

ISO 50001 EXPECTATIONS

Introduction

This document identifies AQA International's expectations for clients seeking registration to ISO 50001. It is organized into the following sections:

- I. Stage 1 Readiness Review Expectations
- II. Stage 2 Conformance Audit Expectations
- III. Surveillance Audit Expectations
- IV. Nonconformance Response Expectations

I. Stage 1 Readiness Review Expectations

The Stage 1 Readiness Review is usually performed on-site to determine if the organization is ready to proceed to the Stage 2 conformance audit. Prior to the Stage 1 Readiness Review clients are requested to complete AQA form EnF-019 to depict how the client's Energy management system (EnMS) addresses ISO 50001 requirements and send it to the auditor along with the EnMS manual and procedures. The lead auditor will review documents and complete the EnF-019 during the audit. General expectations of Readiness to proceed to Stage 2 include:

1. Address of **all requirements of ISO 50001**, including **all documented procedures** required by the standard.
2. The completion and record of **at least one (1) management review** which includes an assessment of the Energy management system's suitability and effectiveness.
3. The completion and record of **at least one (1) full internal audit cycle** in which every element of the standard has been audited.
4. At least **three (3) months** of the records required by the standard.

Please contact AQA to reschedule the audit if any of these expectations cannot be fulfilled by the audit date.

AQA has noticed that there are certain elements of the standard that organizations are more likely to not address properly. These items are discussed below for the purpose of assisting organizations in preparing for documentation reviews and audits. Any examples are intended to clarify meaning, not stipulate preferred methods to address an element. *All AQA clients must implement the procedures and methods that best fit their business practices while meeting the standard.*

Energy review, energy baseline, Energy Performance Indicators and documentation are the cornerstone for conducting an ISO-50001 audit. The Energy review, energy baseline and Energy Performance Indicators – methodology and records are reviewed to determine if they are appropriate and to identify which activities are most significant. Next, documentation is reviewed to determine if all requirements of ISO 50001 have been addressed.



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ISO-50001 Standard ⇒ Client Documentation ⇒ Energy Management System Implementation and Records

4.2 Energy Policy

The Energy policy is the guiding EnMS document and needs to address the organization's commitments to energy performance improvement, compliance with regulations & other requirements, and establishing Energy objectives and targets. Additionally, the policy needs to support purchase of energy efficient products and services, and design for energy performance improvements.

4.3.1 Energy Review:

The analysis of Energy use and consumption based on measurement and other data, based on analysis of energy use and consumption, identification of area of significant energy use. Identify, prioritize, and record opportunities for improving energy performance. The energy review shall be updated at defined intervals, as well as in response to major changes in facilities, equipment, systems or processes.

4.3.2 Legal and Other Requirements

To achieve and maintain regulatory compliance, an organization needs to identify and understand its regulatory requirements applicable to its energy use, consumption and efficiency. The organization shall determine how these requirements apply to its energy use, consumption and efficiency and shall ensure that these legal requirements and other requirements to which it subscribes are considered in establishing, implementing and maintaining the EnMS.

Therefore, the organization needs to have determined that required permits or licenses are in place and that a process is developed to review and update changes to regulatory requirements and file permit applications when due. Additionally, the organization needs to identify its other requirements they subscribe to, i.e., customer requirements, industry standards, etc.

4.4.2 Competence, Training and Awareness

Employees whose job function could have a significant energy uses, must be trained and aware of the impact, actual, with respect to Energy use and consumption of their activity and behavior contribute to the achievement of energy objectives and target, and the potential consequences of departure from specified procedures. A process to determine competency must be established.

4.4.3 Communication

The organization needs to develop communication processes for communicating Energy Performance and EnMS to its employees, suppliers or contractors and have provision for making comments or suggest improvements to the EnMS. The organization shall decide and document it decision, whether to communicate Externally its Energy Policy, Energy performance and decides to communicate, the method of communication shall be documented.

4.4.7 Design

The organization shall consider energy performance improvement opportunities and operational control in the design of new, modified and renovated facilities, equipment, systems and processes that can have significant impact on its energy performance. The results of energy



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performance evaluation shall be incorporated into the specification, design and procurement activities of the relevant project (s).

The results of the design activity shall be recorded.

4.4.8 Procurement of energy services, products, equipment and energy

The organization shall inform to suppliers that procurement is partly evaluated on the basis of energy performance, when procuring energy services, products and equipments related to significant energy use. The criteria for assessing energy use, consumption and efficiency over the planned or expected operating lifetime when procuring energy using products, equipment and services. The energy purchase specifications shall be defined and documented.

4.5.1 Monitoring and Measurement and analysis

The organization needs to have documented procedures to monitor and measure the key characteristics of its operations that determine energy performance. This includes information tracking conformance with its objectives and targets. Monitoring equipment must be calibrated with records available.

A process and schedule for performing Energy compliance assessments for determining compliance with legal requirements.

II. Stage 2 Conformance Audit Expectations

The auditor will assess conformance to ISO 50001 and client is adherence to its own policies, objectives and procedures. This assessment will be performed by observations, interviews and record review.

