

Environment Agency– Abu Dhabi



Update of Environmental Permitting Procedures and Guidelines

Guidance on Environmental Management Plans
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Overview

- Technical Guidance Documents have been updated for the following Environmental Management Plans (EMPs):
 - Construction Environmental Management Plan (CEMP)
 - Operation Environmental Management Plan (OEMP)
 - Decommissioning Environmental Management Plan (DEMP)
 - Environmental Action Plan (EAP)

- Technical Guidance Documents outline the requirements for developing EMPs for review and evaluation by EAD

- The following presentation will provide an overview of each of the EMPs (including EAP) and the information presented in the relevant Technical Guidance Document

Why are EMPs required?

- As the competent authority for implementation of Federal Law No.24 within the Abu Dhabi Emirate, EAD may require a proponent to submit an EMP or EAP as a mechanism for:
 - Controlling environmental impacts throughout the construction, commissioning, operational and decommissioning phases of a project
 - Avoiding or abating pollution at a site or facility and protecting the environment

Who prepares EMPs?

- EMPs should be prepared by an EAD-approved consultant engaged by the project proponent
- For the CEMP, OEMP and DEMP, the consultant must include:
 - All of the details and requirements stipulated by EAD, as per the Technical Guidance Documents
 - Method statements from contractors undertaking the proposed works (in cases where the contractor has yet to be selected, the contractor must indicate their commitment to the approved CEMP at a later date)
- For the EAP, the consultant must:
 - Determine the most appropriate corrective actions based on the identified issues, which may include a combination of engineering or administrative controls, and potentially remedial or clean-up activities.
 - Include a level of detail in the EAP based on the significance, impact, number and complexity of the issues and that of the corrective actions necessary to resolve them.

Construction Environ. Management Plan (CEMP)

What is a CEMP?

- The CEMP is a site-specific plan developed to ensure that appropriate environmental management practices are followed during the construction phase of a project
- The CEMP:
 - Specifies the roles and responsibilities of personnel involved with all aspects of the construction activities
 - Identifies the potential environmental impacts and mitigation measures that will be used to address them
 - Establishes procedures for audits, monitoring and inspections
 - Specifies training, recordkeeping and document requirements

Construction Environ. Management Plan (CEMP)

When is a CEMP required?

- As a general guideline, a CEMP is usually required for:
 - Industrial facilities that contain manufacturing processes
 - Residential and commercial development projects
 - Development and infrastructure projects (e.g. railways, ports, airports, waste management facilities, water and sanitation facilities, etc)
 - Power projects (e.g. power and desalination plants, geothermal plants, renewable energy facilities)
 - Any project required by EAD to perform an environmental study or otherwise required to obtain a license to operate

- The CEMP must be submitted to EAD for approval prior to the scheduled beginning of construction

Construction Environ. Management Plan (CEMP)

Technical Guidance Document

- Section 1 – Background Information
 - Definition of CEMP
 - Objective of the CEMP
 - Applicability and Approach
 - Preparation and Submission of the CEMP
 - Review of the CEMP

- Section 2 – Required Content and Recommended Format
 - Includes a recommended format for the Table of Contents
 - Provides discussion of the required content of each section

Construction Environ. Management Plan (CEMP)

Recommended Format

- Section 1 – Project or Industry Title Page
 - Include contact details of the consultant, proponent and contractor
- Section 2 – Distribution List
 - Can be used to establish communication channels that will enable more effective control of environmental issues
- Section 3 – Introduction
 - Brief overview of the project and scope of work
- Section 4 – Project Description
 - Location
 - Scope
 - Overall Project and Planned Construction Activities
 - Project Schedule and Milestones

Construction Environ. Management Plan (CEMP)

Recommended Format

□ Section 5 – Environmental Management

■ Policy Statement

- Describe the proponent's commitment to environmental protection

■ Environmental Management Systems

- Discuss the ways in which the CEMP corresponds to the proponent's EMS

■ Roles and Responsibilities

- Outline the chain of command and responsibilities of personnel in relation to implementation, management and review

■ Regulations and Requirements

- Detail the legal framework and regulations to be adhered to

■ Environmental Awareness Training

- Overview of proponent's systematic program to ensure that employees are aware of the CEMP and other environmental requirements

■ Document Review and Updates

- Establish procedures for the periodic review of the CEMP to ensure contents are current and that it is being properly implemented

■ Environmental Commitments

■ Coordination with External Entities and Addressing Complaints

- Descriptions of correspondence with parties potentially affected by construction activities

Construction Environ. Management Plan (CEMP)

Recommended Format

- Section 6 – Environmental Impacts
 - Outline specific construction activities and potential environmental impacts to the site or surroundings
 - Explain the methodology used for determining significance of impacts
 - If an environmental study was undertaken prior to preparation of the CEMP, include any identified impacts from the study in the CEMP
 - If previous environmental studies are unavailable, the CEMP should include an analysis of potential impacts and their significance
 - Environmental impacts that must be addressed include:
 - Air Emission
 - Surface Water
 - Soil and Groundwater
 - Terrestrial Ecology
 - Marine Ecology
 - Noise and Vibration
 - Traffic
 - Waste Management
 - Other Environmental Conditions and Systems

