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# ISO 17025 - Auditing Experience

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Experience as Technical Expert, supporting Lead Assessor

- LA – section 4 – Management Requirements
- TE – section 5 – Technical Requirements
- Lessons – weaknesses and strengths
- Some questions for you!

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**CALIBRATION** - a set of operations that establish the relationship between values of quantities indicated by a measuring system and the corresponding values realized by the standard.

**TEST** - technical operation that consists of the determination of one or more characteristics of a given product, process or service according to a specified procedure.

**Q. Which is relevant?**

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The Quality Manual should not just repeat the standard.

**Standard:**

**“5.4.7.1 Calculations and data transfers shall be subject to appropriate checks in a systematic manner.”**

**QM:**

**“5.4.7.1 Calculations and data transfers are subject to appropriate checks in a systematic manner.”**

**Q. What would be better here?**

## 4.2 Management System

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**4.2.2 . . . The quality policy statement shall be issued under the authority of top management . . .**

**Q. Who are “top management”?**

**A. Those who have the authority to grant you all the resources you need.**

# Culture

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## 4.1 (Organization) and 4.2 (Management System)

If followed, these lead to a good quality culture.

Auditors can often tell, by talking to staff, what their attitude to quality is.

But an audit is about getting **evidence**.

## 4.4 Review of Requests, Tenders and Contracts

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### 4.4.1 Review of Requests

**Have you the capability?**

**-technical**

**-capacity**

**Difference between dealing with a small request and a large one.**

## 4.5 Subcontracting

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**Does your IMS subcontract any part of its service?**

**What happens if your IMS has a problem?  
Would you turn to another IMS for help?**



## 4.8 to 4.12 – Problems and How They Are Fixed

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A good QMS:

- **identifies** non-conformances
- **corrects** them quickly
- identifies **root** cause
- identifies **preventive** measures
- **follows up**, to make sure they are effective

4.10 – continual improvement

## 4.9 Nonconformances

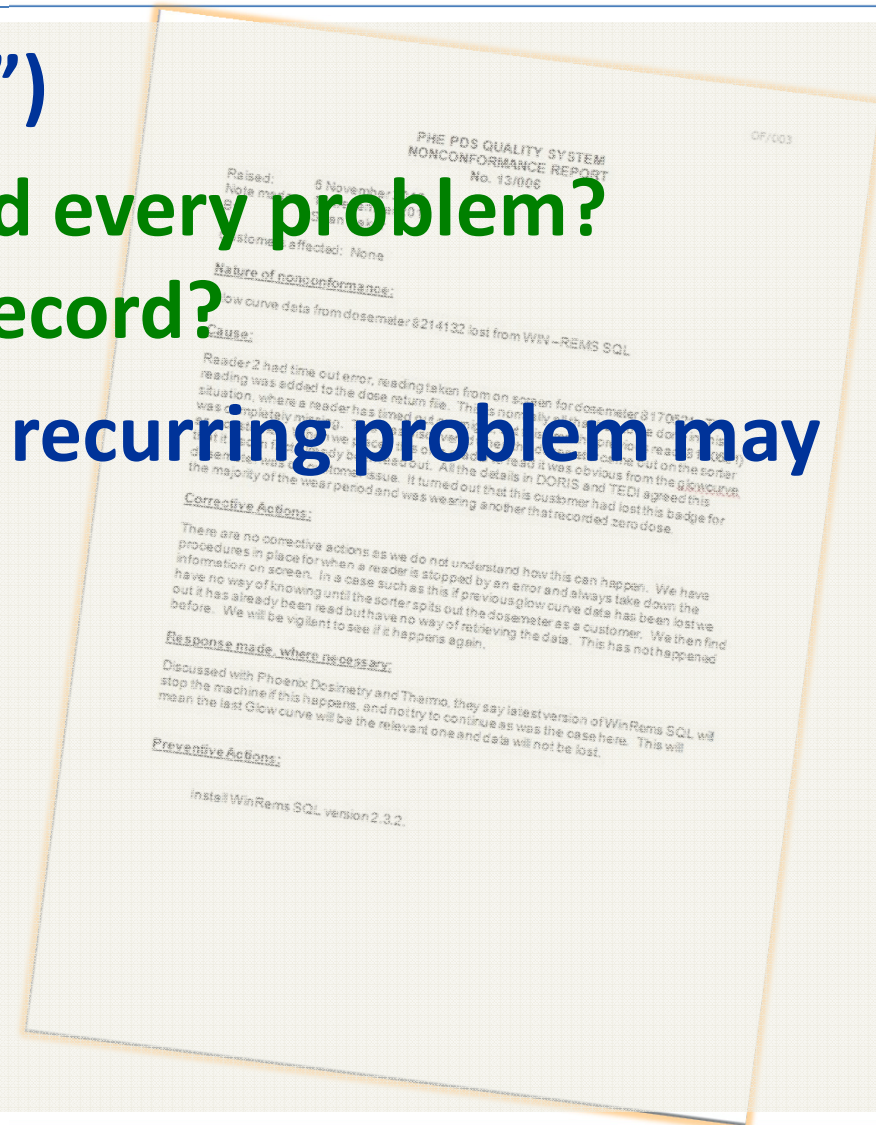
(“Nonconforming work”)

