



EMS MANUAL

EMS ELEMENT: ORGANIZATIONAL CONTEXT



ORGANIZATIONAL CONTEXT

In order to manage environmental issues more effectively at Denver International Airport (DEN), DEN has chosen to implement an Environmental Management System (EMS) based on the ISO 14001 Standard. DEN has established, maintains, and continually improves the EMS to achieve the following intended outcomes:

- enhancement of environmental performance,
- fulfillment of compliance obligations,
- achievement of environmental objectives.

The DEN EMS has been structured around the requirements of ISO 14001 to provide a continual improvement cycle for DEN. The general intent is to explicitly follow a “Plan – Do – Check – Feedback” cycle that considers all of DEN’s environmental aspects and explicitly manages those that can create a significant impact to the environment. The EMS Manual is a primary-level document that illustrates the entire DEN EMS by referencing subsidiary documents for specific procedures and programmatic descriptions for each element within the EMS. Titles of related documents are noted where appropriate to provide additional direction to the reader.



As an airport, DEN strives to achieve a seamless passenger experience, meaning that a passenger will experience products and services from DEN and many of our business partners, from the point of entering airport property to takeoff. The integrated nature of the products and services offered by DEN and its business partners, and the partnerships needs to achieve environmental objectives, begs for an integrated EMS.

The scope of the EMS covers all properties and operations within the property boundary lines of DEN. These boundaries are clearly demarcated on the Airport Layout Plan (ALP). The City of Denver owns and operates Denver International Airport (DEN). Under the city charter, the management, operation and control of DEN is delegated to the city’s Department of Aviation. All activities, products and services conducted by Aviation at DEN are within the scope of the EMS and are commonly referred to as being conducted by DEN. All elements of the EMS apply to those activities. DEN determined the scope of the EMS considering the internal and external issues, the compliance obligations, its organizational units, functions and physical boundaries, its activities, products and services, and its authority and ability to exercise control and influence.

“DEN business partner” means any person or legal entity that provides services on behalf of DEN or uses DEN property and facilities to operate a business or not-for-profit activity. DEN and its business partners create mutual obligations in written agreements that are enforceable by law. DEN business partners conducting ongoing operations on behalf on DEN are typically doing so in accordance with an operating agreement, and those that provide short-term services typically do so in accordance with a contract or



purchase order. These types of business partners are commonly referred to as contractors, subcontractors, and vendors. DEN business partners that are operating their own business or not-for-profit activities at DEN are typically doing so in accordance with a use and lease agreement, access permit, license, or other legal authority. These types of business partners are commonly referred to as tenants, concessionaries, lessees, sub-lessees, permittees, and federal partners.

DEN's business partners maintain independent operational control of their activities, products and services. However, their conduct must be compliant with environmental requirements and legal agreements. The Denver City Charter specifically authorizes DEN to adopt rules and regulations to direct activities conducted at DEN, and through that authority DEN requires that all entities doing business at DEN or on behalf of DEN conform to certain elements of the ISO 14001 EMS standard. The provisions of Part 180 of the Airport Rules and Regulations specify that, all DEN business partners must be aware of the DEN Environmental Policy, identify the significant environmental aspects that they affect, and develop programs to manage these aspects in a manner that complies with environmental requirements, and further, must ensure the competency of their staff with respect to environmental responsibilities. DEN business partners retain operational control over the environmental aspect or impact and have discretion on the means and methods used to meet environmental requirements. EMS documents provide guidance and communicate expectations to DEN business partners.

DEN has many interested parties. The ISO standard defines an interested party as a person or organization that can affect, be affected by, or perceive itself to be affected by a decision or activity. DEN evaluates who are interested parties and their needs and expectations as part of the annual planning process. DEN also determines which of those needs and expectations become compliance obligations.

Related Documents: DEN Environmental Policy, Roles and Responsibilities, Environmental Guideline Process, Needs and Expectations of Interested Parties Process

LEADERSHIP

The Environmental Policy, established by the airport's CEO, outlines its commitment to environmental protection, preventing pollution, fulfilling compliance obligations, and continual improvement by enhancing environmental performance. DEN sets environmental objectives to support the Environmental Policy and monitor how the airport's EMS achieves its intended outcomes.

