



ENVIRONMENTAL MANAGEMENT MANUAL

DOCUMENT APPROVAL:

ENVIRONMENTAL MANAGER
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DOCUMENT CONTROL

Any changes in the methods or procedures outlined in this document must be approved by Environmental Safety Management. The Change Control History includes a brief description of the changes made and compatibility with earlier releases. The current revision of this document is controlled by Document Control and maintained on ADTRAN's internal network.

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1.0 Scope

The environmental Management System Manual documents ADTRAN's environmental management system to demonstrate the company's commitment to the objectives in the Environmental Policy.

This manual establishes compliance with ANSI/ISO 14001-2004, and applies to all processes implemented at ADTRAN, that have been identified as causing or potentially causing a significant impact on the environment.

2.0 Introduction

2.1 Company Background

ADTRAN began operations in January 1986, with an experienced nucleus of managerial, engineering, sales, and marketing personnel. This initial management and engineering team brought to the new company many years of extensive experience and success in the telecommunications industry.

ADTRAN was created with the strategy to design, manufacture, and market a broad range of ADvanced TRANsmission products for the Telco industry. The first group of products was oriented toward the digital transmission area in DDS and related generic digital services. This product line has been expanded to include ISDN, NCTE, OEM and CPE products.

2.2 Overview of the ADTRAN Environmental Management System (EMS)

It is ADTRAN's intention to implement an EMS that complies with the requirements of ISO 14001-2004, at its facilities. It is ADTRAN's desire that this EMS will help the company in achieving their environmental goals including reducing the use of natural resources.

The purpose of the EMS is to manage and control activities and processes that have a significant impact on the environment, minimize the impact of these activities, and achieve continual improvement of the EMS and ADTRAN's environmental performance.

It is a requirement that all employees of ADTRAN understand, implement, and continually support the objectives of the environmental policy. Every employee is responsible for minimizing the impact on the environment and the use of resources, by following instructions, procedures, work instructions and forms developed for their individual tasks, and is encouraged to make recommendations for improvement of the environmental program.

2.3 Environmental Policy

ADTRAN Incorporated is committed to the protection of the environment and the conservation of natural resources in the assembly of telecommunications products. To this end we will:

- Comply with all applicable environmental laws, regulations, and company requirements.
- Establish objectives for continual improvement in environmental management.
- Conduct top management reviews of our environmental management system.
- Educate employees on responsibilities in protecting the environment.
- Communicate our environmental policy to employees.

3.0 Definitions

EAGLE

Environmental Action Group Leaders, a team of management representatives.

Environmental Aspect

Element of an organization's activities, products or services that can interact with the environment.

Environmental Impact

Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's activities, products or services.

Environmental Management System

The part of the overall management system that includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the environmental policy.

Environmental Objective

Overall environmental goal, arising from the environmental policy, that an organization sets itself to achieve, and which is quantified where practicable.

Environmental Performance

Measurable results of the environmental management system, related to an organization's control of its environmental aspects, based on its environmental policy, objectives and targets.

Environmental Target

Detailed performance requirement quantified where practicable, applicable to the organization or parts thereof, that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives.

Prevention of Pollution

Use of processes, materials or products that avoid, reduce or control pollution, which may include recycling, treatment, process changes, control mechanisms, efficient use of resources and material substitution.

4.0 Environmental Management System Requirements

4.1 General Requirements

ADTRAN has established, documented, implemented, maintains and continually improves, an Environmental Management System based on the requirements of ISO 14001-2004.

The EMS manual is a summary of ADTRAN's policies and intentions concerning each element of the EMS at ADTRAN's facilities.

Some procedures may be a part of this manual; others may be referenced separately.

4.2 Environmental Policy

The environmental policy, established by top management at ADTRAN, takes into account the significant aspects and impacts of ADTRAN's operations, as it impacts the environment.

This supports ADTRAN's commitment to minimize the impact to the environment, as well as complies with all applicable laws and regulatory requirements. In regards to the WEEE initiative, ADTRAN's implementation date was August 13, 2005. There are currently no other specific industry standards to which ADTRAN subscribes.

Using the policy as a guideline, objectives and targets have been set at the highest level of the organization and cascade down through as objectives and targets for all levels of the organization.