**Q. Do we need to record every problem?  
When should we NOT record?**

**Remember: a small but recurring problem may lead to a bigger one.**

### REPORT

- Details
- Cause → ROOT Cause
- Corrective actions
- Preventive actions
  
- Also: follow-up



## 4.15 Management Review

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Typically has fixed agenda

Be careful to take a view over the **whole system**

Performance indicators?

Main question: is the Quality System working?

Avoid too much focus on details

## 5.2 Personnel

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### 5.2.2 Education & Training

Remember to evaluate the effectiveness of training:

- did the trainee learn enough?
- would you use the same trainers again?

### 5.2.4 Job Descriptions

If these are used for your institute's own purposes, do they still state the person's Quality System responsibilities?

## 5.4 Test Methods and Method Validation

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### 5.4.5 Method Validation

**Q. How can an IMS tell that a method is valid?**  
(“Relevant to the customer’s needs”)

- Usually, customer does not specify their needs
- Meets published standard, e.g. IEC 62387-1
  - hence: type testing
- Meets any other requirements (customer, national etc.)

## 5.4 Test Methods and Method Validation

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### 5.4.7 Documented and Validated Software

- Care needed with in-house systems – may not be documented sufficiently.
- If contracted out, make sure contractor has coding and documents in a usable state.

#### Q. How is software validated?

- thorough test programme
- outputs (compare with independent sources)

## 5.5 Equipment

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**Q. Why are logs and maintenance records useful?**

- confidence in equipment
- trends visible - diagnosis
- anticipate problems
- information on efficiency – hence costs
- maximises reliability

## 5.6 Traceability

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**UNBROKEN chain from national/ international standards**

**Q. In an IMS, what are the “reference standards” and “intermediate checks”?**

**A. (i) TLD: Calibration dosemeters; QC dosemeters**

**(ii) Film: Batch calibration films; Set-up films for densitometer**

*(See also 5.9.)*



## 5.8 Handling

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**Q. IMS had defined storage conditions for dosimeters (cool, dry, away from sources of radiation). Was this enough?**

**A. No. They needed to demonstrate that the storage conditions were suitable (no effect on dosimeters), by:**

- carrying out and recording their own validation, or
- referring to manufacturer data.

**... and keeping **evidence available**.**

## 5.9 Assuring the Quality of Test Results

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**5.9.1** The laboratory shall have quality control procedures for monitoring the validity of tests . . . undertaken. The resulting data shall be recorded in such a way that trends are detectable . . .

This monitoring . . . may include, but not be limited to, the following:

- a) regular use of certified reference materials and/or internal quality control using secondary reference materials;
- b) participation in interlaboratory comparison or proficiency-testing programmes;
- c) replicate tests or calibrations using the same or different methods;
- d) retesting or recalibration of retained items;
- e) correlation of results for different characteristics of an item.

**5.9.2** Quality control data shall be analysed and, where they are found to be outside pre-defined criteria, planned action shall be taken to correct the problem and to prevent incorrect results from being reported.

