

D

PART D
Project Environmental
Management Plans



PART D

Project Environmental Management Plans

D.1 Introduction

'Project' refers to road construction or maintenance projects. Environmental management plans are one of the tools for ensuring construction and maintenance projects have minimal environmental impact. Environmental management plans are discussed separately for construction and maintenance works below.

D.2 Construction

Environmental Management Plan (Construction)

The EMP (Construction) is the construction contractor's for environmental management to ensure that all works undertaken are in accordance with the contract documents. This includes relevant Federal and State legislation and local government laws.

Responsibility

It is the responsibility of the successful tenderer to prepare and implement the EMP (Construction).

Main Roads also has a responsibility. In particular, the Principal's representative, the Superintendent, is responsible for review of the EMP (Construction) and determining its suitability. Submission of the EMP (Construction) to the Superintendent is a milestone. Determining the EMP (Construction)'s suitability is a hold point. This means construction shall not start until the EMP (Construction) is deemed suitable (see Figure D-1). The Superintendent may need to consult an Environmental Officer, or

appropriately qualified person, about the suitability of these documents.

The Superintendent may also undertake auditing and subsequent reporting of construction works to ensure that the requirements in the contract documentation are implemented properly, and feed back to the post-completion report, and ultimately the construction pre-qualification system.

Timing

Figure D-1 shows the administrative arrangements and timing associated with the EMP (Construction) under a Road Construction Contract. No such timings are specifically identified in the contracts for Minor Works or Road Performance Contracts. The specifications for these contracts allow for the provision for such timings.

Under a Road Construction Contract, Main Roads Supplementary Conditions of Contract requires the contractor to submit their EMP (Construction) within twenty-eight (28) days of award of contract, unless otherwise stated in Clause 4 of the Annexure to the Supplementary Conditions of Contract. Unless otherwise stated, the Superintendent may take up to fourteen (14) days to review the documentation and provide direction as to its suitability. If the document is deemed to be unsatisfactory by the Superintendent, the contractor is given seven (7) days to make necessary amendments as requested by the Superintendent.

