ASCLD/LAB

Inspection Report

NORTH CAROLINA STATE BUREAU OF INVESTIGATION
RALEIGH LABORATORY

January 11 - 15, 1988

Inspection Team:

J. G. Bubonic (Captain)
J. F. Anderson
H. C. Lee
T. Longhetti
D. T. Stafford

Introduction

This is a report of the site inspection team for the Raleigh Laboratory of the North Carolina State Bureau of Investigation (NCSBI) in Raleigh, North Carolina.

The inspection team consists of Joseph G. Bubonic, Assistant Bureau Chief, Illinois State Police, Bureau of Forensic Sciences, Springfield, Illinois. Mr. John Anderson, Technical Director, Washington State Patrol, Crime Laboratory division, Olympia, Washington, Dr. Henry Lee, Director, Connecticut State Police, Forensic Science Laboratory, Meriden, Connecticut, Mr. Anthony Longhetti, Deputy Chief, Scientific Investigation Bureau, San Bernardino Sheriff's Office, San Bernardino, California, Dr. David Stafford, Director, Toxicology Laboratory, University of Tennessee, Memphis, Tennessee.

The team conducted a detailed inspection of the Raleigh Laboratory on January 11 - 15, 1988. The inspection team also reviewed aspects of the management, personnel, procedures and laboratory operations which pertain to the ASCLD/LAB accreditation guidelines. This report contains the findings and recommendations of the inspection team.

Laboratory Overview

The Raleigh Laboratory is the main laboratory of the NCSBI System consisting of Raleigh and a regional laboratory in Asheville. The Director of the Raleigh Laboratory, Mr. Harold E. Elliott reports to Mr. Charles J. Dunn, Deputy Director of the State Bureau of Investigation (SBI), who in turn reports to Mr. Robert Morgan who is Director of the SBI. The Bureau is part of the Department of Justice. The laboratory currently occupies about 26,573 square feet of space spread among five separate buildings. The main building houses the offices of the administrators of the bureau including the laboratory director. The photography unit is located in the basement of this building. In addition, other units of the SBI are headquartered in this building. A separate structure houses the evidence handling unit and the drug chemistry/toxicology sections. This building also houses the clerical staff responsible for report typing, the laboratory library and the office of the Chief of Laboratory Standards. The Serology and Trace sections are housed on separate floors in a building separate but within a short walking distance from this building. The firearms and latent print sections are located on separate floors in a building somewhat away from those previously discussed. Finally, the document section is housed in an additional building quite removed from the others. In addition, portions of the records division for the bureau is located in this building sharing a floor with documents.

Plans are in the works for a new building to be constructed solely for laboratory usage and built to laboratory specifications somewhere within the city limits of Raleigh. The building, while still in the planning stages and with final design site dependent, currently is budgeted at $11 million for 100,000 square feet of space. It is projected that occupancy would be two years in the future.

Raleigh has a staff of 41 sworn professionals, 3 forensic photographers, 3 evidence control personnel, and 15 clerical staff members. The laboratory also houses the Chief of Laboratory Standards for the bureau (Ralph Keaton). This laboratory provides services in the areas of : controlled substances - (Chemistry) [9], Toxicology [2], Trace Evidence [9], Serology [7], Firearms/Toolmarks [6], Questioned Documents [4], and Latent Prints [4]. Raleigh services the 75 eastern counties of North Carolina. Asheville services the 25 western counties as identified on the attached map. Services not available at Asheville are provided by Raleigh. Most of the Agencies in Mecklenburg County are serviced by the Charlotte, North Carolina, Police Laboratory. The population of North Carolina is 6,254,000.

Laboratory Management and Operations

The Raleigh Laboratory is the main laboratory of the laboratory services division of the State Bureau of Investigation (SBI). The SBI reports directly to the Attorney General of the Department of Justice, North Carolina. Administrative procedures, organization and management procedures are essentially the same at the two laboratories in the system and are uniformly provided by the state, department, and bureau directives manuals.

Technical procedures are developed within each functional section and reviewed by the section supervisor and Chief of Laboratory Standards before implementation. All new employees who have successfully completed the 6-months of training provided at the bureau training academy are assigned to their respective areas of expertise and receive structured on-the-job technical training as directed and provided by the section supervisor. The length of training varies in time from six months to two years based on the functional section and education and background of the individual. Staff for the regional laboratory are trained at Raleigh before assignment.

There are generally standardized procedures throughout the laboratory for evidence handling and record keeping, laboratory safety, security, analyzing evidence and reporting of findings, evaluation of methods, use of controls and standards, maintenance and calibration of equipment, control of materials and supplies, and inventory of equipment and instruments. All personnel and financial related items are covered by state and bureau policies.

The Management Information System provides useful information and is being reviewed for refinement.

Laboratory Management and Operations (Cont.)

The laboratory director has a strong background and training in management having served in various levels in the field investigative division of the SBI. He has held various positions from field inspector to middle management over a 21 year period. He was appointed Laboratory Director in 1986. He is supported by Mr. Ralph Keaton, Chief of Laboratory Standards. Mr. Keaton has had a long and extensive background in forensic science and administration. These gentlemen appear to have good rapport with each other and work closely together. Rapport with other laboratory staff was also evident. Each Section (6) is headed by a supervisor who reports directly to Mr. Elliott. Four sections have assistant supervisors. In addition, his administrative secretary , the Supervisor of Clerical Services and the Chief Evidence Technician report directly to him.

