

Section 3: EMS Nonconformance and Corrective/Preventative Actions

What is an EMS Nonconformance?

A nonconformance is the audit term used to describe one or more EMS requirements that have not been addressed (i.e., no procedure) or have not been implemented (e.g., employees not following a procedure) within your organization's defined EMS fence line.

Examples of Nonconformance:

- No external/internal communication procedure
- Emergency preparation procedure exists, but is not posted
- A number of employees are not aware that you have an environmental policy

Step-by-Step Guide to Nonconformance and Corrective and Preventative Action

- Step 1) Identify EMS Nonconformances
- Step 2) Identify Root Causes and Prevent their Reoccurrence
- Step 3) Implement Corrective and Preventative Actions
- Step 4) Update and Communicate EMS Corrective and Preventative Actions
- Step 5) Develop a System Procedure for Nonconformance and Corrective and Preventative Actions
- Step 6) Check Your Nonconformance and Corrective and Preventative Action Procedure for EMS Conformance

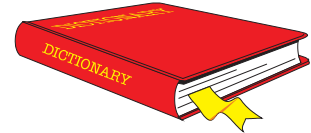


Step 1) Identify EMS Nonconformances

EMS nonconformances (potential problems or areas requiring improvement) can be initiated in a number of ways, including through 1) audit "findings"; 2) suggestions from employees (e.g., from working with day-to-day operating procedures); and 3) monitoring your significant environmental issues. To manage your EMS nonconformances, identify and investigate your EMS deficiencies, determine their root causes, and implement corrective and preventative actions to manage them and verify their effectiveness. A corrective and preventative action program will do this for you.

A sample Corrective/Preventative Action Request/Report (CPAR) is attached at the end of this Section.

Key Section Terms



Audit Finding – The discovery of a lack of conformance to the requirements of an EMS (ISO 14001-based) criteria/checklist. All audit findings must be resolved as found during the internal audit or through a formal EMS process of corrective and preventative action.

Corrective Actions – As a result of the audit findings, corrective action reports (CARs) are assigned to all nonconformances to correct EMS deficiencies as they occur. CARs track an audit finding, and assign tasks to be completed, responsibilities, and timeframes.

Corrective Action Request (CAR) – A report form to identify, track and manage corrective actions.

EMS Audit – A planned and documented review performed in accordance with a documented audit procedure for the purpose of verifying, through interview and an evaluation of EMS documents and records, conformance with the applicable elements of your EMS.

Major Nonconformance – A deficiency in meeting the requirements of an EMS. One or more of the 17 elements of the EMS are not addressed (e.g., no system procedure) or implemented (e.g., not following a system procedure as written).

Minor Nonconformance – A finding that leads to a failure to conform completely with an EMS element, but is not considered to be a breakdown in your system. For example, a number of employees were overdue on their EMS refresher training.

Key Section Terms, continued

Observation – A recognition of something done incorrectly or an area of concern. While not a major or minor nonconformance with an EMS requirement, if done correctly it could strengthen the EMS or if done incorrectly, could potentially cause a system failure.

Preventive Actions – A proactive approach to managing actions that are assigned to any EMS nonconformance made that will prevent potential environmental issues before they occur.

Root Cause – Underlying reason that led to or may lead to an EMS nonconformance. For example, if a group of employees were not following a procedure, the underlying cause could be that they were not properly trained on the procedure or that an updated procedure was not communicated to them.

System Procedure – An EMS required document that establishes an element's purpose, scope, roles & responsibilities, the tasks to be completed, and where or how the associated records and documents are maintained.

Typical Causes of EMS Nonconformances Include:

- ✓ Poor communication
- ✓ Faulty or missing procedures
- ✓ Equipment malfunction (or lack of maintenance)
- ✓ Lack of training
- ✓ Lack of understanding of an EMS requirement
- ✓ Not following an EMS requirement

Step 2) Identify Root Causes and Prevent their Reoccurrence

While many corrective actions may be “common sense,” look beneath the surface to determine why the problems occurred in the first place. Many organizations use the term “root cause” in their corrective and preventative action processes. By determining the root causes of your nonconformances, you are simply looking past the most obvious or immediate reasons to determine why it occurred.

For example, a new procedure was recently updated by the document control center to include an EMS initiative to recycle oil and grease. However, it was noted on the most recent EMS internal audit that employees in maintenance were not disposing of their oils and greases properly. So how would you determine the root cause of this nonconformance?

By performing a check of the potential sources or causes of nonconformance.

- ◆ Was the procedure updated with the new recycling initiative? Yes.
- ◆ Were all employees in maintenance trained and was the new procedure communicated? Yes.
- ◆ Were they using the most current procedure? No.

