

American Association for Laboratory Accreditation



Excellence in Accreditation, Commitment to Service

Overview of A2LA DoD ELAP Program and Common Issues

Chris Gunning

Environmental Sciences Program Manager

*American Association for Laboratory Accreditation (A2LA),
Frederick, Maryland*



What is A2LA?

The **A**merican **A**ssociation for **L**aboratory **A**ccreditation

- n Established in 1978
- n Largest U.S. multi-discipline Conformity Assessment Body (CAB) Accreditation system
 - n *More than 2500 CABs currently accredited*
- n Fourth largest multi-discipline CAB Accreditation system in the world



What is A2LA?

Mission

- Provide world-class accreditation and training services for testing and calibration laboratories, inspection bodies, proficiency testing providers, reference material producers and product certifiers. These and other future services should create stakeholder confidence in the quality, competence and integrity of all A2LA-accredited organizations and in their products and services.

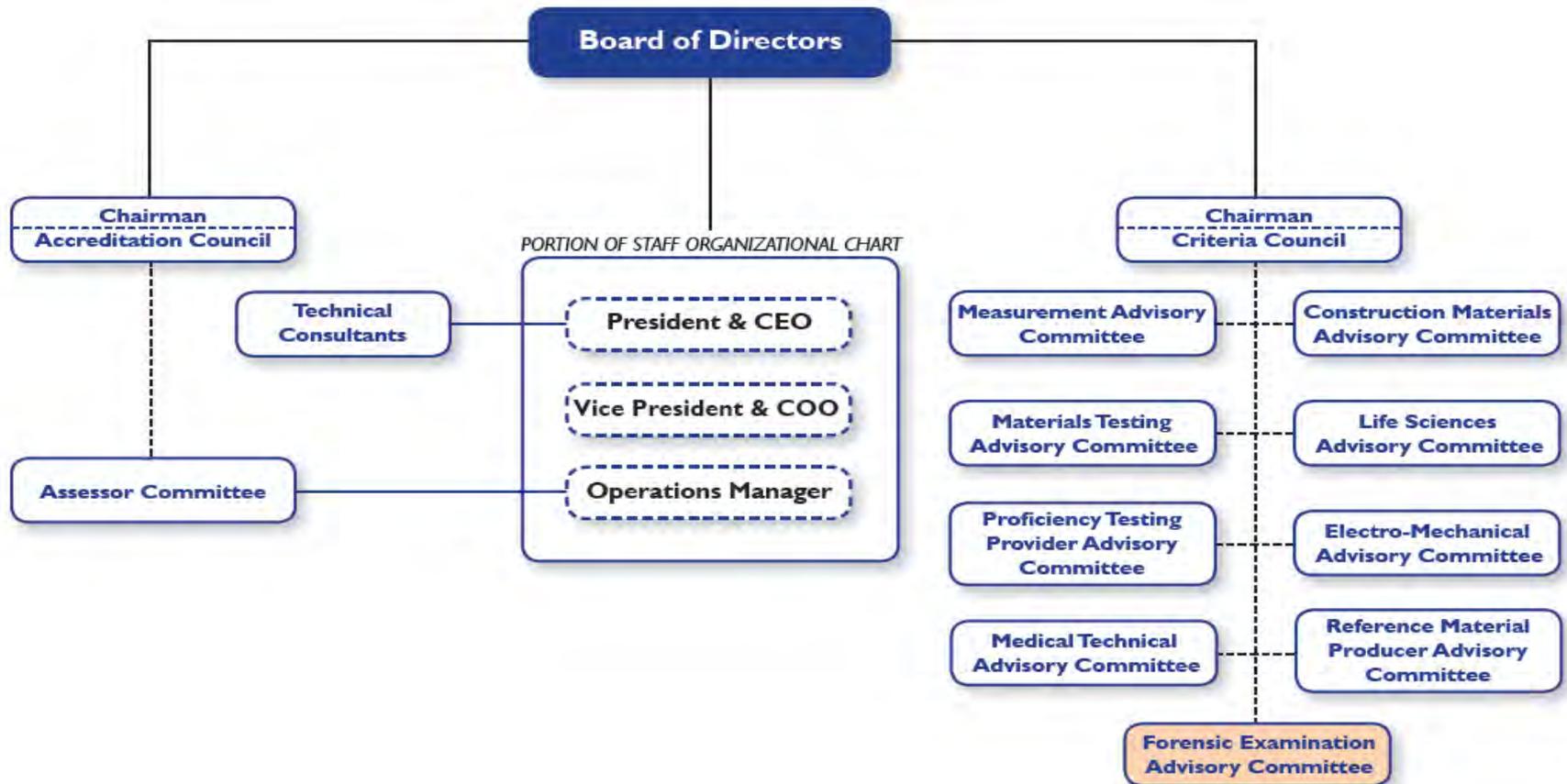


What is A2LA?

- n First lab accredited was in the Environmental industry and is still accredited by A2LA
- n Over 30 years using ISO Guides & Standards
- n 50+ highly-talented staff
- n Non-profit, non-governmental
- n Public Service Membership Society



A2LA Organization



A2LA Programs

- n Laboratory Accreditation – testing and calibration (ISO/IEC 17025)
- n Inspection Body Accreditation (ISO/IEC 17020)
- n Proficiency Testing Providers (ISO/IEC 17043)
- n Reference Materials Producers (ISO Guide 34)
- n Medical Testing Laboratories (ISO Guide 15189)



A2LA Programs

- n Product Certification Body Accreditation (ISO Guide 65)
- n Medical Testing Laboratory Accreditation (ISO 15189)
- n CAB quality & related training