The Environmental Policy, established by the airport's CEO, clearly communicates commitment and leadership of the EMS throughout top management of the organization. As part of the annual management review process and the routine reporting process (e.g., weekly reports to top management), top management takes accountability for the effectiveness of the EMS. They ensure the environmental policy and environmental objectives are established and are compatible with the strategic direction and context of the organization. They ensure the integration of the EMS requirements into the organization's business processes. Key elements of the annual review include EMS intended outcomes,



the environmental policy, environmental objectives, environmental performance, resources, and continual improvement.

Related Documents: DEN Environmental Policy, Roles and Responsibilities, Management Review

PLANNING

DEN considered its interested parties and their needs and expectations in determining the scope of the EMS. These considerations helped DEN to establish and maintain the EMS to achieve its intended outcomes. DEN reviews interested parties and their needs and expectations as part of the annual planning process.

Compliance obligations consist of environmental requirements and voluntary commitments. Environmental requirements include mandatory requirements contained in environmental laws and permits, obligations contained in legal agreements with business partners, and voluntary commitments. Compliance obligations are informed by the needs and expectations of interested parties. DEN maintains a procedure to identify and have access to environmental requirements applicable to DEN and voluntary commitments to which the organization subscribes.

Related Document: Compliance Obligations Process

DEN maintains a process for identifying and assessing the environmental aspects of its activities, products and services that it can control and over which it can expect to have an influence.

Related Document: Environmental Aspects and Impacts Process

DEN utilizes a process to determine the risks and opportunities related to its significant environmental aspects. In this way, additional controls can be appraised to mitigate potential adverse effects and initiatives and actions can be appraised to leverage and promote beneficial effects. DEN has also determined risks and opportunities related associated with the external and internal issues and requirements of its interested parties identified during the planning process.

Related Document: Risks and Opportunities Process

DEN documents its environmental objectives through a planning process, the results of which are reviewed annually by top management. Where possible, objectives are cascaded through each relevant function and level within DEN. While setting and reviewing the objectives, DEN will consider compliance obligations, the identified significant environmental aspects, risks & opportunities, its technological options, and its financial, operational and business requirements, remedial actions and needs of interested parties. Progress towards achieving its objectives will be documented annually as part of the review process. Objectives shall be consistent with the environmental policy, including commitment to prevention of pollution.



Related Document: Planning Process

The Objectives, Goals, and Strategies document and Master Schedule includes environmental objectives and planned actions to address significant environmental aspects, and risks and opportunities associated with DEN's activities, products, and services. DEN considers its technological, financial, and operational requirements when planning these actions.

SUPPORT

DEN maintains a program to provide proper training and promote awareness of environmental responsibility. Personnel performing tasks, which can cause significant environmental impacts, shall be competent on the basis of appropriate education, training, and/or experience. General awareness training is extended to non-city employees, including tenants, but limited to the scope of the EMS. Competence is defined as the knowledge, skills and abilities necessary to perform tasks repeatedly to the required standard under real conditions. Competence in any field or discipline is acquired from education, training and experience over time. Employees should be aware of the hazards, aspects and risks they are facing and the main controls for those risks as well as their responsibilities in maintaining those controls. Training shall serve the purpose to assure that all relevant personnel are aware of:

- The Environmental Policy
- The importance of conformance with the environmental policy, any relevant procedures or environmental guidelines, and with requirements of the EMS;
- The significant environmental impacts, actual or potential, of their work activities and the environmental benefits of improved personal performance;
- Their roles and responsibilities in achieving conformance with the environmental policy, procedures and environmental guidelines, and with the requirements of the EMS, including emergency preparedness and response requirements; and
- The potential consequences of departing from standard operating procedures or environmental guidelines.

Related Document: Environmental Training Process

DEN maintains procedures for communicating environmental information both internally and externally of the organization. Procedures are maintained for the following functions:

- Internal communication between the various levels and functions of the organization (maintained by DEN ES for internal communications regarding environmental aspects);
- Receiving, documenting and responding to relevant communication from external interested parties, especially in regard to significant environmental aspects; and
- Mechanism to communicate externally about DEN's environmental programs including significant environmental aspects.



Environmental SMEs regularly communicate with external parties such as governmental agencies, community stakeholders, tenants, contractors, and other city personnel. These communications include subjects associated with the management of DEN's significant environmental aspects and are governed by DEN's compliance obligations.

