

Part II: Sample Manual and Blank Forms

Below is a Sample EMS Manual for a hypothetical metal finishing facility.

Star Plating EMS Manual

Prepared by: Joe Hagenburger

Approved and Authorized by: David Shaw (President)

Main Point of Contact for the EMS: Carol White

Mailing Address: P.O. Box 000
Plating, IN 00000

Phone: (000) 000-0000 Fax (000) 000-0001

Email: cwhite@starplating.com

Purpose of This Manual

This EMS Manual defines the scope of Star Plating's Environmental Management System (EMS) and provides a linkage of system documents to the various elements of the ISO 14001:1996 standard.

The control of this Manual is in accordance with the Star Plating Environmental Procedure for Document Control. All copies of this EMS Manual not marked "CONTROLLED DOCUMENT" are uncontrolled and should be used for reference purposes only.

Amendments to this Manual will be issued by the Environmental Management Representative (EMR) or designee following approval by the Plant Manager.

CONTENTS

- 1.0
SCOPE, STRUCTURE, AND RESPONSIBILITY
- 2.0
ENVIRONMENTAL POLICY
- 3.0
ENVIRONMENTAL ASPECTS
- 4.0
LEGAL REQUIREMENTS
- 5.0
SIGNIFICANT ENVIRONMENTAL ASPECTS
- 6.0
OPERATIONAL CONTROLS
- 7.0
GOALS AND ACTION PLANS
- 8.0
TRAINING, AWARENESS, AND COMPETENCE
- 9.0
COMMUNICATION
- 10.0
EMS DOCUMENTATION AND DOCUMENT CONTROL
- 11.0
MONITORING, MEASUREMENT, AND RECORDS
- 12.0
EMS AUDITS, NONCONFORMANCE, AND CORRECTIVE AND PREVENTIVE ACTION
- 13.0
MANAGEMENT REVIEW
- RECORD OF REVISIONS

1.0 Scope, Structure, and Responsibility

The Star Plating EMS provides a mechanism for environmental management throughout all areas and departments at the facility in [Fictional State Name]. More specifically, it covers operations beginning at the points of entry of raw materials and energy, to the point of exit of finished manufactured products. In addition to manufacturing processes and activities, all other on-site operations fall within the scope of the EMS, including maintenance, grounds-keeping, and offices. The EMS takes waste disposal into account in evaluating the environmental impacts of on-site activities, even though Star Plating may not be the final disposer of its waste. The EMS covers environmental aspects that a facility can control and directly manage and those it cannot control or directly manage but can be expected to have an influence.

EMS roles, responsibilities, and authorities are defined at relevant functions and levels within the facility. Top management provides the resources essential to the implementation and control of the EMS, including: training; human resources; specialty services; financial resources; and technical and informational services. The Environmental Management Representative (EMR) has primary responsibility for establishing, operating, and maintaining the EMS. An EMS Coordinator provides routine EMS support and reports directly to the EMR. Members of the Cross-Functional Team (CFT), which includes members from each major operation within the facility, are responsible for representing their area or department in several facets of the EMS, such as identifying environmental aspects, determining significant environmental aspects (SEAs), setting goals, implementing action plans, reviewing and tracking EMS internal audits results, and serving as an information resource.

Reference Material

ISO 14001 Standard (4.4.1)

2.0 Environmental Policy

The Star Plating Environmental Policy (Policy) is endorsed by the Facility Manager. The policy covers all activities at the facility. The Policy includes a commitment to continual improvement and pollution prevention as well as a commitment to meet or exceed relevant environmental legislation, regulations, and other requirements. The Policy will be reviewed annually by top management, communicated to all employees, and made available to the public in accordance with the Communication with Stakeholders procedure.

Reference Material

ISO 14001 Standard (4.2)

Applicable Procedures and Forms

Communication with Stakeholders

3.0 Environmental Aspects

The Star Plating has established a procedure for identifying the environmental aspects that the facility controls and over which it may be expected to have an influence.

Reference Material

ISO 14001 Standard (4.3.1)

Applicable Procedures and Forms

- Procedure for Environmental Aspects, Objectives and Targets, and Action Plans
- Form for Significant Environmental Aspects
- Form for Linking SEAs, Objectives and Targets, and EMS Operational Control Procedures to Measurement Indicators, Job Functions, Responsible Parties, and Applicable Processes
- Procedure for Identification of Legal and Other Requirements
- Procedure for Environmental Review for New Purchases, Processes, and Products

4.0 Legal Requirements

Star Plating has established a procedure for identifying, accessing, and communicating legal and other requirements to which the facility subscribes. The EMS Coordinator identifies, communicates to appropriate parties, and makes available changes to local regulations. At least annually, the EMS Coordinator reviews the most current national, regional, provincial, state, and local legal and other requirements as applicable to Star Plating. Star Plating also has established a procedure to secure approval from regulatory agencies for processes and activities affecting air emissions, waste management or water discharges, as well as the method for other environmental approvals.

Reference Materials

ISO 14001 Standard (4.3.2)

Applicable Procedures and Forms

- Procedure for the Identification of Legal and Other Requirements
- Procedure for Obtaining Agency Approval
- Form for Legal and Other Requirements

5.0 Significant Environmental Aspects

Star Plating has established a procedure for determining which of its environmental aspects will be considered significant. Discussions regarding significance are recorded in CFT meeting minutes. The SEAs are reviewed at least semi-annually by the CFT or when there is a new or changed process or activity at the facility. The EMR maintains CFT minutes and other records.

Reference Material

ISO 14001 Standard (4.3.1)

Applicable Procedures and Forms

- Procedure for Environmental Aspects, Objectives and Targets, and Action Plans
- Form for Significant Environmental Aspects
- Form for Linking SEAs, Objectives and

Targets, and EMS Operational Control Procedures to Measurement Indicators, Job Functions, Responsible Parties, and Applicable Processes

- Procedure for Identification of Legal and Other Requirements
- Procedure for Environmental Review for New Purchases, Processes, and Products

6.0 Operational Controls

The Star Plating CFT is responsible for identifying operations and activities associated with SEAs that require operational controls. Work Instructions cover the environmental control of specific operational activities and are usually activities specific in their application.

Star Plating has a procedure for identifying and controlling the SEAs of suppliers and contractors.

Star Plating has an environmental procedure to identify the potential for and to respond to accidents and emergency situations and for preventing and mitigating the environmental impacts that may be associated with them. Emergency methods are reviewed by the CFT on an annual basis and after the occurrence of accidents or emergency situations.

Reference Material

ISO 14001 Standard (4.4.6 and 4.4.7)

Applicable Procedures and Forms

- Procedure for Contractors and Sub-contractors
- Procedure for Emergency Preparedness and Response
- Form for Emergency Preparedness and Response Requirements
- Worksheet for Linking SEAs to Operational Controls, Measurement Indicators, Job Functions, Responsible Parties, and Locations of Documents

7.0 Goals and Action Plans

The Star Plating CFT has developed goals for each SEA that define:

1. The performance goals (Investigate/Study, Control/Maintain, or Improve) for each SEA;
2. The specific, quantified targets that define those performance goals; and
3. The planned deadlines for the achievement of those targets.

Goals are developed considering: SEAs; technological options and financial, operational, and business plans; and the views of interested parties.

The CFT establishes action plans as a means to achieve goals. These plans define the principal actions to be taken, those responsible for undertaking those actions, and the scheduled times for their implementation. The action plans are developed by the CFT and approved by top management.

Star Plating also has established a procedure to ensure that environmental management applies to new developments and new or modified activities, products, or services.

Reference Material

ISO 14001 Standard (4.3.3 and 4.3.4)

Applicable Procedures and Forms

- Procedure for Environmental Aspects, Objectives and Targets, and Action Plans
- Procedure for Environmental Review for New Purchases, Processes, and Products
- Forms for Action Plan
- Project Environmental Checklist

8.0 Training, Awareness, and Competence

Star Plating identifies, plans, monitors, and records training needs for personnel who have a significant impact upon the environment. Star Plating has established a procedure to train employees at each relevant function and level so they are aware of the environmental policy, SEAs, their roles and responsibilities in achieving conformance with the policy and procedures, and with the requirements of the environmental management system. The training coordinator is responsible for maintaining employee training records. Appropriate records are monitored and reviewed on a scheduled basis. Competency is determined by the employee's supervisor as specified in the Procedure for Environmental Training and Awareness.

Reference Material

ISO 14001 Standard (4.4.2)

Applicable Procedures and Forms

- Procedure for Environmental Training and Awareness
- Training Needs Analysis Matrix
- Training Needs Analysis—Procedures and Work Instructions by Area/Department

9.0 Communication

Star Plating has established and will maintain a procedure for internal and external communications regarding the EMS. Star Plating has considered a process for external communication on its SEAs and has decided to make that information available upon request.

Reference Material

ISO 14001 Standard (4.4.3)

Applicable Procedures

- Procedure for Communication with Stakeholders
- External Stakeholder Communication Record

10.0 EMS Documentation and Document Control

This EMS Manual describes the core elements of the management system and their interaction and provides direction to related documentation. These documents define the mechanisms for the establishment, implementation, and maintenance of the EMS and ensure that the system is maintained in accordance with the environmental policy and goals and is communicated to suppliers and contractors. These procedures are facility-wide in their application.

Star Plating has established an environmental procedure for controlling EMS documents. This procedure describes where documents can be located and how and when they are reviewed. The procedure ensures that current versions are available and that obsolete documents are promptly removed from use or are suitably identified.

Reference Material

ISO 14001 Standard (4.4.4 and 4.4.5)

Applicable Procedures and Forms

- Procedure for Document Control
- Master Document List

11.0 Monitoring, Measurement, and Records

Star Plating has established a procedure to monitor and measure the key characteristics of its operations and activities that can have a significant impact on the environment. This procedure includes calibration and maintenance requirements and ensures that records will be retained. The procedure also describes requirements to calibrate and maintain monitoring equipment, and to evaluate compliance with relevant environmental legal and policy requirements.

Star Plating has a procedure to identify, maintain, and dispose of environmental records. These records include training records and the results of audits and reviews. They are readily retrievable and protected against damage, deterioration, and loss. The Areas and Departments maintain their own environmental records. Record and document retention is also specified in the procedure.

Reference Material

ISO 14001 Standard (4.5.1, 4.5.3)

Applicable Procedures and Forms

- Procedure for EMS and Regulatory Compliance Audits
- Procedure for Monitoring and Measurement
- Environmental Measurement Indicators Log
- Calibration Log
- Compliance Tracking Log
- Environmental Records
- Index of Environmental Records

**12.0
EMS Audits, Nonconformance, and
Corrective and Preventive Action**

Star Plating has a procedure for conducting periodic system audits that ensure the EMS has been properly implemented and maintained. A summary of these audits is provided to top management. Audits are performed according to a schedule that is based on the environmental importance of an activity, the results of previous audits, and the audit schedule. Auditors are trained and audit records are kept with the Audit Program Leader.

Star Plating has a procedure for defining responsibility and authority for handling and investigating nonconformances, for taking action to mitigate impacts, and for initiating and completing corrective and preventive action. Any changes in procedures resulting from corrective and preventive actions are implemented and recorded.

Reference Material

ISO 14001 Standard (4.5.4, 4.5.2)

Applicable Procedures and Forms

- Procedure for EMS and Regulatory Compliance Audits
- Internal EMS Audit Checklist
- Form for Internal EMS Audit Schedule
- Procedure for Corrective and Preventive Action
- Corrective and Preventive Action Request
- Corrective and Preventive Action Tracking Log

Record of Revisions

Revision Date	Description	Sections Affected

**13.0
Management Review**

Star Plating has a procedure for EMS review by top management. Top management reviews all elements of the EMS at least annually to ensure its continuing suitability, adequacy, and effectiveness. Meeting minutes record these reviews and are kept by the EMR or designee.

Reference Material

ISO 14001 Standard (4.6)

Applicable Procedures and Forms

- Procedure for Environmental Management System Management Review
- Management Review Record

Form 3: List of Legal and Other Requirements

Category/ Aspect	Legal or Other Requirement	Description	Laboratory Operations	Surface Preparation/ Finishing Processes	Metal Finishing Processes	Chrome Plating	Wastewater Pretreatment	Building/Ground Maintenance	General Administration	All Operations

For documenting requirements in ISO 14001 Standard (4.3.2)

Form 5: Goals

Goal	Significant Environmental Aspect	Related Policy	Performance Measurement Indicator(s)

Contact Person: Date Completed: Next Scheduled Update:

For documenting requirements in ISO 14001 Standard (4.3.3 and 4.3.4)

Form 6: Action Plans

Significant Environmental Aspect	
Goal	
Action Plan	
Review Cycle	

Significant Environmental Aspect	
Goal	
Action Plan	
Review Cycle	

Significant Environmental Aspect	
Goal	
Action Plan	
Review Cycle	

Significant Environmental Aspect	
Goal	
Action Plan	
Review Cycle	

Significant Environmental Aspect	
Goal	
Action Plan	
Review Cycle	

Significant Environmental Aspect	
Goal	
Action Plan	
Review Cycle	

Significant Environmental Aspect	
Goal	
Action Plan	
Review Cycle	

For all significant aspects	
Budget	
Schedule	

Contact Person: _____ Date Completed: _____ Next Scheduled Updated: _____

For documenting requirements in ISO 14001 Standard (4.3.3 and 4.3.4)

Form 8: Communications Program Matrix

Stakeholder(s)	Potential Environmental Interest	What We Want to Tell Them	What We Want Them to Tell Us	How We Will Communicate with/Tell Them	When We Will Do It	Person Responsible

For documenting requirements in ISO 14001 Standard (4.4.3)

Form 9: Links Between SEAs, Goals, Completion Dates, Operational Controls, and Monitoring and Measurement

Significant Aspect	Goal	Operational Control	Monitoring and Measurement	Completion Date	Progress to Date

For documenting requirements in ISO 14001 Standard (4.5.1 and 4.5.3)

Form 10: Sample Internal Audit Checklists

Environmental Policy

Questions	Findings/Observations
1.	
2.	
3.	
ADDITIONAL QUESTIONS:	

Environmental Aspects

Questions	Findings/Observations
1.	
2.	
3.	
ADDITIONAL QUESTIONS:	

Goals

Questions	Findings/Observations
1.	
2.	
3.	
ADDITIONAL QUESTIONS:	

Training, Awareness, and Competence

Questions	Findings/Observations
1.	
2.	
3.	
ADDITIONAL QUESTIONS:	

Communication

Questions	Findings/Observations
1.	
2.	
3.	
ADDITIONAL QUESTIONS:	

Document Control

Questions	Findings/Observations
1.	
2.	
3.	
ADDITIONAL QUESTIONS:	

For documenting requirements in ISO 14001 Standard (4.5.4 and 4.5.2)

Form 11: Management Review Record

Date of review meeting:	
Persons present at meeting:	
<i>Name</i>	<i>Position</i>
Conclusions	
Actions to be taken	Person(s) responsible
Signed:	

For documenting requirements in ISO 14001 Standard (4.6)