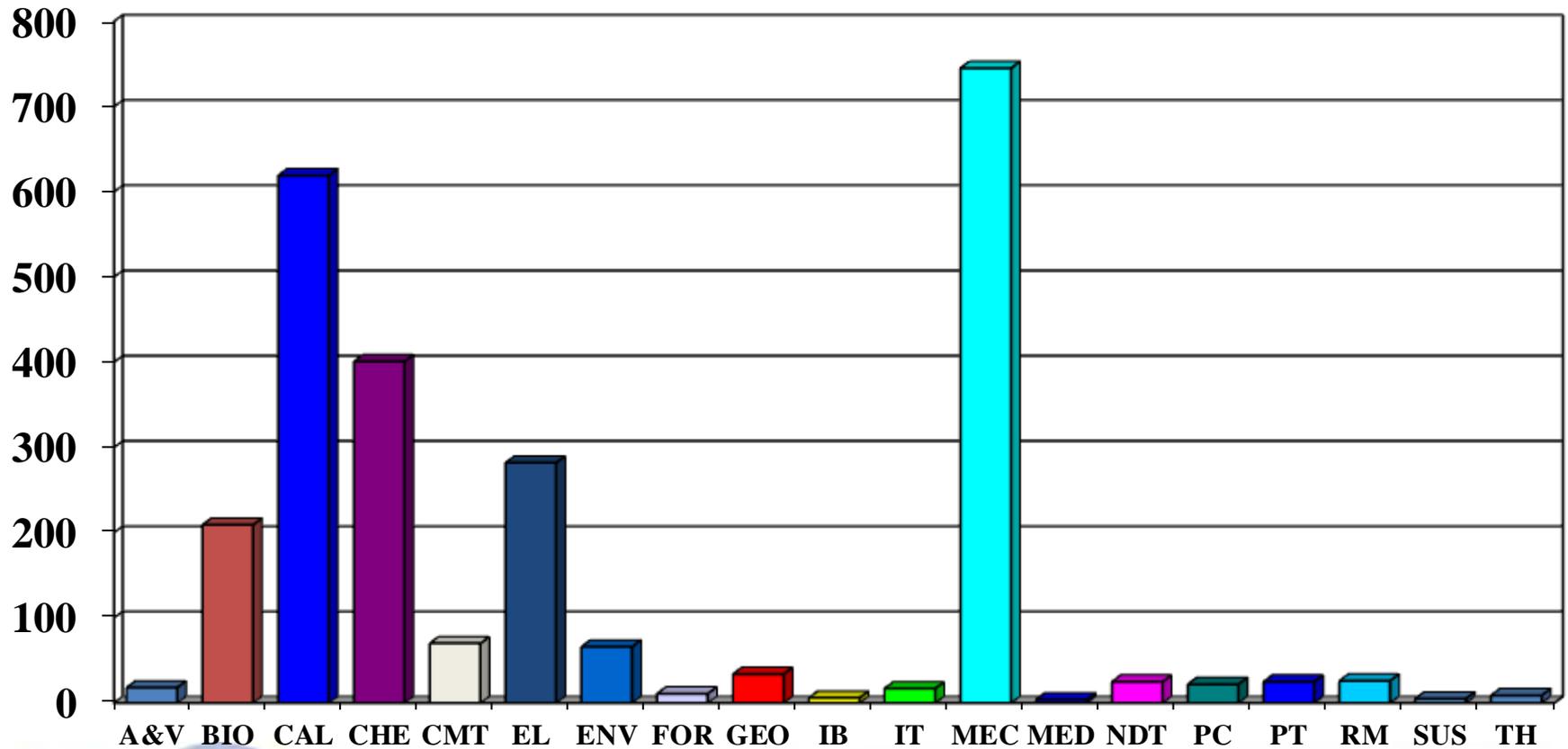


A2LA Fields of Testing/Calibration

- n Mechanical
- n Chemical
- n Environmental
- n Construction Materials
- n Electrical
- n Geo-technical
- n Information Technology
- n Calibration
- n Non-destructive
- n Biological
- n Acoustics & Vibration
- n Sustainable Energy
- n Thermal
- n Medical
- n Forensics



Number of Accreditations & Applicants Per Field/Program (2013)



Why Do CABs Seek Accreditation?

- n **Legal requirements** - Government legislation might require accreditation, such as in the areas affecting health, safety, environment in order to provide confidence in essential services.
- n **Customer requirements** - Customers may require the use of only accredited laboratories to reduce their risk of taking actions based on invalid testing/calibration results.
- n **Marketing advantage** - The CAB might be able to gain a market advantage by having an independent third party evaluate their competency (provides more assurance than self-declaration).
- n **International Trade** - The CAB may want to ensure that testing they provide for a product/material does not have to be repeated in another country before the product can be sold.



Accreditation Requirements Hierarchy

- n 1) International Standard (i.e. ISO/IEC 17025)
 - n Management Requirements
 - n Technical Requirements
- n 2) A2LA's Field-Specific Requirements
 - n limited to certain fields
 - § calibration, food microbiology, etc.
- n 3) Test/Calibration Method Requirements
 - n ASTM B117, ASME B89, In-house developed methods



Accreditation Requirements Hierarchy

- n 4) A2LA Traceability Requirements
- n 5) A2LA Proficiency Testing Requirements
- n 6) Other A2LA policy requirements
 - n such as Field Testing/Field Calibration Requirements, Advertising Policy Requirements



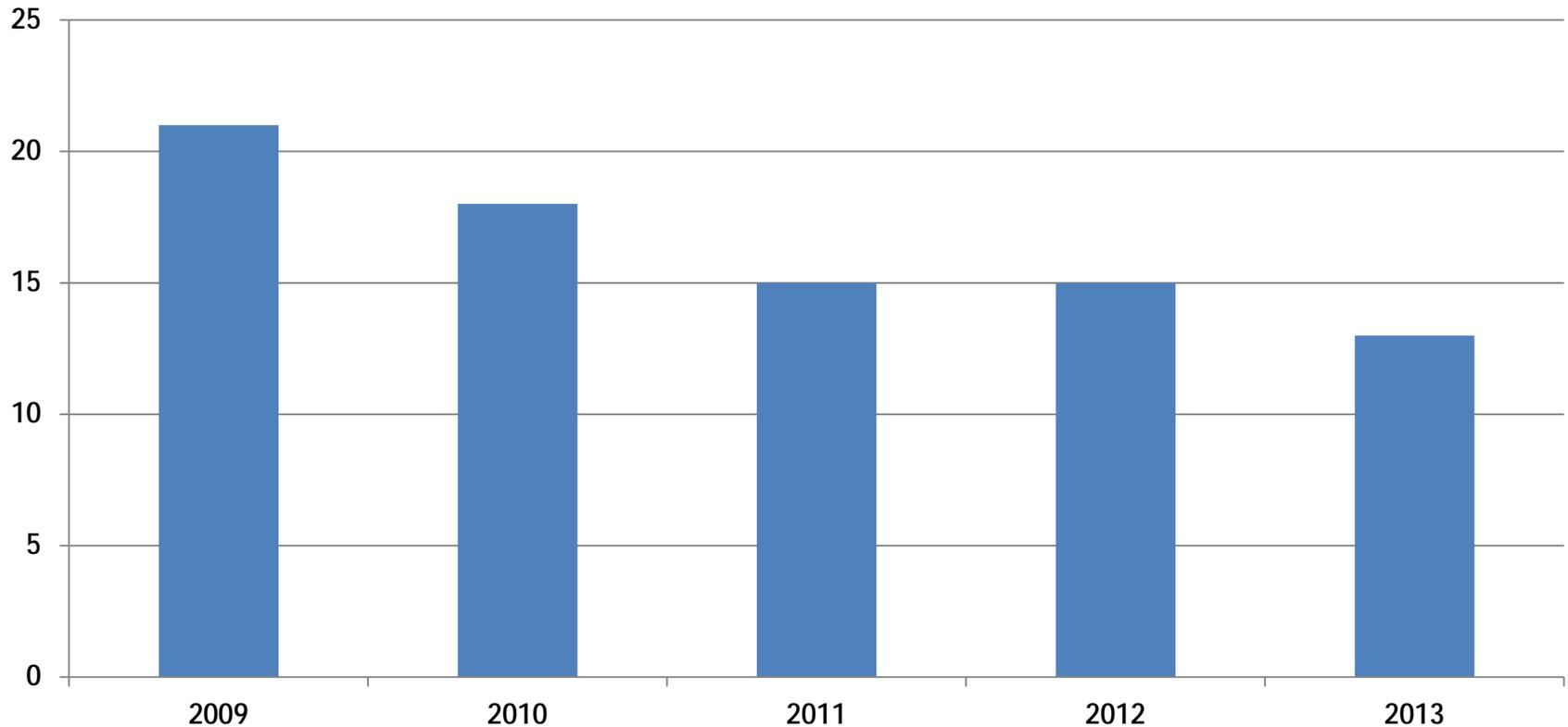
A2LA DoD ELAP Program

- n A2LA was recognized in 2009 as an ILAC signatory and mutually recognized Accreditation Body (AB) to provide accreditation to labs seeking to work under the Defense Environmental Restoration Program.
- n Currently have 29 labs in the program.
- n 11 highly qualified and trained assessors specifically for the ELAP program allowing for a rotation of assessors throughout the assessment cycles so that assessors do not visit a lab for consecutive assessments.
- n Several dedicated full time in office accreditation officers to help labs throughout the process.



Progress on Deficiencies

Average Deficiencies



Top Ten NCs for All Labs 9054 NCs from 1292 Assessments

1. Specific tests or calibrations	18%
2. 5.5 Equipment	14%
3. Other standards	13%
4. 4.3 Document control	11%
5. Traceability policy	10%
6. 5.4 Methods & validation	10%
7. 4.14 Internal audits	6%
8. 4.13 Records control	6%
9. 4.6 Purchasing service/supply	6%
10. 5.9 Assuring quality of results	5%



Top Ten NCs for Environmental Labs from 36 Assessments

1. Other standards	36%
2. 5.4 Methods & validation	14%
3. 5.5 Equipment	8%
4. 4.13 Control of records	8%
5. 4.14 Internal audits	8%
6. Traceability policy	7%
7. 4.3 Document control	6%
8. Specific tests	5%
9. 4.11 Corrective action	4%
10. 4.2 Management system	4%



Most Common Issue

- n Laboratory practice or SOP does not match published method or lab is not following own SOP.
 - n Why? – Labs are relying on technical staff to review SOP's with no emphasis on checking what the published method states.
 - n Undeclared changes are often found during assessments and when staff is questioned on it they are unaware of what the published method states.
 - n How to avoid? – Periodic review of in-house SOPs against published methods.
 - n Remember – Deviation from test methods shall occur only if the deviation has been documented, technically justified, authorized, and accepted by the customer (5.4.1).



More Common Issues

- n Labs not determining LOD/LOQ quarterly.
- n Labs running multiple CCVs and assessing whether they adhere to criteria.
- n Determining what constitutes a change in stoichiometry and therefore a method modification.
- n TCLP analysts using less sample than required.
- n Assessing and qualifying data when LCS fails.
- n Special handling and processing of QC samples (CCV and CCB).



Conclusion

- n What is the basic reason for accreditation?
 - n Data defensibility.
 - n Customer confidence and satisfaction.
 - n Labs need to operate as if the data they produce could end up in litigation (detailed audit trail).



For Further Information

Contact: Chris Gunning

Phone: 240 575 7481

Email: cgunning@A2LA.org

American Association for Laboratory Accreditation

5301 Buckeystown Pike, Suite 350

Frederick, MD 21704

www.A2LA.org





ANSI-ASQ National Accreditation Board

Internal Auditing to QSM 5

ANSI-ASQ National Accreditation Board

INTERNAL AUDIT TRIGGERS

§ Annual Internal Audit (4.14)

§ Entire System

§ TNI 4.14.5.c

§ DoD 4.14.6 (all areas)

§ AB policy



INTERNAL AUDIT TRIGGERS

- § When CA indicates nonconformities casts doubt on compliance with (4.11.5) :
 - § Laboratory policies and procedures
 - § Standard requirements
- § Requested by management (4.14.1)



4.14.1 (SHALL)

- § Periodically (annually)
- § Predetermined schedule and procedure
 - § Verify operations continue to comply with:
 - § Management system
 - § Standard



4.14.1 (SHALL)

§ Address

§ All management system elements:

§ Including testing activities

QUESTION

Does a data audit/ review satisfy this?

SOP performed as written?



4.14.1

§ Responsibility of quality manager to

§ Plan and organize by:

§ Schedule

§ Requested by management

§ CA



4.14.1 (SHALL)

§ Carried out by:

§ Trained and qualified personnel

§ Independent of the activity audited

§ Where resources permit

§ Clarified further in DoD 4.14.8

§ Ensure sufficient resources



4.14.2

§ When audit findings cast doubt on:

§ Effectiveness of operations

§ Correctness or validity of the laboratory's test



4.14.2 (SHALL)

§ Laboratory:

§ Take timely corrective action

§ Notify customers in writing if investigations show that the laboratory results may have been affected



4.14.3 (SHALL)

§ Recorded:

§ Area of activity audited

§ Audit findings

§ Corrective actions



4.14.4 (SHALL)

§ Follow-up audit activities:

§ Verify and record

§ Implementation

§ Effectiveness of CA



TNI 4.15.5.a Additional Items (SHALL)

§ Policy that specifies:

§ Time frame for notifying client

§ When doubt on validity of results

§ See 4.14.2



TNI 4.14.5.b Additional Items (SHALL)

§ The laboratory management shall ensure that these actions are discharged within the agreed time frame.



TNI 4.14.5.c Additional Items (SHALL)

- § Internal audit schedule
 - § Completed annually



DoD 4.14.7 (SHALL)

§ Audit personnel

§ Trained

§ Qualified:

§ specific management system element

§ technical area



DoD 4.14.7 (SHALL)

§ Laboratories determine

§ Training and qualification requirements for

§ Audit personnel

§ Including quality managers

§ Establish procedures

§ Audit personnel are trained and qualified

§ i.e. Have necessary education or
experience required



DoD 4.14.7

§ Document

§ Requirements

§ Procedures



DoD 4.14.8 (SHALL)

- § Management ensures
 - § Sufficient resources available to allow
 - § Independent personnel
 - § Audit Activities



DoD 4.14.8 (SHALL)

§ Personnel

- § Sufficient authority

- § Access to work areas

- § Organizational freedom to

 - § Observe activities affecting quality

 - § Report the results



4.15.1 DoD Clarification

§ Management reviews and internal audits are separate activities



Questions



Thank You!

§ Matthew Sica

§ Manager Environmental Programs

§ ANSI ASQ National Accreditation Board ACLASS

§ msica@anab-aclass.org



Welcome

2014 DoD Environmental Monitoring & Data Quality Workshop

Presenter: Jason Stine

**Laboratory Accreditation Bureau
Quality Manager / General Manager of Testing
Lead Assessor / Lead Evaluator**

Management Review

- Required per 17025:2005 Section 4.15
- Additional Requirements
 - QSM Version 5.0 – None
 - TNI - Performed Yearly

“In accordance with a predetermined schedule and procedure, the laboratory’s top management shall periodically conduct a review of the laboratory’s management system and testing and/or calibration activities to ensure their continuing suitability and effectiveness, and to introduce necessary changes or improvements.”

Objectives of Management Review

- Establish What Changes are Necessary to Ensure Quality
- Ensure that the Management and Technical Operations Continue to Conform with Quality System Requirements
- Review Quality Policy and Goals
 - Revise as Necessary
- Review Quality Objectives and Action Plans
 - Assure Your Laboratory is on Track and Improving
 - Set Your Objectives for the Next Year

Objectives of Management Review

- Recognize Organizational / Lab Changes
 - That Have Taken Place / Need to Take Place
 - Organization / Facilities / Equipment / Procedures
- ∅ Need for Changes May Result From Many Areas
 - ∅ Internal / External Audits
 - ∅ ILC / PT Activities
 - ∅ Complaints
 - ∅ New Work Requests

Organization of Management Review

- Senior Management Responsible for Conducting Reviews
- Should Include Personnel Responsible for:
 - Design and Implementation of Quality System
 - Technical Operations
 - Decision Makers
 - Personnel at all Levels that Utilize the System

Organization of Management Review

- May be a Single Focused Effort performed Yearly
 - Get it Done all at Once
- May Consist of Several Smaller Focused Meetings
 - Piece it Together Over the Year
- One Size Does Not Fit All

Organization of Management Review

- Management Responsibilities
 - Typically Performed by the Quality Manager
 - Ensuring Reviews are Conducted in Systematic Manner
 - Follow Procedure
 - * Action Items Identified
 - * Recording of Results
 - * Assuring Implementation with Agreed Timeframe
- * Identifying Action Items, Recording of Action Items and Implementation of Actions Items is KEY.

Planning of Management Review

- Pre Planned Activity
- Conducted Annually (Per TNI 4.15.3)
- Your Procedure
 - Define Goals and Objectives
 - Clarity and Consistency

Planning of Management Review

- Who Should Attend?
- Who Can Help Achieve Your Goal and Objectives?
- Consider Different People / Roles to Include
 - Executive Management
 - Senior Operational Management
 - Quality Manager
 - Technical Management
 - Other Key Department Heads
 - One Person may Fulfill More than one Role

Implementation of Management Review

- No Required Format
- Conducted in a Systematic Manner
- Utilize Formal Agenda
- Procedure Should Provide Basic Outline of Process and Expectations
- Assure Process for Recording of Results

Implementation of Management Review

- Actual performance of the Management Review will depend on the size, scope, organizational structure of the Lab
- May be Simplified for Smaller Organizations
- Can be Performed in a Way That Makes Sense to You

Implementation of Management Review

- 17025 Defines Minimum Agenda Items (4.15.1)
- Review Should Include at least the Following:
 - Matters From Previous Management Reviews
 - Quality Policy / Long and Short Term Goals and Objectives
 - Also Required per 17025 section 4.2.2
 - Suitability of Policies and Procedures
 - Reports from Key Personnel
 - Results of Audits (Internal / External)

Implementation of Management Review

- Review Should Include at least the Following:
 - Analysis of Corrective / Preventative Actions
 - Results of PT and Trend Analysis
 - Trend Analysis of in-house QC
 - Adequacy of Resources (Personnel and Equipment)
 - Future Plans, Estimated Work, Additional Staff
 - Changes in Methods, Equipment
 - Training Needs for Staff
 - Trending of Complaints and Feedback
 - Recommendations for Improvement

Implementation of Management Review

- Results Should Feed into the Lab's Planning System
- May Include:
 - Revision to Quality Policy and Long Term Goals
 - Planned Program for Preventative Action
 - Setting of Objectives for Upcoming Year
 - Corrective Action System

Implementation of Management Review

Key Activity

- Develop Formal Action Plans
- Timelines for Implementation of Agreed Changes
- Responsibility of Management to ensure Actions are Carried out as Required within Agreed Timeframe
- Actions and Effectiveness Should be Monitored

Records of Management Review

- Maintained for all Management Reviews
- May be in the form of Minutes with Clear Indication of Action Items
- Assign Responsibility to Assure Recording
- Records Retained per Retention Policy of the Lab
- Consider Communicating Results Throughout the Lab

Summary

Management Review should be considered a key quality process, and when performed correctly, can be a very effective tool to improve and assure the overall quality of laboratory operations including data.

**Good Management
Review Process**

=

**Good Lab Quality
System and Data**

=

Happy Fred!! J



THANK YOU!

Acknowledgments:

Asia Pacific Laboratory Accreditation Cooperation (APLAC)
APLAC Technical Committee
APLAC TC 003

Presenter: Jason Stine

**Laboratory Accreditation Bureau
Quality Manager / General Manager of Testing
Lead Assessor / Lead Evaluator**



DOD EDQW - PJLA PRESENTATION

"Taking The Mystery Out Of Corrective Action" Satisfying the requirements of section 4.11

Douglas Berg
PJLA Testing Program Manager

In this presentation all references to "the standard" are referring to the DoD QSM 5.0 unless stated otherwise stated.



Training objectives
Session attendees will learn:

- Ø What does the standard require relative to non-conforming work
 - Ø How are non-conformances identified or discovered
 - Ø How to determine the root cause (or causes) of non-conformances
 - Ø How to select the appropriate corrective action or actions
 - Ø How to implement corrective action to eliminate the non-conformance
 - Ø How to ensure effectiveness through monitoring activities
 - Ø How to determine when additional audits are necessary
-
-



PJLA DoD QSM 5.0 - Corrective Action

What does the ISO/IEC 17025:2005 standard require?

"The laboratory shall establish a policy and a procedure and shall designate appropriate authorities for implementing corrective action when nonconforming work or departures from the policies and procedures in the management system or technical operations have been identified." Section 4.11.1 General of the standard

The laboratory shall establish ...

Ø A policy:

Ø A procedure:

The laboratory shall designate

Ø Appropriate authorities for implementing corrective action ...

When:

Ø Specific events have occurred...



PJLA DoD QSM 5.0 - Corrective Action

What does the ISO/IEC 17925:2005 standard require, in addition?

4.11.2 Cause analysis

The procedure for corrective action shall start with an investigation to determine the root cause(s) of the problem.

4.11.3 Selection and implementation of corrective actions

Where corrective action is needed, the laboratory shall identify potential corrective actions. It shall select and implement the action(s) most likely to eliminate the problem and to prevent recurrence. Corrective actions shall be to a degree appropriate to the magnitude and the risk of the problem. The laboratory shall document and implement any required changes resulting from corrective action investigations.

4.11.4 Monitoring of corrective actions

The laboratory shall monitor the results to ensure that the corrective actions taken have been effective.

4.11.5 Additional audits

Where the identification of nonconformities or departures casts doubts on the laboratory's compliance with its own policies and procedures, or on its compliance with this International Standard, the laboratory shall ensure that the appropriate areas of activity are audited in accordance with 4.14 as soon as possible.

Section 4.11 ISO/IEC 17025:2009



PJLA DoD QSM 5.0 - Corrective Action

What does the NELAC 2009 standard require, in addition?

"4.11.6 The laboratory shall have documented procedure(s) to address 4.11.1 and 4.11.3 through 4.11.5.

These procedure(s) shall also include:

- a) which individual(s) or positions are responsible for assessing each QC data type; and*
- b) which individual(s) or positions are responsible for initiating and/or recommending corrective actions.*

4.11.7 Cause analysis described in Section 4.11.2 applies to failures that indicate a systematic error."

Section 4.11.6 and 4.11.7 NELAC Vol 1 Module 2 2009



PJLA DoD QSM 5.0 - Corrective Action

What does the DoD QSM 5.0 standard require, in addition?

” The laboratory shall have and use a record system for tracking corrective actions to completion and for analyzing trends to prevent the recurrence of the nonconformance.

Approved corrective actions developed to address findings during DoD ELAP or DOECAP assessments must be implemented. Any changes to approved corrective action plans must be approved by the DoD ELAP Accreditation Bodies or the DOECAP Operations Team, as appropriate”. Section 4.11.8 DoD QSM 5.0

The laboratory shall ...

- Ø Use a record system to track corrective actions
 - Ø Analyze trends
 - Ø Implement corrective actions from DoD ELAP and DOECAP assessments
 - Ø Obtain approval from DoD ELAP AB or DOECAP Operation Teams for changes to approved corrective actions
-
-



PJLA DoD QSM 5.0 - Corrective Action

How are non-conformances identified?

- Ø Control of nonconforming work
 - Ø Annual internal audits
 - Ø Annual management review
 - Ø External audits performed by customers
 - Ø External assessment by an accrediting body
 - Ø Feedback from customers
 - Ø Staff observation
-
-



PJLA DoD QSM 5.0 - Corrective Action

Root Cause Analysis (RCA)

- Ø Brainstorm to identify all influences that might cause or result in a non-conformance
 - Ø Organize all identified influences in order of their likelihood of causing or resulting in a non-conformance
 - Ø Organize all identified influences in order of severity of the affect of a resulting non-conformance
 - Ø More than one root cause may be identified
 - Ø More than one corrective action may be implemented
 - Ø After corrective action is implemented monitor the output of procedures or processes to determine effectiveness.
 - Ø Audit affected areas when necessary
-
-



PJLA DoD QSM 5.0 - Corrective Action

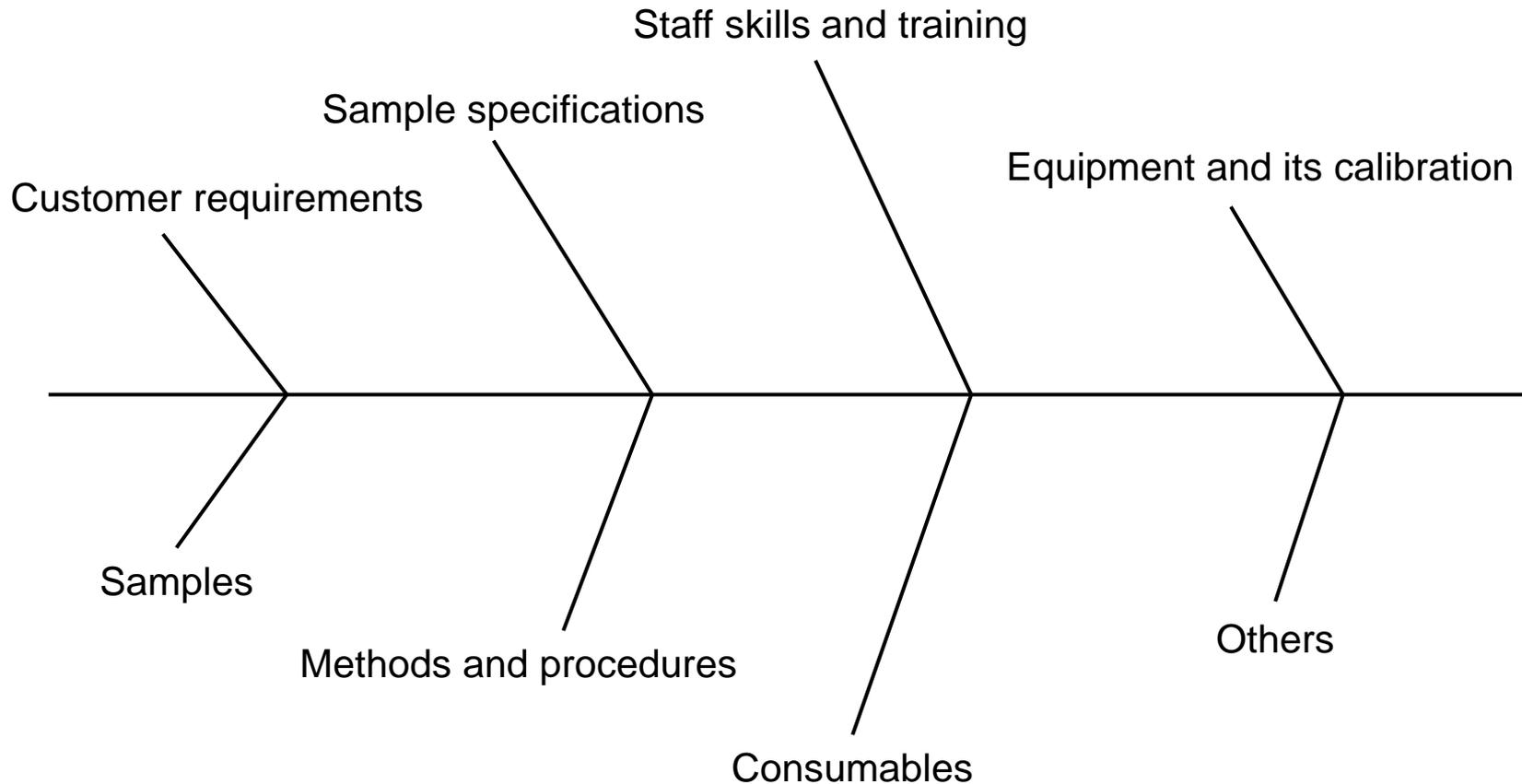
Brainstorm to identify all influences that might cause or produce a nonconforming result

- Ø Customer requirements
 - Ø Customer provided samples
 - Ø Sample specifications
 - Ø Methods and procedures
 - Ø Staff skills and training
 - Ø Consumables
 - Ø Equipment and its calibration
-
-



PJLA DoD QSM 5.0 - Corrective Action

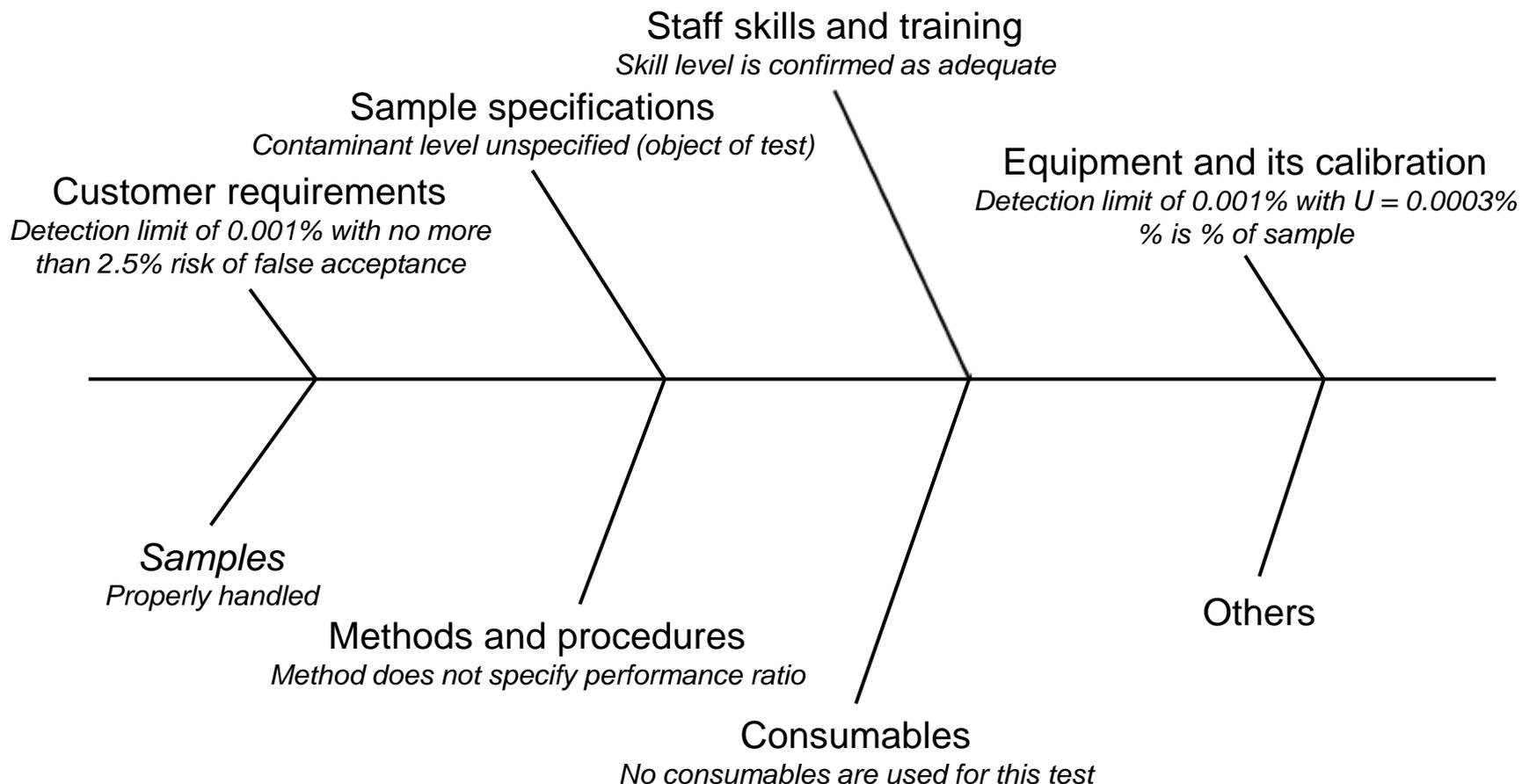
Record potential causes using a fishbone diagram or similar method





PJLA DoD QSM 5.0 - Corrective Action

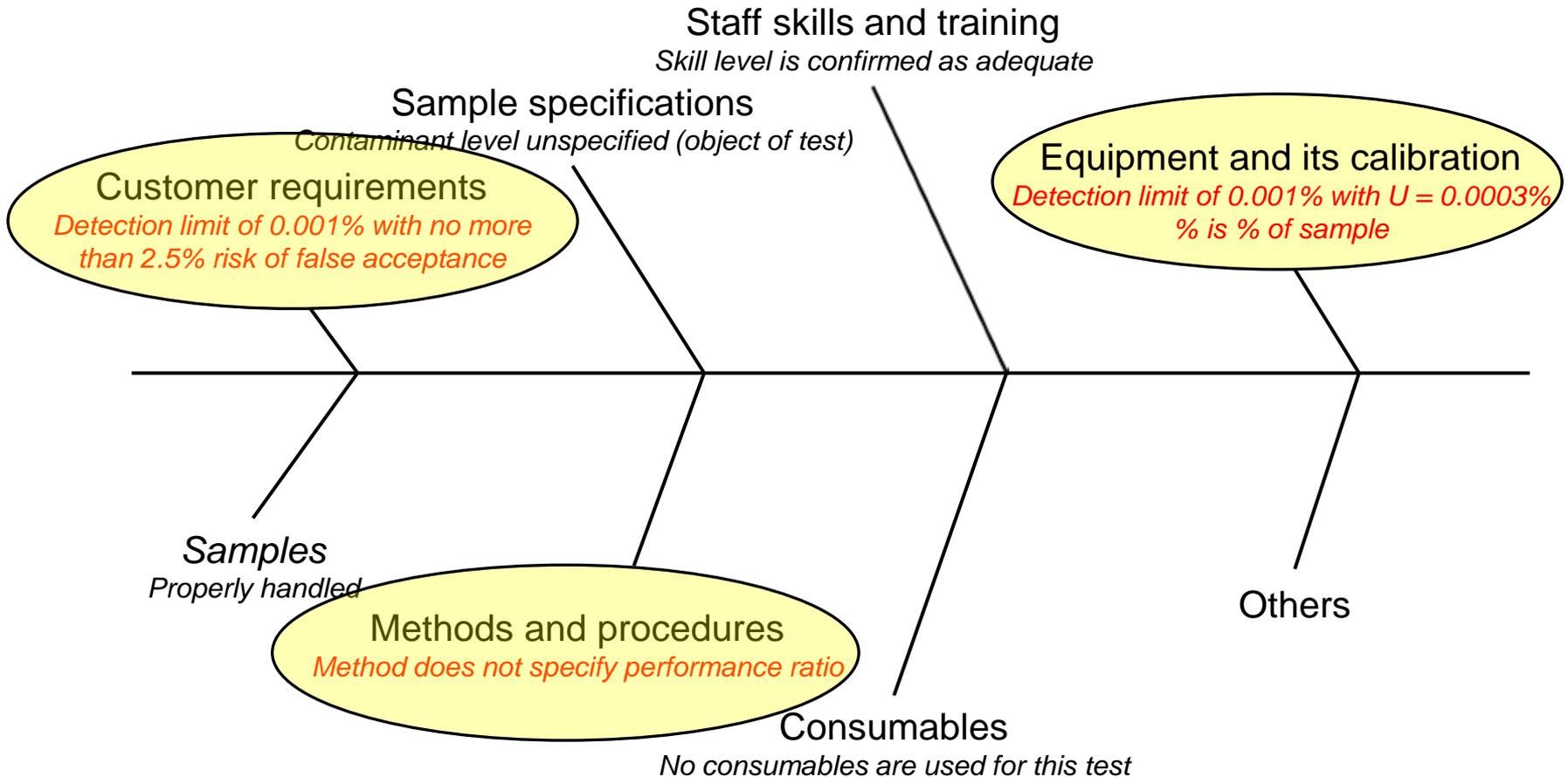
Record the results of investigation for each potential cause





PJLA DoD QSM 5.0 - Corrective Action

From the list of potential causes select actual causes





PJLA DoD QSM 5.0 - Corrective Action

Prioritize causes in order of their likelihood of having an adverse effect on the calibration or test result

Priority of likely cause:

- 1) Detection limit with uncertainty could be too high 0.0013%
- 2) The method does not specify a performance ratio (TUR)
- 3) The customer requirement establishes a fixed lower M&TE performance limit