Content

The principal objective of the EMP (Construction) is to comply with the

D

D

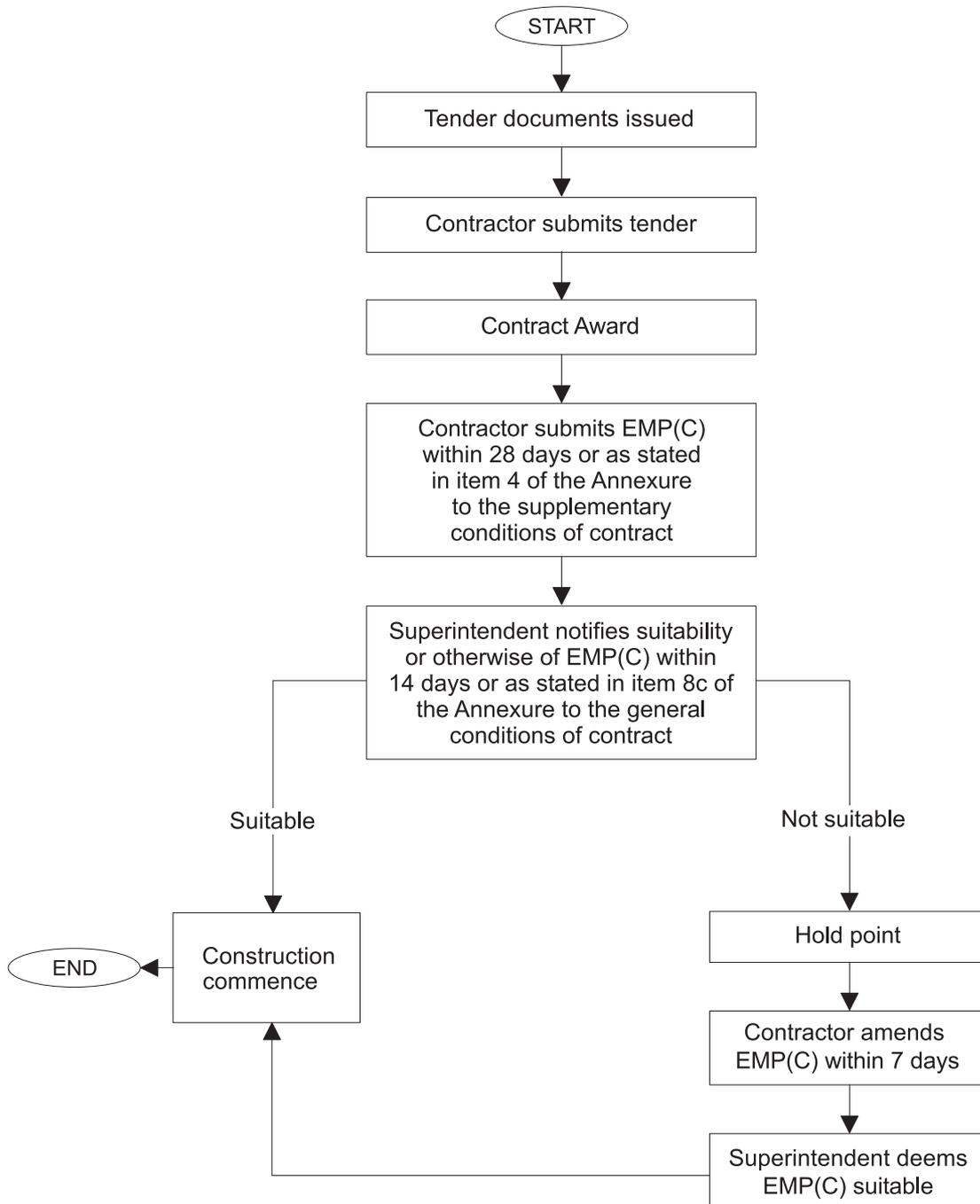


Figure D-1 Timing for EMP (Construction) Under Road Construction Contract

requirements of the contract documentation. The EMP (Construction) must address the environmental management requirements in a site-specific manner in accordance with the construction specifications (standard and supplementary) and design plans. Main Roads Standard Specification for Environmental Management (MRS 11.51) specifies the requirements for the content of an EMP (Construction).

The EMP (Construction) is to include discussion on each of the environmental elements outlined in the Standard Specification for Environmental Management (MRS 11.51).

The contractor may utilise documents and/or diagrams to address the EMP (Construction) requirements for each element. These documents and/or diagrams may include:

- Certified system (eg. ISO 14000)
- A concise stand-alone document that is revised and upgraded as necessary throughout the construction period
- Marked up design working plans, showing features of the site (eg watercourses)
- Contractor's schedule of works/ construction program
- Contractor's own working plans, showing details of areas of disturbance (eg location of sidetracks, borrowpits etc.)
- Text in a table format
- Reference to another management plan (eg traffic, quarry, safety etc.) to address a particular requirement

The contractor is encouraged to utilise the combination of methods that are considered to be most effective in transferring vital site-specific information from the desktop to the construction site.

Administrative arrangements

Figure D-2 shows the administrative arrangements during the construction phase of a project.

The key administrative issues to be considered by the Superintendent during the construction phase include the following.

- The Superintendent may undertake scheduled and unscheduled audits of the implementation of the EMP (Construction) and report on any non-conformance and corrective action requests.
- The Superintendent should provide written feedback on the environmental performance of the contractor for inclusion in the post-completion report and input to the pre-qualification system.

D

D.3 Maintenance

Following the construction contract defects liability period, there is the long-term or ongoing maintenance requirement for the road and the road reserve. Activities undertaken in this phase may include hand mowing, tractor slashing, pavement repairs, shoulder grading and cleaning of culverts, pipes and pits. A separate contractor generally undertakes maintenance activities in accordance with a Road Maintenance Performance Contract (RMPC).

In some instances, the works undertaken during the maintenance phase may trigger assessment under an external assessment and approval process. Therefore, an assessment of the activities against the triggers for external processes should be undertaken (refer Section B.3). This should occur annually and just prior to letting the maintenance contract.

To ensure that legal obligations are addressed in maintenance operations, environmental assessments need to be undertaken and environmental management

D

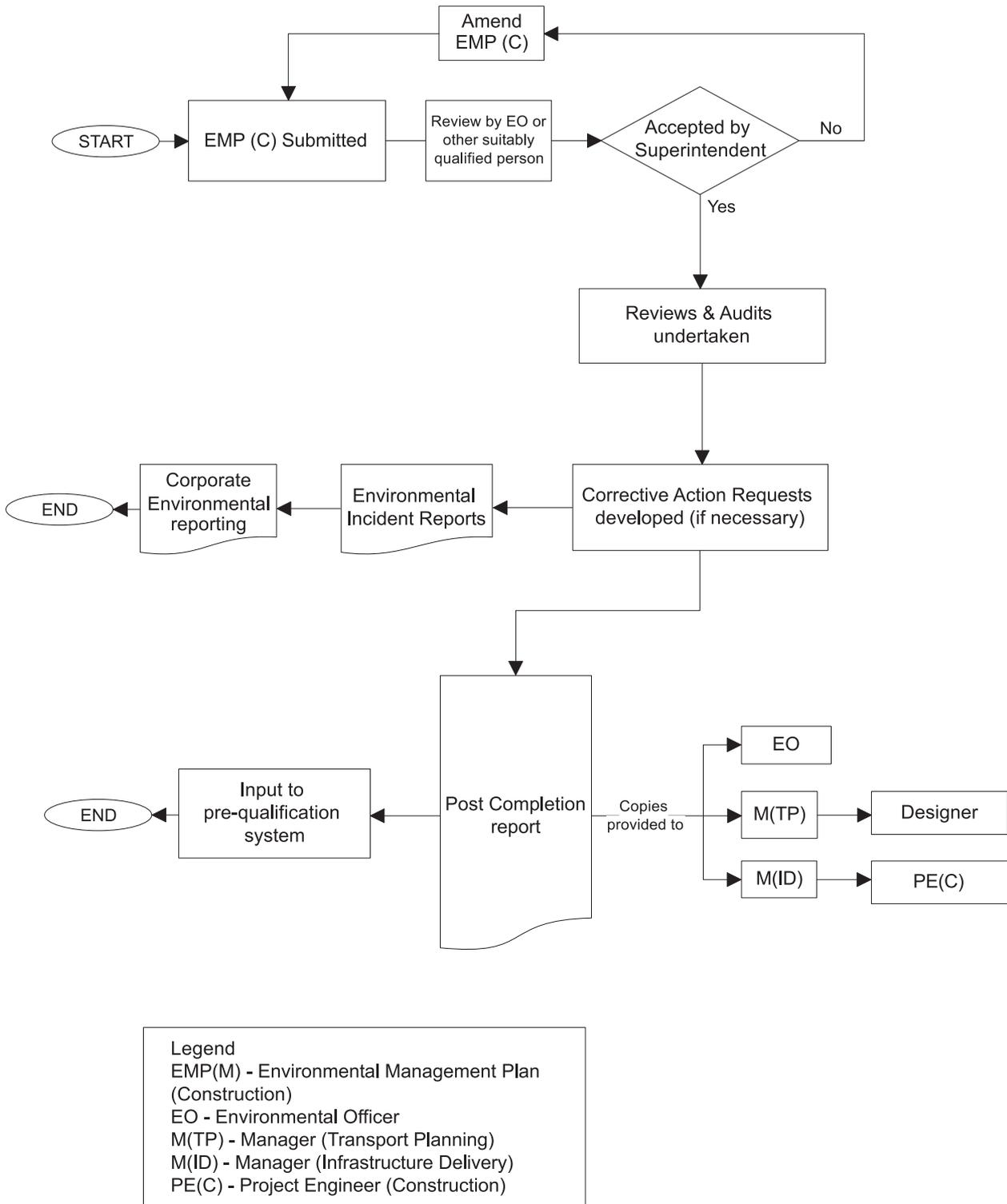


Figure D-2 Administration arrangements - Construction

plans need to be developed. Due to the scope, scale and timing of maintenance operations, environmental assessments and management plans are different to those discussed in the earlier sections of this manual.

The environmental assessment undertaken in the maintenance phase is developed by Main Roads and provided to the maintenance contractor as information under the contract. This addresses the requirement of Section 3.4 of RMPC Volume 1 to brief the contractor on any significant environmental areas and site specific management techniques for these areas. For the purposes of this manual, this document is termed the 'Statement of Environmental Effects'.

Documentation in relation to the environmental management component of the maintenance phase is developed by the contractor and is termed the 'Environmental Management Plan (Maintenance)'. This document addresses the requirement of Part 10 of the General Conditions of Contract - RMPC, whereby the contractor is required to have a quality system that includes an Environmental Management Plan (Maintenance).

The purpose, responsibilities, timing and content of these two documents is discussed below.

D.3.1 Statement of Environmental Effects

Purpose

The purpose of the Statement of Environmental Effects is for Main Roads to provide the maintenance contractor with information on any environmental issues, or significant environmental locations, that require particular attention or maintenance processes that differ from standard processes.

Responsibility

The District Director is accountable for the preparation of the Statement of Environmental Effects for maintenance operations.

The Manager (Infrastructure Delivery) is responsible for the quality of the Statement of Environmental Effects.

The District Director and Manager (Infrastructure Delivery) should seek advice in relation to the preparation of this document from the Environmental Officer or other suitably qualified person.

Timing

The Statement of Environmental Effects should be prepared or reviewed (if an existing document occurs) in the February preceding the June/July review of the Road Maintenance Performance Contract.

Content of Statement of Environmental Effects

Information that should be reviewed in the preparation of the Statement of Environmental Effects includes the following.

- Environmental databases (such as district databases including the Road Corridor Environmental Assessment (RCEA) database)
- Significant Environmental Areas database
- Complaints/communication register
- Legislative and policy requirements/conditions
- New technologies and products being used in road and bridge maintenance operations

A checklist for the content of a Statement of Environmental Effects follows.

- List of permits, licences and approvals that will definitely be required to be



obtained by the maintenance contractor.

- Copy of permits, licences and approvals that Main Roads has obtained and any notes explaining implementation of conditions.
- Environmental objectives to be achieved by the maintenance contractor.
 - particular declared plant or animal colony to be controlled
 - particular vegetation community to be protected
 - particular technology to be applied / trialed that reduces environmental impacts
 - particular method for an activity to be developed and implemented
- Significant environmental parameters.
 - Indigenous and non-indigenous cultural heritage sites
 - Rare and threatened flora and fauna species
 - Endangered and of concern regional ecosystems
 - Declared areas (eg. irrigation zones, nature refuges, property plans, etc)
 - Matters of National Environmental Significance (World Heritage Areas, Ramsar wetlands, endangered species and ecological communities, habitats for migratory species protected under international agreements, Commonwealth marine areas)
- Environmental constraints.
 - Location of declared plants/animals and environmental weeds
 - Land degradation sites (eg. salinity, erosion, scalding)
 - Erodible soils (eg. sodic)
- RMPC activity guidelines - these should include amendments to reduce actual and potential environmental impacts from the activity.

- Commonwealth, State and Main Roads Standards, Policies, Guidelines and Procedures relevant to maintenance.
- Environmental training program and schedule for the contract administrator and maintenance contractor.
- Environmental monitoring program.
- Draft environmental auditing program.
- New technologies and processes for environmental management of maintenance.

D.3.2 Environmental Management Plan (Maintenance)

Purpose

The purpose of this document is for the maintenance contractor to demonstrate to Main Roads the means by which they will implement the requirements of the contract documentation (including the Statement of Environmental Effects) in order to avoid environmental harm and where possible enhance the environmental values of the road reserve.

Responsibility

It is the responsibility of the successful tenderer for the maintenance contract to prepare the EMP (Maintenance). The maintenance contractor is also responsible for ensuring activities are undertaken in accordance with the EMP (Maintenance).

Main Roads also has responsibilities during the maintenance phase. In particular, the Principal's representative, the Superintendent, is responsible for the review of the suitability of the EMP (Maintenance). The Superintendent should seek advice regarding the suitability of the EMP (Maintenance) from the Environmental Officer or other suitably qualified person. The review should focus on ensuring the EMP

(Maintenance) adequately discusses the objectives and desired outcomes of the Main Roads contract documentation (including the Statement of Environmental Effects). Main Roads should also undertake auditing and the subsequent reporting of maintenance works to ensure that the requirements in the contract documentation are properly implemented.

Timing

The EMP (Maintenance) is to be prepared and/or updated as needed as per the RMPC. This generally occurs annually.

General content

The EMP (Maintenance) should be developed in reference to the maintenance contract documentation (including the Statement of Environmental Effects). Clause 10.5 of the RMPC identifies the minimum content for an EMP (Maintenance) as follows.

- Statement of environmental management policy relevant to the activities carried out under the contract.
- Notes describing the contractors document control for the environmental management plan.
- List of permits, licences and approvals obtained relevant to the work to be undertaken.
- Procedures in respect of the following.
 - erosion and sediment control
 - minimising the impact on flora and fauna
 - waste management and contamination of land and waterways
 - cultural heritage
 - control of dust, noise, vibrations and other nuisances
 - chemical handling and storage
 - solvent spillage

- integration of environmental considerations into water sourcing and disposal
- specific environmental measures as nominated by the Principal
- monitoring, auditing and corrective action
- environmental training
- environmental complaints and incident reporting
- emergency response

Procedures developed by the Contractor to minimise or mitigate potential environmental harm when undertaking maintenance activities are to be included in the Contractor's Work Instructions and/or Quality Manual, and should include:

- Identification of Activities/Locations on the Site that have the potential to cause environmental harm.
- Assessment of the risk/significance of the potential environmental harm of these activities generally and at specific locations.
- Where there is significant risk of potential environmental harm the Contractor must;
- Adapt work procedures for identified activities to minimise potential environmental impacts;
- Develop location specific procedures, where warranted, in accordance with Departmental Standards or as agreed by the Principal and the Contractor.

Specific/additional content

Some sections of road also require site-specific management processes that are outside the normal maintenance processes discussed in the RMPC. These relate to the protection of environmental values through the adoption of amended maintenance processes. For example, fire exclusion may be relevant where rainforest occurs within the



road reserve. Similarly, alternative processes may be required when cleaning culverts in environmentally sensitive locations.

In these cases, those areas that would benefit from specific maintenance processes would be identified in the Statement of Environmental Effects and the maintenance contractor is to discuss the proposed management processes to minimise actual and potential impacts on these areas within the EMP (Maintenance). These areas should also be considered for signing as Significant Environmental Areas.

With regard to these amended processes, the RMPC states that the procedures developed by the contractor are to be included in the Contractors Work Instructions and/or quality manual and should include the following.

- Identification of activities and locations on the road network under the contractor's control that have the potential to cause environmental harm.
- Assessment of the risk/significance of the potential environmental harm of these activities generally and at specific locations.
- Where there is a significant risk of potential environmental harm, the contractor must:
 - adapt the work procedures for identified activities to minimise potential environmental impacts
 - develop location specific procedures, where warranted, in accordance with Departmental Standards or as agreed by the Principal and the Contractor.

Feedback register

During the maintenance phase, both positive and negative feedback may be received from stakeholders, including the public, businesses, local Councils and state government departments. A procedure to record any feedback should be implemented

by the maintenance contractor.

A feedback register is an effective method of recording all feedback and should include the following details.

- Name and address of the stakeholder
- Date of the feedback
- Reason for feedback-this may be a complaint, query or a general comment
- Action required
- Action undertaken
- Outcome

Regular reviews of the feedback register should be undertaken to identify any areas of non-conformance and the corrective action taken to prevent their recurrence.

Administrative arrangements

Figure D-3 shows the administrative arrangements during the maintenance phase of a project. The maintenance contractor is required to submit an EMP (Maintenance) in accordance with the RMPC.

The key administrative issues to be considered by the Superintendent during the maintenance phase include the following.

- The Superintendent should seek advice from the Environmental Officer or other suitably qualified person during the review of the EMP (Maintenance).
- The Superintendent may be required to undertake audits of the implementation of the EMP (Maintenance) and report on any non-conformance and corrective action requests.

The Superintendent should provide detailed feedback on the environmental performance of the maintenance contractor for consideration in the next annual RMPC review.

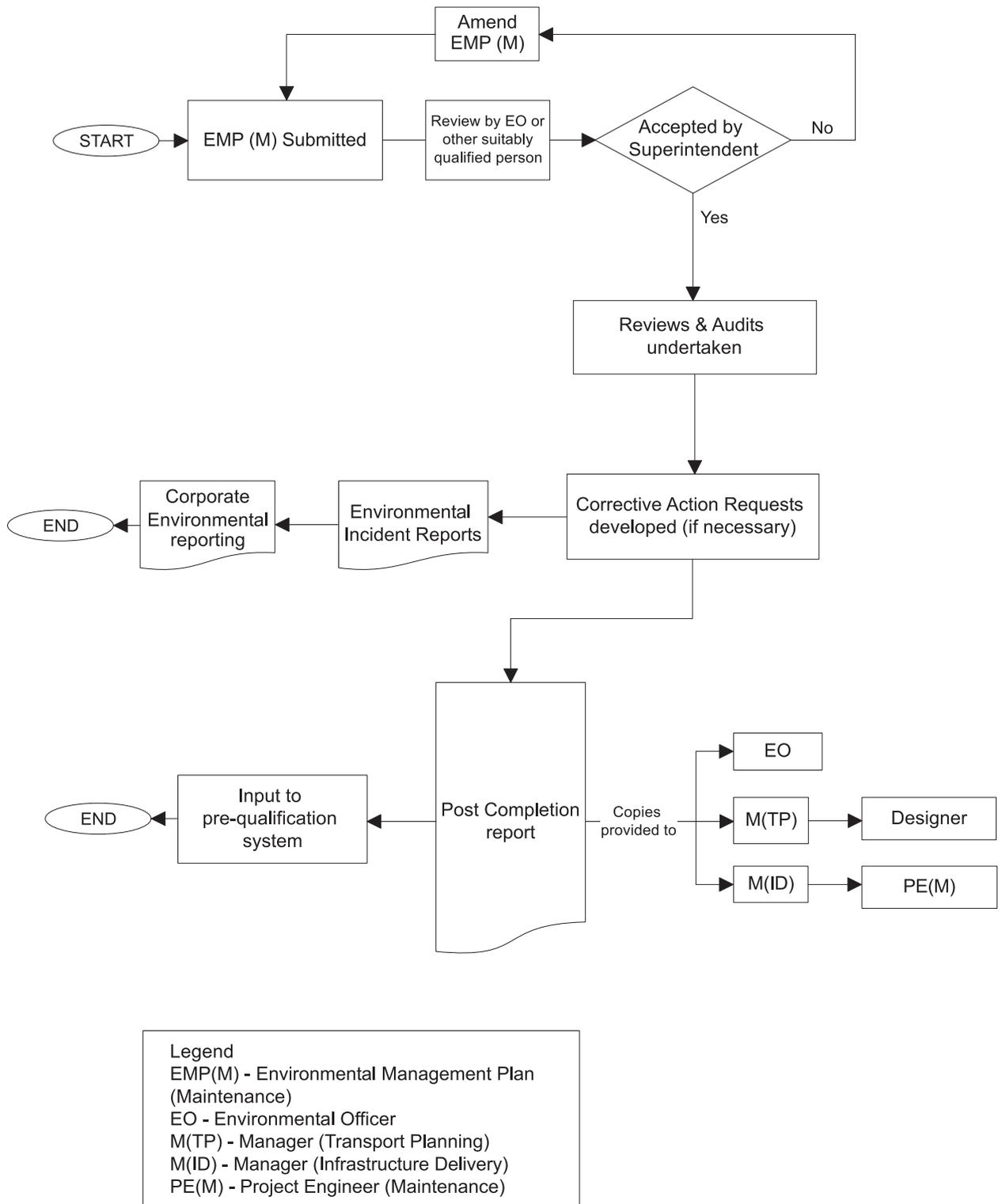


Figure D-3 Administration Arrangements - Maintenance



PART E
Project Environmental
Auditing And Reporting