Related Document: Communication Strategy

DEN maintains a documented information process to facilitate the effectiveness of the EMS. The procedure ensures that documents:

- Can be located;
- Are periodically reviewed, revised as necessary and approved for adequacy by authorized personnel;
- Are available in their current version at all locations where operations essential to the effective functioning of the EMS are performed;
- If obsolete, are properly removed from all points of use, or are otherwise assured against unintended use;
- Are kept in a standardized format, which requires them to be legible, have an owner, and be dated; and
- If obsolete and are needed for legal and/or knowledge preservation purposes, are suitably identified.

Related Document: Documented Information Process

DEN maintains a records management procedure for environmental documents generated at DEN. This procedure is intended to identify and maintain all environmental records. Environmental records should be legible, identifiable, and easily traceable to the activity, product, or service involved. Environmental records are stored and maintained in such a way that they are readily retrievable and protected against damage, deterioration, or loss. Retention times are established and recorded in the procedure.

DEN maintains a centralized environmental records system that includes all relevant permits, plans, and procedures, as well as reports, training records, and the results of audits and reviews.

Related Document: Documented Information Process

OPERATION

DEN maintains an organizational structure and clearly assigns responsibility with the intent of fully implementing the environmental policy. Roles, responsibility, and authorities are defined, documented, and communicated in order to facilitate effective environmental management. Top management have established the EMS, support its implementation with necessary resources, and are accountable for its effectiveness.



DEN identifies those operations and activities that are associated with the identified significant environmental aspects, risks & opportunities, in line with its policy, and objectives. DEN delineates environmental roles and responsibilities associated with these operations and activities within the Environmental Guidelines and other EMS documents.

DEN identifies those operations and activities that are associated with the identified significant environmental aspects, compliance obligations, risks & opportunities, and in line with its policy and objectives. DEN plans these activities, including maintenance, in order to ensure that they are carried out under specified conditions by:

- Establishing and maintaining environmental guidelines to cover situations where their absence could lead to deviations from the environmental policy and objectives;
- Communicating operating expectations in the guidelines; and
- Establishing and maintaining guidelines related to the identified significant environmental aspects of goods and services used by the organization and communicating relevant procedures and requirements to suppliers and contractors.

Related Document: Environmental Guidelines Process

DEN maintains a variety of procedures, referred to as work instructions to promote compliance and clarity when conducting activities that can interact with significant environmental aspects.

Related Document: Work Instruction Process

DEN Environmental Services has the responsibility to effectively implement EMS day-to-day business activities, report on the performance of the EMS, and request the resources necessary to support its implementation.

Related Document: Communication Strategy

Under FAA requirement, DEN maintains an emergency preparedness and response program to identify and respond to accidents and emergency situations, including the mitigation of environmental impacts that may be associated with them. Tests of these procedures are performed periodically to ensure competency.

Related Document: Denver International Airport Standard Operating Guideline HAZMAT and Non-HAZMAT Spills and Release [maintained by the Operations Division in the Airport Emergency Operations Center (EOC)]

DEN Environmental Services reviews and revises, where necessary, the environmental portions of its emergency preparedness and response procedures, after the occurrence of accidents or emergency



situations. Through this review, the causes of the incident shall be documented to prepare a plan for prevention of such an incident in the future.

Related Document: Spill and Release Follow Up Work Instruction

DEN considers unplanned events, including emergencies, as part of the planning process.

Related Document: Planning Process

DEN's EMS is planned, implemented, and continually improved considering the interlinked stages from generation/composition of resources needed to perform activities within the EMS scope, to final disposal of items used during operations. This lifecycle perspective is focused on the environmental aspects DEN can control and those influenced within the EMS scope.

Lifecycle considerations are accounted for when determining environmental aspects of DEN's projects, programs, initiatives, activities, and services. These environmental aspects may result in environmental impacts during development, implementation, change, steady state, and end of life operational activity. Identified aspects are evaluated for significance and potential environmental impacts; DEN applies appropriate controls to ensure these are managed and controlled to protect the environment.

The lifecycle perspective is also applied to purchasing materials and items that while in use or disposal may impact the environment. DEN identifies and purchases the least environmentally hazardous products that satisfy their intended purpose, informs personnel working of the importance of using products which reduce environmental impacts, and works to replace existing products with less environmentally hazardous options. DEN disposes of products in an environmentally safe manner that prevents pollution and environmental impacts. DEN informs personnel about potential impacts associated with the use, end-of-life treatment, and final disposal of products to raise awareness and reduce environmental impacts.

Related Document: Planning Process

PERFORMANCE EVALUATION

DEN maintains documented procedures to monitor, measure and analyze its environmental performance. Performance evaluation activities determine the status of a system, process, or activity, and includes checks to supervise or critically observe. DEN uses the term "findings" to broadly describe results of performance evaluation activities, which are observations based on evidence. Findings can be generated externally and communicated in writing to DEN. Examples include findings generated by regulatory agencies through compliance review activities such as inspections and audits, and findings generated through external EMS audits. Findings can also be generated internally, such as through the course of daily work or planned performance evaluation events such as internal reviews and management reviews.



Findings are characterized as follows:

- Conformity. Fulfilment of a requirement
- Nonconformity. Non-fulfilment of a requirement
- Major Nonconformity – Lack of implementation, total ineffectiveness or insufficiency of a management system element; significant regulatory non-compliance (e.g., non-compliance deemed by a regulatory agency as appropriate for escalation to a formal enforcement response such as a Cleanup Order or Compliance Order); or a significant preventable “incident” such as a spill or unintentional release.
- Minor Nonconformity – An isolated instance indicating lack of complete implementation, ineffectiveness or insufficiency within a management system element that could hinder EMS effectiveness over time in combination with other instances; or a regulatory non-compliance that is not characterized as significant by a regulatory agency (e.g., isolated non-compliance due to administrative errors, equipment malfunction, or oversights made in good faith).
- Opportunity for Improvement (OFI) – An opportunity to improve practices for continuous improvement or to improve practices that have the potential to become a nonconformance, if not corrected. Generally, OFIs are what we term a Just Do it (JDI).
- Strengths. A practice that is particularly thorough, enduring, or extends beyond meeting the requirements of the standard to the underlying intent or future direction of industry practice. Strengths function as good practices to model for similar practices within the DEN EMS, or at other organizations.

Monitoring documents included in the EMS library summarize specific monitoring activities that are compliance obligations, such as field inspections, sampling, visual checks, and recordkeeping. Some of these monitoring activities also include measurements. Monitoring equipment shall be calibrated and maintained, and records of this process shall be retained according to DEN’s records management process.

Related Document: Monitoring Process

DEN maintains a process to review its activities and management system performance to measure the extent that the airport is performing in a manner that will meet its goals.

DEN conducts EMS Reviews to serve the purpose to:

- Check conformity with the ISO 14001 Standard
- Identify areas of potential non-compliance and allow for timely corrective actions;
- Determine whether or not the environmental management system:
 - Conforms to planned arrangements for the EMS; and
 - Has been properly implemented and maintained
- Provide information on the results of EMS reviews to management.

DEN’s review process, including the schedule, is based on the environmental importance of the activity concerned, and on the results of previous reviews. In order to be comprehensive, the review procedures



cover the review scope, frequency, and methodologies, as well as the responsibilities and requirements for conducting the review and reporting results.

Related Document: Internal Review Process

DEN top management reviews the EMS annually to ensure DEN's environmental performance and objectives are being met. The scope of the review includes non-conformities and corrective actions.

The management review also addresses the possible need for changes to policy, objectives and other elements of the EMS, in light of the EMS review results, changing circumstances and the commitment to continual improvement.

DEN top management reviews the EMS to ensure its continuing suitability, adequacy, and effectiveness. The management review process ensures the necessary information is collected to allow top management to perform this evaluation.

Related Document: Management Review Process

IMPROVEMENT

DEN maintains procedures for defining responsibility and authority in the handling and investigating of nonconformance, taking action to mitigate any impacts caused and for completing corrective and preventative action.

Any corrective or preventative action taken to eliminate the causes of actual and potential non-conformances are appropriate to the magnitude of problems and commensurate with the environmental impact encountered. DEN implements and records any changes in the documented procedures resulting from corrective and preventive action.

Corrective actions for non-conformances identified during internal reviews or external audits are maintained in the DEN EMS SharePoint Site. Other self-identified non-conformances, including those identified via other mechanisms (e.g. Risks & Opportunities Assessment, or daily work), that are determined by the Environmental Director to warrant corrective action (e.g. potential to result in a significant environmental impact) are maintained in the DEN EMS SharePoint Site.

Related Document: Corrective and Preventative Action Process