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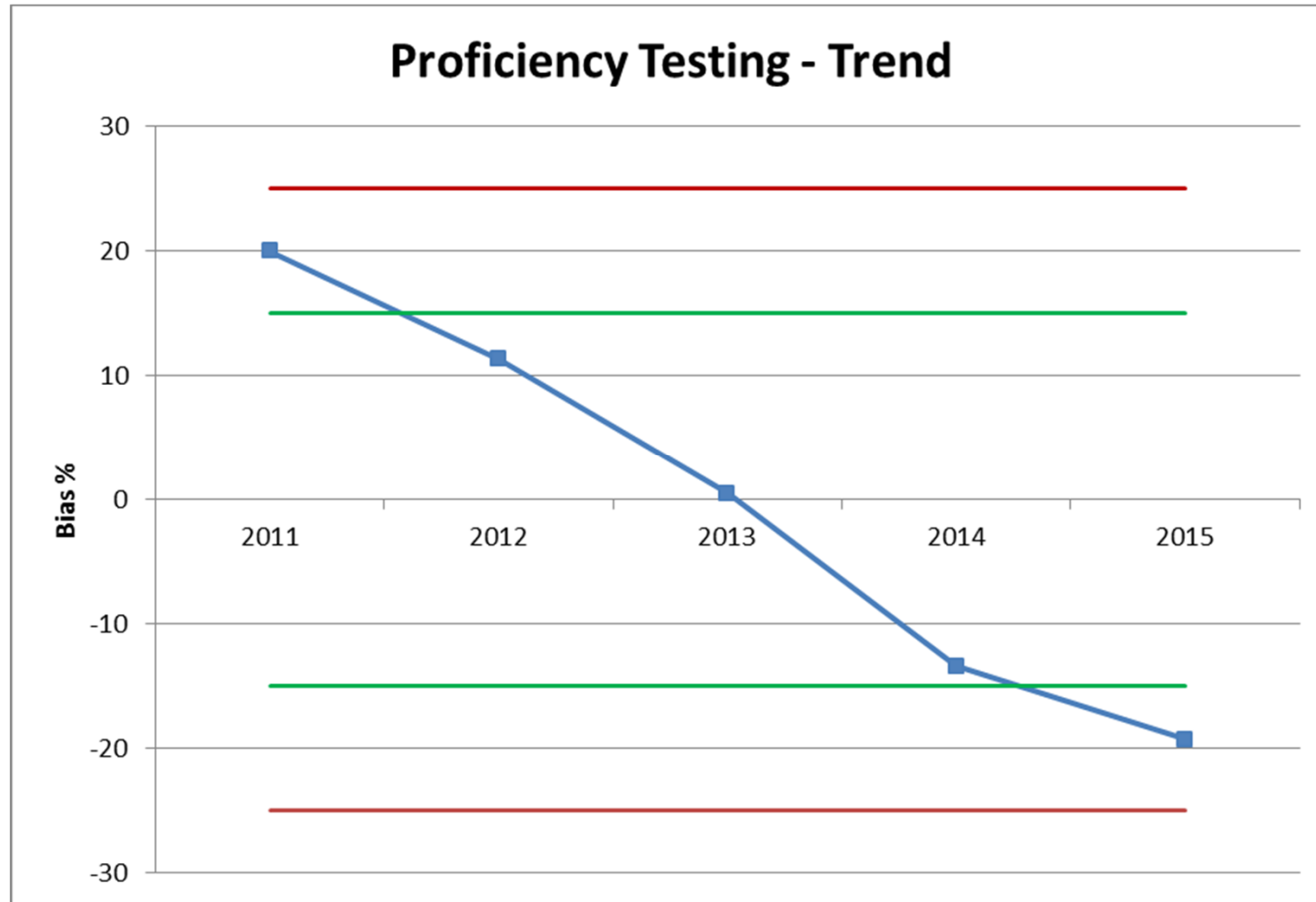
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- Laboratory had records of results in local intercomparisons (ICs) for last 5 years.
- Each IC result had been analysed and a report produced by the Quality Manager.
- Report commented on whether result was Good (within  $\pm 15\%$ ) , Acceptable (within  $\pm 25\%$ ) or Requiring Action.

**Q. What else should they have done?**

Year	Judgement
2011	Acceptable
2012	Good
2013	Good
2014	Good
2015	Acceptable

## 5.9 Assuring the Quality of Test Results



What will happen in 2016?

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## Summary

- not everything is straightforward
- some parts of ISO 17025 are more challenging than others
- read the standard properly
- think it through carefully
- you need **evidence!**

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**Any questions?**