the length and detail of the EAR may vary depending on the size and nature of the project or facility being audited, or on the objectives and scope of the audit (e.g., whether it is an initial, surveillance, special audit); however, it is recommended that the EAR follow the format indicated as closely as possible. Following the format will allow EAD to provide a prompt and expeditious report review and minimize the potential for any submittals and clarifications that may be subsequently needed.

Table 1. Standard Table of Contents for an EAR

Table of Contents		
List of Tables		
List of Figures		
List of Abbreviations		
Definitions of Terms		
Chapter 1	Executive Summary	1.1 Project Title and Project Proponent 1.2 Description of the Audited Development Project or Facility 1.3 Description of the Environment 1.4 Summary of Findings
Chapter 2	Introduction	2.1 Audit Scope, Objectives, and Criteria 2.2 Auditors and Auditees 2.3 Reference Documents
Chapter 3	Site Activity Summary	3.1 Industrial Facilities 3.2 Development Projects
Chapter 4	Audit Findings	4.1 Environmental Management Systems and Management Commitment 4.2 Previous Audit Results 4.3 Non-conformances and Observations 4.4 Summary of Corrective Action Status
Chapter 5	Conclusions and Recommendations	

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Environmental Audit Report Annexes	
Annex 1	Photographic Record
Annex 2	Audit Checklist(s)
Annex 3	Supporting Documents
Annex 4	Audit Qualifications

The Table of Contents should also include lists of tables and figures included within the body of the document.

List of Tables

This section should include a list of all the tables presented within the main body of the EAR and should indicate table numbers, table titles, and associated page numbers.

List of Figures

This section should include a list of all the figures presented within the main body of the EAR and should indicate figure numbers, figure titles, and associated page numbers.

Reference Information

In addition to the Table of Contents, the EAR should provide reference tables that allow for quick reference to abbreviations and definitions.

List of Abbreviations

This section should include a list of abbreviations and acronyms used in the EAR. This list should be presented in a tabular format using a format similar to that on **page iv** of this Technical Guidance Document.

Definitions of Terms

This section should include a list of terms used in the EAR and their definitions. This information should be presented in a format similar to that used on **page v** of this Technical Guidance Document.

Chapter 1: Executive Summary

Chapter 1 should summarize the overall scope and objective of the audit, the effectiveness of the project EMS, the status of environmental performance, and the significant audit findings. With regard to audit scope, the EAD–approved or EAD–issued document that is the basis for the audit should be identified with the directive title and date (e.g., construction permit, EIA, CEMP, OEMP). Any changes in directives since the last audit should be identified and described (i.e., changes to CEMP).

The summary of the EMS should touch on the strengths and weaknesses of the management system, comment on particular highlights of the audit, and include an overview of any findings that represent non-conformity and/or significant areas of concern.

The Executive Summary should concisely and clearly state the conclusions of the audit regarding conformance of the project's EMS against the EAD requirements and any recommendations or corrective actions that are needed.

The Executive Summary should be written in English only and include the following specific sections:

1.1 Project Title and Project Proponent

This section should include the name, address, telephone number, and fax number of the proponent's firm; the name and designation of the contact person who is responsible for the project EMS; and the project's title.

1.2 Description of the Audited Development Project or Facility

This section should contain short descriptions of the overall project or facility and the breakdown of any phases or project/facility components, if applicable. The descriptions should be brief, yet provide enough information for readers to understand the location, size, nature, and activity or function of the project or facility. Descriptions should include information on the relevant management structures and workforce, all inputs and outputs (industrial facility), and ancillary operations such as transport services, materials storage, and processing operations.

1.3 Description of the Environment

This section should include brief descriptions of the project's or facility's surroundings and on-site environment, including the natural and built environment, sensitive receptors, local ecology (noting any sites of special interest or conservation value), and socio-economic or cultural factors that may have a bearing on the environmental impacts of the project or facility.

1.4 Summary of Findings

The following information and findings should be described in this section:

- A summary of non-conformances and observations identified during the audit (the use of tables is recommended)
- A list of non-conformances and observations, which are still on-going and not yet closed, that were identified in the previous audit reports
- The environmental impacts or issues observed during the course of the audit
- The overall effectiveness of existing environmental mitigation measures and management practices
- Conclusions and recommendations, including any corrective actions required or taken.

Chapter 2: Introduction

Chapter 2 should provide information on the audit scope, objectives, and the criteria used as the basis for the audit; identify background documents relevant to audit; identify the audit team members and those representatives of the project or facility involved in the audit; and describe the audit itinerary. Sections 2.1 through 2.3 of this chapter describe the specific information that should be included in the Introduction.

2.1 Audit Scope, Objectives, and Criteria

This section should describe the audit objectives, scope, and criteria used for the audit. This section would indicate the scope of the audit (e.g., if the audit covered the full development project or facility, covered all environmental media or components, or was specifically targeted to an issue or physical area of concern). The criteria on which the audit is based should be itemized and clearly identified (e.g., an EIA, CEMP, OEMP, construction permit, operating permit) with titles and dates. This section should also indicate if there have been changes in requirements applicable to the facility or project since the last audit or if there were specific issues from former audits that would be considered.

The typical scope items that should be described in the EAR for all projects and facilities include documentation and records, training, monitoring programs and results, internal audits and inspections, incidents and complaints, and audit activities. The specific information that should be included for those items is discussed below.

Documentation and Records

The EAR should provide comments on the documentation and control of records, including CEMP and OEMP documents, permits, training records, environmental program plans and procedures, audit and inspection reports, and other records.

Training

The EAR should describe and provide comments on the environmental training programs that are being implemented in accordance with CEMP or OEMP requirements.

Monitoring Program and Results

The EAR should identify monitoring program that are being implemented on the project and provide comment on whether monitoring is being performed in accordance with CEMP or OEMP requirements.

Internal Audits and Inspections

The EAR should provide comment on the internal audit and inspection programs that are being implemented to meet regulatory requirements.

Incidents and Complaints

The EAR should provide comment on the procedures followed for responding to incidents and/or complaints and include a description of any follow up on specific complaints or emergency response incidents.

Audit Activities

Audit activities include descriptions of audit interviewees and the timing and audit methodologies used. This section would also include comments on the site conditions during the time of the audit, highlight any adverse conditions or unusual observations made, and identify areas of the site visited. The audit activities should focus on implementation of the environmental programs, procedures, and measures identified in the CEMP or OEMP. The typical environmental programs or plans that would be evaluated in the audit and discussed in the EAR are as follows:

- Air Quality Control Plan
- Water Quality Control Plan
- Waste Management Plan
- Soil and Groundwater Contamination Control Plan
- Marine Ecology Control Plan
- Terrestrial Ecology Control Plan
- Noise and Vibration Control Plan
- Traffic Management Plan
- Erosion and Sediment Control Plan
- Other Environmental Program.

2.2   Auditors and Auditees

This section should identify the personnel of the proponent, the facility, or consultant organization that performed the audit (audit team). This section should also list the project or facility representatives who were key contacts for the audit and describe their roles and responsibilities with regard to the audit.

2.3   Reference Documents

This section should include a list of documentation reviewed prior to the audit (e.g., CEMP, previous EARs, environmental assessments, permits, complaints). This section should also identify the requirements on which the audit is based, indicating the title, version, and date of any documents that contain site-specific environmental requirements. If changes to the requirements since the last audit were noted, then these should be described, relevant to the current audit scope and objectives.

Chapter 3: Site Activity Summary

Chapter 3 should include detailed descriptions of the activities and processes that were being conducted onsite during the audit. Contents of this chapter will depend on whether the audit is of an industrial facility or a development project. For industrial facilities, this chapter should provide a general description of production processes, production levels, ancillary operations, and any other information that would relate to the activities or operations that would impact or contribute to environmental issues or concerns within the scope of the audit. Sections 3.1 and 3.2 below provide more information on the contents of this chapter.

3.1   Industrial Facilities

It is important to note that this section will be similar to the previous audit report for industrial facilities and should focus on changes to operations that have occurred since the last audit. With regard to facility audits, the following information should be included in this section.

Main operations

This information would include descriptions of the type of facility (e.g., manufacturing, power plant, chemical storage/distribution), the type of operations conducted, (e.g., chemical blending, batch concrete mixing, metal fabrication, cogeneration steam/electric); and the production level or capacity (e.g., full capacity, 100,000 tons of concrete/year, 20 MKw). These descriptions should be concise and brief enough to provide the reader with an understanding of the size and complexity of the operations conducted onsite, both in comparison to facility capacity and in relation to other similar type facilities.

Ancillary operations

This information would include any particular operations that are not part of the main facility operations that would have impact or contribute significantly to the facility's potential environmental impacts. This information would include operations such as vehicle or equipment servicing, large electrical switch yards, and large chemical storage or staging areas.

Environmental control operations

The EAR should describe any specific engineered or work practice controls that are in place to mitigate environmental pollution that would be within the scope of the audit (e.g., wastewater treatment plant, air pollution–control devices).

3.2   Development Projects

For development projects, this section should describe the progress or phase of the project construction activity, including the contractors that were present onsite and their individual activities, and the status of the project against the overall project schedule. For development projects, this section will differ from the last audit because this section will reflect the current activity onsite and should reflect the changes that have occurred from previous phases or stages of the development project. With regard to development projects, information on status and schedule, as well as descriptions of the contractors and the activity should be included in this section.

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Status and Schedule

The EAR should describe the current status of project implementation and the schedule of the project and the components and phases therein (if it is a multi-component or a multi-phased project). Notes should be made regarding any changes made to the schedule and the anticipated schedule of the project.

Contractors and Activity Descriptions

This EAR section should describe and provide details on the main contractor and subcontractors and their responsibilities with regard to EMS activities and project activities, particularly if changes have occurred since the last audit. The information presented in this section should reference the activities outlined in the CEMP or OEMP. At a minimum, the information should cover on the following activities:

- Waste and wastewater management
- Hazardous materials management
- Material and equipment management
- Water and groundwater management
- Energy management
- Noise management
- Air quality control.

Chapter 4: Audit Findings

This chapter should provide an overview of audit findings, including any analysis of the non-conformances noted. In particular, this chapter should describe findings regarding the implementation of EMSs and the resolution (or non-resolution) of previous audit findings and thoroughly discuss individual audit findings. The preferable format for presenting the individual audit findings is in tabular form, which includes whether the finding has been addressed by corrective action. Sections 4.1 through 4.4 below provide more information on the contents of this chapter.

4.1   Environmental Management Systems and Management Commitment

This section should provide comments on the facility's or proponent's procedures for determining, setting, and communicating environmental policies and objectives, as well as the overall commitment of senior management to meeting environmental requirements. Included in this discussion would be the facility's or proponent's efforts to monitor, measure, and report environmental performance.

4.2   Previous Audit Results

The EAR should provide comments on the facility's or proponent's mechanisms to determine the root causes of any previously identified environmental problems and on the effectiveness of the actions taken to correct such situations and prevent their recurrence. This section should also comment on the sufficiency of the facility's or proponent's formal processes for implementing and tracking corrective and preventive actions.

4.3   Non-conformances and Observations

This section should contain a table identifying non-conformances and observations identified during the current audit, sorted by priority, and should include the following information:

- Description of each non-conformance or observation, including a unique reference number for each non-conformance or observation to ease follow-up in subsequent audit reports and to help in tracking the corrective action status
- Date of occurrence
- Audit criterion or the specific NOC, CEMP, OEMP, or regulatory requirement applicable to the non-conformance

- Relative priority or significance of the finding with respect to EAD and regulatory requirements (e.g., major, minor, observation)
- Details (e.g., coordinates) regarding where the non-conformity or observation was found
- Subcontractor that caused the non-conformance (if applicable).

The description of the non-conformances should be concise, yet be sufficiently broad or supported by documentation, photographs, or other information (to be included in the EAR annex) to allow project or facility management to address the issue and EAD to assess adequate resolution of the issue.

4.4   **Summary of Corrective Action** Status

This section should include a summary table that provides details on the corrective action(s) taken and/or planned in response to non-conformances and/or the observations identified in Section 4.3 above. This section should also include any corrective actions planned or taken to address non-conformances identified in recent previous audits, particularly those that have been or are ongoing issues at the site or facility. In particular, the Corrective Action Plan summary should include the type of any required corrective action, the current status (e.g. open, closed) of corrective action(s), the date of planned closure, and the date of actual closure as a result of conducting the audit follow-up. This section should provide comments on the auditor's observation on the capability and commitment of the site/facility management to resolve the issues.

It is important to note that EAD may require the facility or project to develop an EAP if issues are identified in the audit that are considered to be repetitive or are ongoing issues, or problems that present significant concern for environmental impact. The EAP is a Corrective Action Plan that must be submitted and approved by EAD and requires formal reporting of the resolution of the issues. Additional information regarding the requirements for developing an EAP can be found on the EAD Web site in the document titled *EAD Technical Guidance: Environmental Action Plan,* April 2010.

Chapter 5: Conclusions and Recommendations

Chapter 5 should include the conclusions of the audit with regard to the status of the conformity of the site or facility EMS with the CEMP, OEMP, or other requirements, as well as the effectiveness of the EMS in meeting environmental objectives.

The EAR should make recommendations to address any significant non-conformances or deficiencies, including allocating priorities for corrective action. Any recommendations should be specific and detailed enough to allow EAD and facility/project management the ability to evaluate the feasibility and appropriateness of implementing the recommendation. Types of recommendations might include further investigation of an issue or implementation of emissions control technology or environmental pollution control best management practices. The emphasis of recommendations should be on removing the source of the problem rather than the use of command-and-control (or end-of-pipe) technology.

Environmental Audit Report Annexes

The annexes of the EAR should include all information necessary to support the findings of the audit that are not provided in the main text of the EAR. Typical annexes should include the following information:

- Annex 1: Photographic Record—This annex should include evidence available to support non-conformities identified in the report and/or corrective actions taken.
- Annex 2: Audit Checklist(s)—This annex should include reference materials such as checklist(s) or audit protocol used by auditors.
- Annex 3: Supporting Documents—This annex should include other documents that support or provide necessary clarity for audit findings or recommended corrective actions. These documents may include internal audit/inspection reports, monitoring reports, site or facility maps, technology descriptions, equipment specifications, waste transfer notes, Material Safety Data Sheets, reference materials for regulatory requirements, and/or best management practices.

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- Annex 4: Auditor Qualifications—This annex should include information about the audit team members who provided evidence of knowledge and capability to conduct the environmental audit.

Additional annexes should be added as needed to support Environment, Health, and Safety documentation and log templates for inspection, auditing, monitoring, maintenance, and training.

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Document Change History

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EAD-EQ-PCE-TG-10	00	01 January 2011	First Issue		SG
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