Even though employees were trained on the new procedure, it was determined that employees were still using a hard copy procedure that was outdated and that did not include the updates on recycling. It's important to find the cause of the nonconformance in order to fix it and prevent it from reoccurring.

Step 3) Implement Corrective and Preventative Actions

Correct, prevent and manage the nonconformance until it is corrected. This is done through a corrective/preventive action request or CAR.

A CAR identifies and describes the EMS nonconformance, the action items needed to implement the correction, the person(s) responsible for implementing and tracking the correction, and the timeframes for completion. A CAR is an EMS record and documents and tracks corrective actions until the action items from the nonconformance are completed by the established timeframes.

Step 4) Update and Communicate EMS Corrective and Preventative Actions

Update and communicate what you have learned. Based on your root cause review, you may need to update, train, and communicate procedures and work instructions, establish new programs, calibrate equipment, etc.

Let's look back at our example in which the personnel in maintenance were not recycling their oils and greases. It was determined through identifying the nonconformance root cause that the employees in maintenance were using an outdated procedure. As part of updating and communicating the completion of this particular CAR, and to prevent this nonconformance from occurring again: 1) make sure that the document control center "manages" (see section on EMS document and records) all hard copy procedures and work instructions; and 2) communicates and trains the changes to maintenance employees.

In addition, as part of "institutionalizing" this or other corrective actions, inform management so that your EMS improvements will become the new way to do things in your day-to-day operations. For example, from now on, the document control center will put a stamp or footer on all hard copy procedures with the following language: "If printed, this document is obsolete. See an employee from the Document Control Center for the most current version."

REMEMBER



Nonconformances can also be identified outside of an EMS audit. Anyone in your wastewater facility can identify and report findings and make recommendations. This should be encouraged. Find ways to get employees involved in the EMS improvement process – whether formally or informally (for example, via suggestion boxes, contests or incentive programs).

Step 5) Develop a System Procedure for Nonconformance and Corrective and Preventative Action

Document your process for nonconformance and corrective and preventative action in a system procedure that clearly defines what you'll do, roles and responsibilities, when they'll do it, how the information will be communicated, and where the information will be stored. This documented procedure will be a consistent, easily accessible, and clear guide for ensuring that this important element of your EMS is carried out according to your plans.

For samples of Nonconformance and Corrective and Preventative Action procedures from wastewater facilities, see Appendix A.

COACH'S CORNER



Follow a "find, fix, and prevent" approach for smaller issues rather than go through documenting nonconformances. If you're unsure which approach to follow you can start by documenting every finding and filling out a corrective action request (CAR) and then scale back at a later date. Remember, an EMS is about continual improvement.

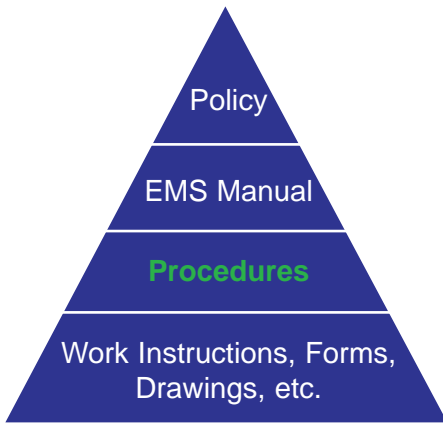
NOTE



Completed CARs are EMS records that need to be traceable to an operation or activity and maintained for review.

Involving Contractors and Temporary Staff

Contractor and temporary employees should understand what is expected of them during your internal EMS audits. Therefore, if an EMS audit finding is found within their operation or service at your facility, they need to understand their roles and responsibilities in correcting the nonconformance (finding), and preventing the EMS audit finding from reoccurring.



A Nonconformance and Corrective and Preventative Action **procedure** is required for this element. A procedure defines the purpose (why the procedure is needed), scope (to what operations/areas/staff the procedure applies), roles & responsibilities (who needs to complete the tasks), and the tasks that need to be completed for this element.

Three Keys to Success

(from wastewater facilities):



1. Focus on correcting and preventing problems. Preventing problems is cheaper than fixing them after they occur (or after they reoccur).
2. EMS nonconformances should be analyzed to detect patterns or trends. Identifying trends allows you to anticipate and prevent future problems as well as identify things going well.
3. Be sure that your corrective & preventive action process specifies roles and responsibilities and schedules for completion for Corrective Action Reports (CARs).