The policy is available to the employees via internal ISO training and the public through ADTRAN's website at www.adtran.com.

4.3 Planning

4.3.1 Environmental Aspects

In order to determine ADTRAN's environmental aspects and impacts, ADTRAN initially went through a process of identifying all processes, activities and tasks performed at ADTRAN, identified the aspects and impacts and potential impacts on the environment of each one, and then evaluated these based on a rating scale. The information is currently kept on the network and updated according to changes in the facility, processes and legislative requirements. The Environmental Safety Manager ultimately determines which significant aspects and impacts will be incorporated into the facility's objectives, targets and plans for operational control and improvement.

For further details see GEN43.1, Environmental Aspects and Impacts.

4.3.2 Legal and Other Requirements

The Environmental Safety Manager at ADTRAN is responsible for maintaining a list of all regulatory and voluntary requirements to which ADTRAN subscribes.

As updates are received from various organizations, the list is updated.

The impact of these changes is considered as decisions are made concerning setting objectives and targets for significant impacts.

For further details, see GEN43.2, Legal & Other Requirements, How to Identify.

4.3.3 Objectives and Targets

The Environmental Safety Manager with guidance from the management review team is responsible for setting objectives and targets at the highest level, based on the significant aspects and impacts selected to be addressed as a reflection of ADTRAN's commitment to its management policy.

Where applicable, legal and other requirements, the views of customers and other interested parties are also considered.

Every objective is assigned to a person whose responsibility it is to see that the objective and target(s) is/are met. They, in turn, develop a plan for achieving the goals and assign responsibilities on levels throughout the organization based on their own planned objectives and targets.

This person is also responsible for monitoring progress and reporting back to the Environmental Safety Manager.

As new significant aspects are identified, objectives and targets change accordingly.

For further details, see GEN43.3, Environmental Objectives and Targets

4.3.4 Environmental Management Program

For each objective and target, the Environmental Safety Manager establishes an initial overall plan.

At this time he assigns responsibility for each objective to one or more individuals. It is the responsibility of these individuals to develop an action plan for their action item.

They are responsible for monitoring the progress and assigning lower level objectives, targets and responsibilities. As needs change, the plans may be modified in response.

As new products are developed or existing designs modified, they will be brought under the EMS and reviewed by the Eagle team to determine their impact to the environment.

For further details, see GEN43.3, Environmental Objectives and Targets

4.4 Implementation and Operation

4.4.1 Structure and Responsibility

Top management is responsible for supporting and approving the overall direction and responsibilities for environmental management at ADTRAN as documented in the EMS manual and procedures, with input from the Environmental Safety Manager.

The Environmental Safety Manager, utilizing designated management personnel provides adequate resources and assigns qualified personnel to all activities. Resources may include, in addition to personnel, technological advancements and financial resources as required.

The Environmental Safety Manager has been designated as the management representative and is responsible for establishing, implementing and maintaining the facility's EMS, with an eye towards continual improvement. His responsibilities also include reporting on the performance of the EMS to top management. Much of this information is reviewed at the management review and is used as a basis for continual improvement.

Designated people are responsible for achieving the company's objectives and targets that are on the objectives and targets list. Department managers and supervisors are responsible for ensuring that the employees in their departments are aware of the EMS policy, understand what it means to them, and understand the importance of what they do as it relates to environmental objectives.

All employees at all levels are responsible for following approved EMS procedures and work instructions and identifying opportunities for improvement of procedures and work instructions in their individual areas of responsibility.

For further details, see GEN44.1, Structure and Responsibility.

4.4.2 Training, Awareness, and Competence

This section describes the method used by the facility to ensure that people with appropriate experience, qualifications and environmental training fill all positions, which have an affect on environmental aspects and impacts.

The Operations Training Manager and the Environmental Safety Manager are responsible for developing environmental awareness training. The Environmental Safety Manager is responsible for ensuring that as objectives and targets change, the training is updated accordingly. The Operations Training Manager, Environmental Safety Manager, and department managers are responsible for implementing plant and job specific training relating to environmental aspects and impacts. The department managers are responsible for judging competence by observation.

EMS awareness training includes, reviewing the EMS policy, the importance of conforming with the EMS policy and the corporation's procedures and regulatory requirements to which the facility subscribes, the EMS benefits of improving personal performance in relation to the actual or potential impact of an individual's work on the environment, the potential consequences of departure from specified procedures, and emergency preparedness and response activities, where appropriate.

For additional details see GEN18.1, Training.

4.4.3 Communication

Internal communications at ADTRAN is handled by one of several methods, depending on the circumstance. These methods may include approved procedures, work instructions, policies, postings on common area bulletin boards, records and forms, special memos either on paper or via internal e-mail, regular meetings, management reports, and special meetings as required. These are intended to ensure that employees at all functions and levels receive reliable, timely information on matters concerning the EMS.

Procedures describing the methods used for handling external environmental inquiries from customers or other interested parties are the responsibility of the Environmental Safety Manager. The procedures include the methods used for receiving, documenting and responding to external inquiries.

It is decided by the Environmental Safety Manager, that significant aspects shall not be communicated to external parties.

For detail see GEN44.3, Internal and External Communication.

4.4.4 Environmental Management System Documentation

ADTRAN's documented EMS consists of four levels of documentation, the EMS Environmental Manual, General Operating Procedures, work instructions, and records, forms and external documents.

Where applicable the documentation resides on ADTRAN's internal network.

For further details, see GEN05.1, Documentation Requirements.

4.4.5 Document Control

The Document Control Manager is responsible for document control. The majority of the controlled documents are located on ADTRAN's internal network, which is available to all personnel in the facility. Some documents typically records, forms and external documents, are found in locations throughout the facility as postings or in file cabinets, to maintain legibility.

The document control system specifies controls for the approval of each document, a unique identifier, the title and revision number and/or date of each document.

All documents on paper are removed when they are revised and become obsolete. Obsolete documents on the computer are deleted and no longer available. If obsolete documents need to be retained for legal or knowledge purposes, they are stored in an archive file away from the mainstream documentation to avoid unintended use.

As processes or conditions change, documents are reviewed and maintained accordingly. Evidence of this can be found in the revision history file for computerized comments.

Maintenance is done by the person(s) that initially approved the document or their designee.

For more details see GEN05.1, Documentation Requirements.

4.4.6 Operational Control

Operating procedures and work instructions have been developed at ADTRAN to ensure that operations associated with significant aspects, policies and objectives and targets are identified, planned and controlled to ensure they are carried out under controlled conditions.

The department managers are responsible for ensuring that all work instructions required are implemented.

The employees whose work affects the environmental management system are responsible for carrying out the tasks as described.

Documented operating procedures direct the processes of each department, while the individual work instructions and forms direct personnel doing the individual tasks and include such things as specifications, measurements, acceptable standards, and any health and safety requirements.

Testing is done at appropriate intervals to verify that input meets output, and that systems are not being compromised.

Procedures are in place and updated as required to ensure that suppliers and outside contractors used by ADTRAN are aware of their potential impact on our environmental policy and/or objectives and targets, and act in an environmentally friendly, safe manner.

For further details, see ISO14001 Correlation Matrix.

4.4.7 Emergency Preparedness and Response

The Environmental Safety Manager is responsible for developing, implementing and maintaining the company's emergency response plan.

ADTRAN maintains a formal, comprehensive, emergency response plan, which identifies potential emergencies that are reasonably foreseeable, and specifies the actions to prevent, prepare for, respond to and recover from them. The plan includes methods used to prevent and mitigate the environmental impacts that could be associated with emergency situations.

The plan is reviewed at least every 3 years and after any accident or emergency situation for the purposes of implementing corrective action.

Training is provided for all personnel who may be involved with emergency response.

The plan is tested, where practical, to ensure its effectiveness, including testing of various equipment and protective gear that may be used.

The emergency contact list is generated and maintained by the Environmental Safety Manager and updated periodically as warranted.

For further details, see GEN44.7, Emergency Preparedness & Response.

4.5 Checking and Corrective Action

4.5.1 Monitoring and Measurement

Procedures govern responsibility for ensuring that controls are implemented and maintained for monitoring and measuring the environmental impact of key processes at the facility and for the collection of environmental performance indicators to be reported to top management, including significant changes in performance, positive and negative incidents and trends.

Approved procedures and action plans define the measures to track performance and to measure progress of the facility's objectives and targets. Standard measures include indicators of resource and environmental compliance.

Calibration and maintenance of equipment used for measuring and tracking environmental performance are controlled under ADTRAN's calibration and preventive maintenance program. Any piece of equipment found to be defective is repaired or replaced or, if out of calibration, recalibrated. Records are generated and stored in the calibration database.

Based on the master list of all items that need to be done in order to maintain compliance to all applicable rules and regulations, records are generated, and reviewed periodically during an internal EMS audit, to verify that ADTRAN remains in compliance.

For further details, see GEN45.1, EMS Monitoring and Measurement

4.5.2 Nonconformance and Corrective/Preventive Action

The Environmental Safety Manager is responsible for ensuring that procedures are established, implemented and maintained to prevent environmental nonconformance, and to initiate and verify appropriate corrective action when nonconformances are reported.

Initiation of corrective action is directly related to the scale of the environmental problem encountered with the goal of preventing significant environmental impacts. When an incident does result in an adverse impact, action is taken to mitigate and minimize the adverse impact.

ADTRAN's nonconformances cover environmental incidents, community complaints, internal and external audit findings, deviation from the environmental policy and action plans, and other EMS nonconformances.

Corrective and preventive actions are initiated and documented to investigate and correct reported EMS nonconformances and/or to prevent future nonconformances through documented improvement activities.

Changes in documented procedures as a result of corrective action taken are recorded as specified by document control.

All corrective and preventive actions are verified before the action is closed out.

ADTRAN's corrective and preventive action process is described in GEN14.1, Corrective and Preventive Action.

4.5.3 Records

The Environmental Safety Manager is responsible for the implementation and monitoring of ADTRAN's environmental records. EMS records are incorporated into the facility's document control system and follow the same control as other documents regarding identification, traceability, and retrievability.

Records may include but are not limited to, training, EMS audits, testing, management review meeting minutes, and corrective and preventive actions.

All records are stored to prevent damage to them.

For further details see GEN05.1, Documentation Requirements.

4.5.4 Environmental Management System Audit

The Environmental Safety Manager along with the Quality Process Manager are responsible for planning and controlling the internal EMS audit program. Auditors are given audit responsibility in areas of the facility over which they have no direct

responsibility. Department heads are responsible for implementing agreed upon corrective action.

Audits are conducted to ensure that ADTRAN's EMS is compliant with the ISO 14001-2004 requirements, and to verify that the organization complies with internal procedures, work instructions and policies and to determine whether or not procedures have been implemented effectively.

Every element of the EMS undergoes a complete audit within a minimum of two years to determine compliance to the ISO 14001-2004 standard and internal procedures.

Areas that have a greater impact on environmental objectives and targets, or have ongoing nonconformances, or display negative performance trends, may be audited more frequently.

Audits are conducted in accordance with procedure GEN17.1, Internal Audit, the objective being to ensure continued effectiveness of the EMS.

Results are recorded on a standard form, which includes the nonconformances found the individual responsible for corrective actions and a scheduled completion date for the corrective action. The Environmental Safety Manager reports a summary of the results in the Management Review meetings.

Audit reports are given to the Environmental Safety Manager who reviews them and oversees corrective action by affected department heads.

Audit reports are retained as an EMS record for a specified period of time.

For further details, reference GEN17.1, Internal Management System Audits.

4.6 Management Review

The Environmental Safety Manager is responsible for scheduling and conducting periodic management review meetings.

This meeting is conducted to assess the continuing suitability and effectiveness of the EMS, to review audit results, to monitor the progress of objectives and targets, and develop new objectives and targets based on changes to the organization.

It is also to assess the environmental policy to determine if it is still suitable, to develop new action plans for the upcoming year, to assign any additional resources that may be needed, and any other issues that may be important.

The Environmental Safety Manager establishes an agenda, presides over the meeting, ensures that minutes are taken, and develops an action list for the coming year.

Input to this meeting is in the form of internal audit results, corrective and preventive actions, inquiries from external parties, and reports from individuals in charge of addressing objectives and targets.

For further details, see GEN01.1, Management Review.