III. Surveillance Audit Expectations

All EnMS processes may not be audited in every surveillance audit. The auditors will asses:

1. Effective implementation of corrective actions in response to previous non-conformances
2. Efforts made toward *energy performance improvement, updated energy review, energy baseline and EnPIs*.
3. A comprehensive list, or equivalent control system, identifying the nature of all revisions to the EnMS documentation.
4. Continual operational controls in maintaining EnMS, meeting Legal and other requirements and continuous effectiveness of EnMS.



IV. Nonconformance Response Expectations

AQA Clients are required to transfer each AQA identified nonconformance to their internal corrective action form and system. Failure to submit an acceptable response utilizing their corrective action form and system by the established due date may have a negative impact on new or existing registrations.

Acceptable Client Corrective Action Responses Must Include:

1. The results of an investigation to determine the root cause or most basic cause(s) of the nonconformance.

If the root cause is not determined, it is unlikely the corrective actions will prevent recurrence of the nonconformance. In fact, a good test to determine if you have properly identified the root cause is to ask, “If we eliminate this cause, will the nonconformance happen again?” If the answer is no, then the root cause is properly identified. If the answer is yes or maybe, then the root cause needs to be further analyzed. It often takes asking “why did the potential root cause occur” several times to reach a root cause upon which corrective actions can be based to prevent recurrence

Below are some root causes that are usually inadequate and should be rarely used:

- “Operator error” or “Oversight on the part of the operator”,
- “Poor training” or “Training not effective”,
- “Didn’t understand the requirement” or “Not aware of the requirement”
- “Isolated occurrence”

Use of these root causes may result in AQA asking for further clarification or investigation because they are not specific and lend themselves to narrow corrective actions that may not prevent recurrence of the nonconformance. When these are encountered, “why” should be asked at least once more to determine an underlying or more basic cause. For example, if asked why an operator error occurred, it may be determined to have been caused by the operator inadvertently selecting the wrong switch that looked similar and was close to the correct switch. This root cause would lend itself to mistake proofing that would separate or distinguish the switches to prevent recurrence.

Root causes must also be sought over which management has control. A root cause of “severe weather” does not support preventing recurrence of the nonconformance where-as root causes of inadequate contingency planning or leaking trucks do support preventing recurrence of the nonconformance.

2. Corrective actions including both:

- Corrective actions taken to determine the extent of, contain and correct (i.e. fix) the specific nonconformance
- Corrective actions taken in response to the root cause(s) to eliminate recurrence of the nonconformance. These corrective actions focus on changing a process to eliminate the root cause and thus eliminate recurrence of the nonconformance. Often, corrective actions are submitted that fix the specific nonconformance but do not address the root cause to prevent recurrence of the nonconformance.



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3. Verification that corrective actions have been implemented.

The client must verify corrective actions have been implemented and submit this verification, along with evidence of implementation (procedures, records, pictures, control plans, etc.) to AQA. Usually, corrective actions that have not been implemented are not acceptable. Corrective actions that, by nature, require more time to implement may be accepted for future verification if accompanied by specific target dates and adequate justification.

Examples of Good Root Cause and Corrective Actions:

Nonconformance, Root cause and corrective action
<p>Nonconformance: Several new employees have no records showing that they are competent.</p> <p>Root Cause: These employees were determined to be competent during on the job training. Human resource manager had been keeping these records but the procedure was recently changed for supervisors to keep these records. This change was not properly communicated to supervisors. No acknowledgement of procedural changes is required.</p> <p>Corrective action: Verified that on-the-job training records were on file with the Human Resource Manager for all new employees hired before the procedure was changed to have the supervisor keep these records. On-the-job training has been verified for all new employees hired after the procedure was changed and records are attached. The training procedure has been revised to require a procedure (new or revision) sign off for all affected people indicating that they are properly trained to the revision. Attached are the revised training procedure and the sign off sheet for all affected people. An audit has been scheduled for August 2005 to evaluate the effectiveness of training to new procedures and procedure revisions.</p>

Examples of Poor Root Cause and Corrective Actions:

Nonconformance, Root cause and corrective action	Reason for <u>NOT</u> being acceptable
<p>Nonconformance: Annual audit plan does not provide objective evidence to support how the audits are planned according to Energy importance of the activity</p> <p>Root Cause: Not all the key points of internal auditing were grasped</p> <p>Corrective Action: Retraining is to be held for the internal auditor whose qualifications shall be conferred with by the management. The internal auditing plan for the year 2005 is to be formulated to ensure that the planned arrangements are prioritized per Energy importance.</p>	<p>Root Cause does not identify the underlying cause of the nonconformance.</p> <p>Corrective action fixes the 2005 audit plan, but needs to be verified as complete or have a target date established for completion.</p> <p>Corrective action of retraining of internal auditor suggests that the initial training was not effective. This should be examined as part of the root cause.</p>



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<p>Nonconformance: Monitoring equipment in use is found to be out of calibration.</p> <p>Root Cause: Person responsible for calibration of equipment forgot to calibrate this equipment</p> <p>Corrective action: Equipment is now calibrated.</p>	<p>Root Cause doesn't address why the system allows equipment to go without calibration.</p> <p>Corrective Action fixes "equipment", but is not clear if all out of calibrated equipment was identified and fixed.</p> <p>Corrective Action does not make any change to prevent it from recurring.</p>
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