Step 6) Check Your Nonconformance and Corrective and Preventative Action Procedure for EMS Conformance

About two or three months after you have documented and implemented your Nonconformance and Corrective and Preventative Action procedure, check to see if it is working according to your plans. Here are some questions to investigate:

Check ✓

1. Do you have a procedure for identifying, managing, tracking, and completing (closing) EMS nonconformances?
2. Does your process include identifying the root cause and assigning responsibilities and timeframes for completing the corrective actions?
3. Do you document and record your corrective actions?
4. Do you have a procedure to prevent nonconformances from reoccurring?

NOTE



Start thinking about your EMS nonconformances as opportunities to improve. Also, don't forget to document what you are doing well!

After an EMS nonconformance, consult with your employees on how they would implement a solution. Your frontline employees have great ideas on how to improve operations, since they wrestle with the same type of issues each day. The challenge of a manager is how to get ideas out of these individuals, use their knowledge, and reward them for their concepts and foresight.

Rick Bickerstaff
Charleston, South Carolina
Commissioners of Public Works

When you receive a nonconformance, take a breath and try to think about the whole system. Try to avoid jumping in with a quick fix. A quick fix can trigger other unintended consequences that may be another problem down the road.

Donna Adams
Eugene, Oregon
Wastewater Division

Three Lessons Learned

(from wastewater facilities):

- 1.** Your corrective actions should be based on good information and analysis of root cause. While many corrective actions may be “common sense,” you need to look beneath the surface to determine why problems occur.
- 2.** Designate employees from the areas where the nonconformances occurred as the ones responsible for implementing their corrective and preventative actions. These personnel will be the best at identifying appropriate corrective and preventative actions, and the process will get them involved in the EMS.
- 3.** Review your EMS progress regularly and follow up to ensure that corrective actions taken are effective.



Three Things to Avoid

(from wastewater facilities):

- 1.** Starting from scratch. If your organization has a system for correcting environmental compliance findings and/or an ISO 9001 management system, use your current methods as models (or integrate with them) for your EMS.
- 2.** Not documenting and resolving your nonconformances in a timely manner.
- 3.** Not documenting EMS activities that are going well. In addition to documenting nonconformances or problems with your EMS, identify and document EMS successes. This will motivate your staff and help ensure EMS buy-in.



Nonconformance and Corrective and Preventative Action

(Cut out this section for handy reference)




The **Purpose** of this EMS element is to:

- Implement a Corrective and Preventative Action (improvement) process that will identify and manage problems identified in your EMS.

The **Results** of this EMS requirement are:

- A Nonconformance and Corrective and Preventive Action procedure (EMS Document), that identifies, tracks and closes out corrective and preventative actions.
- Corrective and Preventative Action Reports (EMS Records).

Before you Begin this EMS element:

- Develop formal (e.g., audits) and non-formal (e.g., employee suggestions) methods to identify nonconformances or areas that require improvement within your EMS.
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ISO 14001 Requirements	Key Links to Other EMS Elements	Required Documents & Records	Optional Documents & Records
<p><i>Nonconformance and Corrective and Preventive Action</i></p> <p>The organization shall establish and maintain procedures for defining responsibility and authority for handling and investigating nonconformance, taking action to mitigate any impacts caused and for initiating and completing corrective and preventive action.</p> <p>Any corrective or preventive action taken to eliminate the causes of actual and potential nonconformances shall be appropriate to the magnitude of problems and commensurate with the environmental impact encountered. The organization shall implement and record any changes in the documented procedures resulting from corrective and preventive action.</p>	<p>Operational Control – make sure controls (e.g., procedures, work instructions, manuals, etc.) are in place to prevent EMS nonconformances.</p> <p>Monitoring & Measurement – monitor your significant environmental aspects to determine if they are under control.</p> <p>EMS Audits – internal EMS reviews provide a source to identify EMS nonconformances.</p> <p>Management Review – review nonconformances, corrective and preventative actions, and completion of nonconformant issues with management as a way to continually improve and institutionalize the EMS at your facility.</p>	<p>Nonconformance and Corrective and Preventive Action Procedure</p> <p>Corrective and Preventive Action Requests (CPARs)</p>	<p>CAR Logs</p>

Corrective/Preventative Action Request/Report

A. Area/Department:	
<i>Audit Date:</i> <i>Auditee(s):</i>	<i>Auditor(s):</i> <i>Date:</i>
B. Description of Non-Conformance: Audit Criteria: Applicable ISO 14001 Element:	C. Root Cause Analysis:
D. Corrective Action: Date of Implementation:	
E. Preventative Action: Date of Implementation:	
F. Verification of Completion: Date of Verification:	
<i>Auditor (signed):</i>	Date: