

ASCLD/LAB Accreditation

Mike Grubb
Laboratory Manager, San Diego PD
Chair, ASCLD/LAB
mgrubb@pd.sandiego.gov
(619) 531-2579

Who and What is ASCLD/LAB?

- Members of ASCLD (American Society of Crime Laboratory Directors) formed ASCLD/LAB in 1980.
- First accreditations - 1982
- Rapidly growing voluntary program.

Objectives of the Accreditation Program

- Improve quality of laboratory services
- Develop and maintain criteria
- Develop a system of total operational review
- Give the public and users a way of identifying quality laboratories

Structure

- Delegate Assembly
- Board of Directors – 7 from federal, state and local labs; plus public member, and member from law enforcement
ASCLD president and past ASCLD/LAB Chair are non-voting, ex officio members
- Executive Director
- 13 Staff Inspectors
- Hundreds of volunteer inspectors/assessors
- Quality Manager, Proficiency Test Program Manager, Training Manager, Legacy Program Manager, International Program Manager
- Technical Advisory Committees

■ Currently 375 accredited labs

approximate numbers as of February 2010

275 in Legacy program

100 in *International* program

180 State labs

125 Local labs

20 Federal labs

30 Private labs

20 Labs outside the US

Legacy and *International* Programs

■ Legacy –

This is the original program, created in 1982, upgraded and enhanced over 25 years.

Approximately 150 criteria

in the categories of management, communication, quality system, training, proficiency testing, evidence control, notes and reports, personnel qualifications, safety and security.

- Some considered Essential, some considered Important, some Desirable

Legacy Program is going away

- Since April 2009, labs cannot apply for accreditation or re-accreditation in the Legacy program.
- Due to the 5-year accreditation cycle, by late 2015, all ASCLD/LAB-accredited labs will be accredited under ISO 17025

- *International Program* – established in 2004

Based on ISO 17025 standards for competence of testing and calibration labs.

ISO Standards are created external to US crime laboratories. (International Organization for Standardization)

The Supplemental requirements for accreditation of forensic science testing labs are created by ASCLD/LAB (vote of delegate assembly) – they are forensic-specific requirements

■ ASCLD/LAB *International* program

- Approximately 400 criteria
- All criteria must be met. There are no “Important” or “Desirable” criteria.

Example of ISO and Supplemental requirements – how they mesh

■ ISO 17025, clause 5.8.4

- The laboratory shall have procedures and appropriate facilities for avoiding deterioration, loss or damage to the test or calibration item during storage, handling and preparation.

■ Supplemental requirement 5.8.4.1

- Any evidence not in the process of examination that must be placed in a container to protect it from loss, cross-transfer or contamination shall be stored under proper seal.

Is ASCLD/LAB Accreditation a “Good Ol’ Boy” System?

NO !

- The accreditation requirements are not easily met.
 - 2 to 3 years for a laboratory to prepare
 - 6-12 months to apply, have documents reviewed, be assessed, and make corrective actions.

International Recognition

IAAC Recognition – the InterAmerican Accreditation Cooperation

ILAC Recognition – the International Laboratory Accreditation Cooperation

Conformance with ISO 17011 for accrediting bodies

Scope of Accreditation

- Field – Forensic Science Testing

- Disciplines-

- Controlled Substances
- Toxicology
- Firearms/Toolmarks
- Biology
- Latent Prints
- Questioned Documents
- Trace Evidence
- Digital and Multimedia Evidence
- Crime Scene
- Other

ISO 17025 - Management Requirements

- 4.1 Organization
- 4.2 Management System
- 4.3 Document Control
- 4.4 Review of Requests, Tenders and Contracts
- 4.5 Subcontracting
- 4.6 Purchasing Services and Supplies
- 4.7 Service to the Customer
- 4.8 Complaints
- 4.9 Control of Non-conforming work
- 4.10 Improvement
- 4.11 Corrective Action
- 4.12 Preventive Action
- 4.13 Control of Records
- 4.14 Internal Audits
- 4.15 Management Reviews

ISO 17025 - Technical Requirements

- 5.1 General
- 5.2 Personnel
- 5.3 Accommodation and Environmental Conditions
- 5.4 Test Methods and Method Validation
- 5.5 Equipment
- 5.6 Measurement Traceability
- 5.7 Sampling
- 5.8 Handling of Test Items
- 5.9 Assuring the Quality of Test Results
- 5.10 Reporting the Results

How does the ASCLD/LAB Accreditation Program respond to the recommendations of the NAS Report?

The NAS Report

"Strengthening Forensic Science in the U.S. – A Path Forward"

■ 13 Recommendations – (briefly stated)

1. Congress should establish NIFS (National Institute of Forensic Science).
2. Standardized terminology and model reports should be established.
3. The federal government should fund research to establish scientific bases for, and demonstrate validity of forensic methods. Determine quantifiable levels of uncertainty in forensic conclusions.
4. Remove forensic labs from law enforcement agencies and prosecutors' offices.
5. Conduct research re sources of error, and bias.
6. Establish standard methods and protocols.

7. Laboratory accreditation and individual certification should be mandatory.
8. Forensic labs should establish routine QA procedures.
9. A national code of ethics should be established for all forensic scientists.
10. Graduate education programs in forensic science should be developed and improved.
11. Medical Examiner systems should be established to replace Coroner systems.
12. A broad-based effort to achieve fingerprint database interoperability should be launched.
13. Prepare forensic scientists to handle evidence related to events potentially impacting homeland security.

How does the ASCLD/LAB Accreditation Program meet some of the NAS recommendations?

- NAS recommendation 1. (in part)

- b.) NIFS will establish “standards for the mandatory accreditation of forensic science laboratories and the mandatory certification of forensic scientists... and identify the entity/entities that will develop and implement accreditation and certification.”

- i.) NIFS will assess “the development and introduction of new technologies in forensic investigations, including a comparison of new technologies with former ones.”

In response to Recommendation 1(b):

- ASCLD/LAB supports mandatory accreditation.
- Standards already exist (ISO 17025 and the Supplemental Requirements for Forensic Science Testing Laboratories)
- Mandatory certification will be much more difficult. It is currently voluntary. ABC, IAI, ABFDE, etc.

- A form of certification through the laboratory accreditation process?
- We review education, training, competency testing, proficiency testing, casework documentation and reports for all analysts.
- Under ISO, management must give formal authorization to perform certain types of analyses, use certain instrumentation, and issue reports. (ISO 17025, 5.2.5)
- Certification = Authorization to do analysis?

In Response to Recommendation 1(i):

- ISO Std 5.4.3: New methods developed by the laboratory shall be a planned activity, performed by qualified personnel with adequate resources.
- ASCLD/LAB Supplemental 5.4.2.1: “Prior to implementation of a validated method new to the laboratory, the reliability of the procedure shall be demonstrated in-house against any documented performance characteristics of that procedure. Records of performance verification shall be maintained for future reference.

- ISO Std 5.4.5.2: “The laboratory shall validate non-standard methods, laboratory-designed/developed methods, standard methods used outside their intended scope, and amplifications and modifications of standard methods to confirm that the methods are fit for the intended use. The validation shall be as extensive as is necessary to meet the needs of the given application or field of application. The laboratory shall record the results obtained, the procedure used for the validation, and a statement as to whether the method is fit for the intended use.”

■ NAS Recommendation 2 (in part):

“The NIFS... should establish model laboratory reports for different forensic science disciplines and specify the minimum information that should be included.”

In response to Recommendation 2:

- ISO Std 5.10.2: Each test report shall include at least the following information:
 - Title
 - Name and Address of Laboratory
 - Unique identification of the report
 - Identification of method used
 - Description of, condition of, and identification of the items tested
 - Description of sampling plan
 - Test results with units of measurement
 - Name, function and signature of the author

- ISO Std 5.10.3.1: Where necessary for the interpretation of test results, the reports will also include:
 - Deviations from test method
 - Statement of uncertainty of measurement
 - Opinions and Interpretations

- Supplemental 5.10.3.5: “When associations are made, the significance of the association shall be communicated clearly and qualified properly in the report.”

- Supplemental 5.10.3.6: “When no definitive conclusions can be reached (e.g. results are inconclusive) the reasons shall be documented in the case record.”

■ NAS Recommendation 4 (in part):

“...to maximize independence from or autonomy within the law enforcement community, Congress should authorize and appropriate incentive funds...for the purpose of removing all public forensic laboratories and facilities from the administrative control of law enforcement agencies or prosecutors’ offices.”

In response to Recommendation 4:

- That's an expensive proposition!
- The genesis seems to be perceived bias.
- ISO Std 4.1.5.b: "The laboratory shall have arrangements to ensure that its management and personnel are free from any undue internal and external commercial, financial and other pressures and influences that may affect the quality of their work."

■ NAS Recommendation 7 (summarized):

- Laboratory accreditation should be mandatory
- Individual certification of forensic scientists should be mandatory
- NIFS should consider ISO standards
- Certification should extend to forensic scientists in both public and private labs
- Certification should include written exams, supervised practice, proficiency testing, continuing education, recertification procedures, adherence to a code of ethics, and effective disciplinary procedures.

In response to Recommendation 7:

- This is a re-statement of a portion of Recommendation 1
- ASCLD/LAB supports mandatory accreditation
- The certification piece will be more difficult
- Authorization to perform work (ISO 5.2.5) may be an approach to certification

■ NAS Recommendation 8 (summarized):

- Forensic laboratories should establish routine quality assurance procedures
- These procedures should be designed to identify mistakes, fraud, and bias.
- These procedures should confirm the continued validity and reliability of standard operating procedures and protocols, ensure that best practices are being followed, and correct procedures and protocols that are found to need improvement.

In response to Recommendation 8:

- Routine quality assurance procedures are the heart of the ASCLD/LAB program.
- An ASCLD/LAB-accredited laboratory will meet the intent of this recommendation.

■ NAS Recommendation 9 (in part):

“...NIFS...should establish a national code of ethics for all forensic science disciplines and encourage individual societies to incorporate this national code as part of their professional code of ethics.”

In response to Recommendation 9:

- ASCLD/LAB Guiding Principles of Professional Responsibility for Crime Laboratories and Forensic Scientists (adopted December, 2008)
- 19 guiding principles, under the categories
 - Professionalism
 - Competency and Proficiency
 - Clear Communications

Guiding Principles of Professional Responsibility

(briefly stated)

1. Scientists will be independent, impartial and objective
2. Conclusions will be based on the evidence, not outside influences
3. Conclusions will be given only within area of expertise
4. Communication will be clear and honest
5. Unethical conduct will be reported
6. Ethical conflicts with agency policy will be reported
7. No contingency fees in private practice will be allowed
8. New techniques will be validated; we will stay current
9. New employees will be properly trained / competency tested
10. We will employ proficiency testing, tech review and verifications
11. Examiners will avoid contamination, loss and unnecessary consumption of evidence

Guiding Principles of Professional Responsibility

12. We will use appropriate controls and standards
13. We will accurately represent education, training, experience
14. We will present accurate/complete data in reports and court
15. Notes will be complete, clear and accurate, and reports will clearly state opinions
16. Reports will not be altered nor information withheld for tactical litigation advantage
17. Management will not pressure examiners to reach conclusions not supported by data
18. Opinions will be stated so as to be clear, and not slanted
19. Analysts will attempt to qualify answers in court when necessary, rather than being limited to YES or NO