Construction Environ. Management Plan (CEMP)

Recommended Format

□ Section 7 – Environmental Mitigation Measures

- The consultant / contractor must prepare and implement control plans for the following elements:
 - Air Quality
 - Erosion and Sediment
 - Soil and Groundwater Contamination
 - Terrestrial Ecology
 - Water Quality and Marine Ecology
 - Noise and Vibration
 - Traffic
 - Waste Management
 - Health and Safety
 - Chemical and Hazardous Materials Management
 - Contingency Plan
 - Emergency Management Plan
 - Security Plan
 - Infrastructure Plan
- Include site-specific mitigation measures for the applicable environmental components
- Mitigation strategies should be based on best available management practices and technologies
- CEMP must include measures that will be performed and that can be audited to determine their effectiveness
 - i.e. It is not sufficient to solely provide a list of possible mitigation measures that will be used at the contractors discretion

Construction Environ. Management Plan (CEMP)

Recommended Format

- Section 8 – Monitoring and Auditing
 - Environmental Performance Monitoring
 - Discuss how potential impacts will be monitored
 - Detail corrective actions to be implemented in the case of non-compliance
 - Identify frequency and content of monitoring reports
 - Reporting Requirements
 - Including the frequency and content of required reports
 - e.g. Pre-operation compliance reports, incident reports, periodic or annual performance reports, auditing reports, non-compliance reports, corrective action reports, etc
- Section 9 – Documentation
- Section 10 – Annexes

Operation Environmental Management Plan (OEMP)

What is an OEMP?

- The OEMP is a site-, project- or industry-specific plan developed to ensure that appropriate environmental management practices are followed during the commissioning and operation phases of a project
- The OEMP:
 - Documents procedures to monitor and control environmental impacts
 - Provides a mechanism to respond to change in project implementation and to obtain feedback for continual improvement in environmental performance

Operation Environmental Management Plan (OEMP)

When is an OEMP required?

- As a general guideline, an OEMP is usually required for:
 - Industrial facilities that contain manufacturing processes
 - Development and infrastructure projects (e.g. railways, ports, airports, waste management facilities, water and sanitation facilities, etc)
 - Power projects (e.g. power and desalination plants, geothermal plants, renewable energy facilities)
 - Any project required by EAD to obtain a license to operate

- The OEMP must be submitted to EAD for approval no later than one month prior to the commencement of operation (unless otherwise agreed)

Operation Environmental Management Plan (OEMP)

Technical Guidance Document

- Similar structure to the Guidance Document for CEMP

- Section 1 – Background Information
 - Definition of OEMP
 - Objective of the OEMP
 - Applicability and Approach
 - Preparation and Submission of the OEMP
 - Review of the OEMP

- Section 2 – Required Content and Recommended Format
 - Includes a recommended format for the Table of Contents
 - Provides discussion of the required content of each chapter

Operation Environmental Management Plan (OEMP)

Recommended Format

- Same as the recommended format for CEMP
 - Chapter 1 – Project or Industry Title Page
 - Chapter 2 – Distribution List
 - Chapter 3 – Introduction
 - Chapter 4 – Project Description
 - Chapter 5 – Environmental Management
 - Chapter 6 – Environmental Impacts
 - Chapter 7 – Environmental Mitigation Measures
 - Chapter 8 – Monitoring and Auditing
 - Chapter 9 – Documentation
 - Chapter 10 – Annexes

Decommissioning Environ. Management Plan (DEMP)

What is a DEMP?

- ❑ The DEMP is a site-specific plan developed to ensure that appropriate environmental management practices are followed during the decommissioning phases of a project
- ❑ The DEMP details all remediation, restoration, site control and monitoring activities that will continue once the immediate decommissioning activities are completed
- ❑ The DEMP is designed to eliminate long-term liability issues related to the project site for the proponent

Decommissioning Environ. Management Plan (DEMP)

When is a DEMP required?

- ❑ As a general guideline, a DEMP is usually required during the decommissioning phase of:
 - Projects originally required to submit an EIA
 - Projects involving buildings contaminated with asbestos materials and/or lead-based paint
 - Projects involving the removal of organic liquids, hazardous materials or hazardous wastes
 - Projects generating in excess of 100 m³ in volume of waste
 - Projects in which more than 50% of exterior walls are demolished
 - Projects in which the land areas is greater than 2,000 m²
 - Project sites in which residual impacts may pose a threat to the environment or in which contamination levels exceed regulatory limits.
- ❑ However, applications are reviewed on a case-by-case basis
- ❑ The DEMP must be submitted to EAD for approval prior to the scheduled commencement of decommissioning

Decommissioning Environ. Management Plan (DEMP)

Technical Guidance Document

- Similar structure to the Technical Guidance Documents for CEMP and OEMP

- Section 1 – Background Information
 - Definition of DEMP
 - Objective of the DEMP
 - Applicability and Approach
 - Preparation and Submission of the DEMP
 - Review of the DEMP

- Section 2 – Required Content and Recommended Format
 - Includes a recommended format for the Table of Contents
 - Provides discussion of the required content of each chapter

Decommissioning Environ. Management Plan (DEMP)

Recommended Format

- Similar to the recommended format for CEMP and OEMP
- Additional chapter on Long-Term Management
 - Chapter 1 – Project or Industry Title Page
 - Chapter 2 – Distribution List
 - Chapter 3 – Introduction
 - Chapter 4 – Project Description
 - Chapter 5 – Environmental Management
 - Chapter 6 – Environmental Impacts
 - Chapter 7 – Environmental Mitigation Measures
 - Chapter 8 – Monitoring and Auditing
 - **Chapter 9 – Long-Term Management**
 - Chapter 10 – Documentation
 - Chapter 11 – Annexes

Decommissioning Environ. Management Plan (DEMP)

Recommended Format

□ Chapter 9 – Long-Term Management

■ Environmental Assessment

- Establish an environmental assessment plan to determine the extent of residual impacts and risks posed to human health and ecology

■ Monitoring Residual Environmental Impacts

- Establish an environmental monitoring plan for the measurement and assessment of residual impacts after completion of immediate decommissioning activities

■ Remediation

- Remediation plans may be required following environmental assessment
- Must be submitted separately from the DEMP

■ Ecological Restoration

- Describe additional efforts that will be taken to restore impacted natural habitats to their previous condition

Environmental Action Plan (EAP)

What is an EAP?

- The EAP is a site-specific plan developed in response to an issue being identified at a facility or project during an inspection.
- The EAP documents corrective and preventative measures that should be taken to resolve the identified issues and prevent reoccurrence.

Environmental Action Plan (EAP)

When is an EAP required?

- An EAP may be required when an inspection or incident identifies an issue that has impacted, or has the potential to significantly impact, human health or the environment.
- Typically, the EAP is required to address problems in the areas of:
 - Worker health and safety
 - Air and water pollution control
 - Noise abatement
 - Solid and hazardous waste generation
 - Hazardous materials management and
 - Resource use and conservation.

Environmental Action Plan (EAP)

Technical Guidance Document

- Section 1 – Background Information
 - Definition of EAP
 - Objective of the EAP Guidance Document
 - Applicability and Approach
 - The Corrective Action Process and the EAP
 - Preparation and Submission of the EAP
 - Review of the EAP, Follow-Up and Closure

- Section 2 – Required Content and Recommended Format
 - Includes a recommended format for the Table of Contents
 - Provides discussion of the required content of each chapter

Environmental Action Plan (EAP)

Recommended Format

- Chapter 1 – Facility Description and Overview
 - Contact Information
 - Site Activities
 - Overview of current activities at the site, with a focus on those activities having the potential to create environmental impacts
 - Facility / Project Inspection / Audit Program
 - Document the process for identification and reporting of problem findings
- Chapter 2 – Summary of Problem Findings
 - Provide descriptions of the source of the findings for which the EAP is being developed (e.g. inspection, audit, suggestion, incident) and each reported problem
 - Include additional background information on the problem to allow evaluation of the nature and extent of the deficiency

Environmental Action Plan (EAP)

Recommended Format

- Chapter 3 – Root Cause Analysis
 - Discussion of contributing factors for each identified problem finding
- Chapter 4 – Corrective Action Development
 - Selection of Corrective Actions
 - Detail corrective actions to be taken for each problem finding
 - Corrective Actions should be chosen based on their ability to fully resolve the finding and prevent reoccurrence
 - Schedule
 - Include a schedule with projects dates for initiating, completing and implementing each corrective action
- Chapter 5 – Closure and Effectiveness Review
 - Detail the process for verifying closure of the corrective actions
 - Monitor and assess the overall corrective action program for effectiveness in reporting, evaluating, resolving and preventing reoccurrence of indentified problem findings

Environmental Action Plan (EAP)

Recommended Format

- Chapter 6 – Recordkeeping Requirements and Documentation
 - Include minimum requirements for maintaining copies of the EAP and related documents
 - e.g. audit reports, sampling and monitoring data, reports submitted to EAD or other agencies
- Chapter 7 – EAP Annexes and Supporting Documentation
 - Pollution Control or Prevention Technology Evaluation or Implementation
 - Environmental or Health Sampling or Monitoring
 - Remediation of Contamination

Key Changes

- Greater emphasis on the potential for environmental impact during the decommissioning phases of facilities and projects with the introduction of a new Technical Guidance Document for **DEMP**
- Environmental Baseline Audit (EBA) has been replaced by the **Environmental Action Plan (EAP)** as a mechanism for implementing corrective actions at existing facilities and project sites
- Emphasis on the requirement for site-specific CEMPs and OEMPs

Thank You

This concludes today's presentations

Thank You

We welcome questions and discussion

Environment Agency – Abu Dhabi

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