Prioritize causes in order of criticality of the consequence of occurrence

Priority of critical consequence:

- 1) The method does not specify a performance ratio (TUR)
 - 2) Detection limit with uncertainty could be too high 0.0013%
 - 3) The customer requirement establishes a fixed lower M&TE performance limit
-
-



Identify the root cause

Priority of likely cause:

- 1) Detection limit with uncertainty could be too high (0.0013%) ü
- 2) The method does not specify a performance ratio (TUR) ü
- 3) The customer requirement establishes a fixed lower M&TE performance limit

Prioritize causes in order of criticality of the consequence of occurrence

Priority of critical consequence:

- 1) The method does not specify a performance ratio (TUR) ü
 - 2) Detection limit with uncertainty could be too high (0.0013%) ü
 - 3) The customer requirement establishes a fixed lower M&TE performance limit
-
-



PJLA DoD QSM 5.0 - Corrective Action

From a list of potential corrective actions select the action or actions most likely to eliminate the possibility of recurrence.

Two causes have been identified.

Priority of likely cause:

- 1) *Detection limit with uncertainty could be too high (0.0013%)*
- 2) *The method does not specify a performance ratio (TUR)*
- 3) The customer requirement establishes a fixed lower M&TE performance limit

Are both causes root causes? **No!**

Cause 1 is the cause of *this specific* non-conformance.

Cause 2 is what makes cause 1 possible. Elimination of cause 2 would prevent cause 1 from happening therefore it is the overall root cause.



PJLA DoD QSM 5.0 - Corrective Action

What would a corrective action to eliminate cause 2 look like?

The following change would be added to the procedure defining the method by which the test is performed.

“No tests will be accepted by the laboratory unless the detection limit for the test (with the CMC accounted for in total) is less than the customer stated accuracy requirement by a factor of 4 or greater. If upon completion of the test the detection limit for the test (with the uncertainty of measurement associated with the result accounted for in total) is less than the customer stated accuracy requirement by a factor of 4 or greater a statement of compliance with a specification can be made. In cases where this condition is not meet only the test result and the associated uncertainty unique to the specific test performed will be reported and no statement of compliance with a specification will be made.”

It might be determined that other test procedures (perhaps all) will require a similar modification.



PJLA DoD QSM 5.0 - Corrective Action

Upon selection of the appropriate corrective action, the laboratory must modify existing documentation or produce new documents as necessary to implement any changes or additions to the quality management system that result.

- Ø In the previous example the laboratory would need to review the following sections of the QMS for possible modifications:
 - Ø Section 4.4 Review of requests, tenders and contracts
 - Ø Section 4.14 Internal audits
 - Ø Section 4.15 Management review
 - Ø Section 5.4 Test and calibration methods and method validation
 - Ø Section 5.5 Equipment
 - Ø Section 5.10 Reporting the results
 - Ø Section 4.2.7 ... ensure integrity of the management system ...
-
-



PJLA DoD QSM 5.0 - Corrective Action

The laboratory shall monitor the corrective action to ensure that it is effective in eliminating the non conformance.

In this case the laboratory shall monitor two distinct activities to confirm effectiveness of the corrective actions implemented.

- Ø The laboratory shall monitor contracts awarded to ensure that *the detection limit for the test (with the CMC accounted for in total) is less than the customer stated accuracy requirement by a factor of 4 or greater.*
 - Ø The laboratory shall monitor test reports issued to ensure that *upon completion of the test the detection limit for the test (with the uncertainty of measurement associated with the result accounted for in total) is less than the customer stated accuracy requirement by a factor of 4 or greater. In cases where this condition is not meet only the test result and the associated uncertainty unique to the specific test performed will be reported”, no statement of compliance with a specification will be made.*
-
-



PJLA DoD QSM 5.0 - Corrective Action

When is it necessary to perform additional audits of the areas affected.

Additional audits (in addition to the annual internal audit) are necessary in two general types of situations.

- Ø When the determination of the root cause reveals the laboratory may not be in compliance with its own policies and procedures
 - Ø When the determination of the root cause reveals the laboratory may not be in compliance with the requirements of the ISO/IEC 17025:2005 standard
 - Ø If either or both of the above situations is found to exist, the laboratory shall audit the areas affected in a manner consistent with section 4.14 of the standard as soon as possible.
-
-



PJLA DoD QSM 5.0 - Corrective Action

When the determination of the root cause reveals the laboratory may not be in compliance with its own policies and procedures the focus of an additional audit should be:

- Ø The Master List of Controlled Documents
 - Ø Relevant test and reporting procedures
 - Ø Records of contract review
 - Ø Records of root cause analysis and corrective action report
 - Ø Training records
 - Ø Records of monitoring activity to confirm that monitoring was done and that effectiveness of the corrective action was confirmed.
-
-



PJLA DoD QSM 5.0 - Corrective Action

When the determination of the root cause reveals the laboratory may not be in compliance with the requirements of the ISO/IEC 17025:2005 or related standards an additional audit should focus on:

- Ø Determining that all procedures required by the standard are included in the QMS
 - Ø Determining that individual procedures meet minimum requirements
 - Ø Records of internal audits and management review
 - Ø Supporting and non procedural documents such as approved vendor list, training records, calibration certificates, proficiency test plan and results, equipment maintenance logs etc.
 - Ø Review responsibilities of the quality and technical managers
 - Ø Records of monitoring activity to confirm that monitoring was done and that effectiveness of the corrective action was confirmed.
-
-



Time for questions





PJLA DoD QSM 5.0 - Corrective Action

Help us to help you

Do you have questions related to the ISO/IEC 17025:2005, DoD QSM 5.0, EPA LQSR standards/requirements, TNI NEFAP and their implementation? Is there a specific topic that you would like to see as the subject of a future webinar? PJLA welcomes your suggestions. Please submit your questions or suggestions by email to: pjlab@pjlab.com

Perry Johnson Laboratory Accreditation, Inc.
755 W. Big Beaver Rd., Suite 1325
Troy Michigan 48084

1-877-369-5227 (phone)
1-248-213-0737 (fax)