We questioned this span of management commenting that the span might be too large for maximum efficiency and communication. Mr. Elliott indicated that he has had not had any difficulty so far but has also considered a reorganization which would include Mr. Keaton in the direct line administrative chain. For this and other reasons the inspection team supports this consideration.

With the exceptions of the items listed below, all points in this category meet the ASCLD/LAB guidelines.

(13133) (D) (No)
Laboratory work load is such that little opportunity exists for managers to stimulate creative thinking. Emphasis, naturally, is to get the work out. It is recommended that continued supervisory training be afforded the laboratory managers with the goal to develop techniques which balance casework and creative thought. This in turn will increase laboratory productivity.

(13211) (D) (No)
The inspection team has determined that vertical communication within the laboratory was good. However, horizontal and diagonal communication was at times poor. Evidence existed of horizontal communication within sections; however, horizontal communication between sections was virtually non-existent - usually occurring only during case contact involving more than one section.

(13233) (D) (No)
There was minimal evidence of communication channels. Improvement is warranted in some sections, but especially throughout the laboratory. An example of a method which could draw staff together is the establishment of a coordinator of casework whenever analysis involves more than one section.

(13322) (I) (No)
An employee development plan does not exist. The inspection team recommends that various methods to accomplish employee development be explored and considered including funding for membership dues, professional meeting attendance, and the paying of certification fees (applications) such as for the IAI.

(14266) (E) (No)
A trace examiner and a firearms examiner kept no analytical notes. Deficiencies in note taking occurred when explanations and data to support conclusions were not recorded. In addition notes were weak in other sections.

Although all other criteria in this category were answered "yes", the inspection team wishes to make additional comments on several.

(11115) (I) (Yes)
The inspection team recommends the budgeting of funds for the purpose of career development laboratory wide. This should specifically include membership dues for regional and national forensic organizations, in-service training, and attendance and participation at professional meetings. Funds should be distributed fairly and equitably.

(11211) (E) (Yes)
The team recommends close review of laboratory policies for the purpose of necessary editing and refining, i.e. removal of points of redundancy in the evidence handling policy. Also, if policy calls for records to be prepared and maintained, periodic follow-up should be made to determine compliance.

(12111) (D) (Yes)
Observation revealed little or no cross-training in particular functional areas i.e. trace. In the past, workload was not conducive for cross training. The section supervisor is aware of the need and staff members have expressed eagerness to expand into other areas. Steps are being taken to alleviate this deficiency.

(13111) (D) (Yes)
Evidence of constructive discussion between supervisors and subordinates exist; however, the quality of such contact could be improved in certain areas.

(13244) (D) (Yes)
Staff meetings are held, but the quality varies among the sections. Meetings range from those which are held regularly and with agendas and minutes which are disseminated to those which are called on the spur of the moment, with no structure.

(13333) (I) (Yes)
Each section has a minimal number of texts, books and printed material. The material is dispersed. It is recommended that continued efforts be made to strengthen the library.

(13344) (I) (Yes)
Existing systems of certain sections should be improved with appropriate management follow-up.

(14222) (E) (Yes)
Continued efforts should be taken to acquire primary standards for the drug chemistry section.

(14244) (E) (Yes)
Established mechanisms regarding case reviews should be re-emphasized and management should follow-up to determine that reviews are performed. It is recommended that the reviewer prominently initial the notes/file to show the review was performed. Proper casework documentation ties in here also. It is difficult for a technical reviewer to adequately determine if the work was properly performed if work notes are poor or non-existent.

Comment:
A laboratory is "all functional areas working together as a team". At times a " large case" needs someone to coordinate or pull the case together. Laboratory management should utilize the "case coordinator" concept for the coordination of multi-sectional cases. Responsibilities should be established and assigned, perhaps on a revolving basis. The concept should be implemented when necessary, such as when a homicide case is submitted which requires the attention of more than one section.

The inspection team recognizes that attention must be paid to the historical development of situations which governed what cases the laboratory had to work as an absolute must. However, current situations warrant laboratory management to take necessary efforts to discuss laboratory services and limitations with user agencies. The intent of this contact would be to help eliminate "junk" type cases. Cases which take important analyst time but will not lead to criminal charges or provide investigative leads to investigators. Contacts can be made by laboratory managers and analysts who are on work status away from the laboratory, i.e. during court appearances.

Personnel Qualifications

All personnel meet the education and training requirements of ASCLD/LAB with the following exceptions.

(21144) (D) (No)
The laboratory director does not have forensic laboratory experience.

(24133) (24134) (D) N/A
As the trace examiners do not testify to probabilities, probabilities are not assigned.

(26111) (27111) (28111) (D) (No)
Not all examiners have a baccalaureate degree with scientific courses in the following sections: Firearms, Documents, Latents.

(29133) (E) N/A
Proficiency testing is not necessary for the evidence control personnel.

Comment:
Based upon discussions, observations, and review of job assignments, the inspection team recommends that the Chief of Laboratory Standards position be placed in direct line command between the laboratory director and the laboratory technical staff. Wherever this position is placed, adequate clerical support should be provided.

Procedures and Instruments/Equipment

All criteria in this category were answered "yes" with the comment below.

(31188) (E) (Yes)
The laboratory should continue to obtain primary standards for the chemistry section.

Physical Plant and Security

The buildings and some fixtures are relatively old (circa 1942). The management and technical staff is utilizing the space as efficiently as possible. A new building should eliminate many situations now observed.

All criteria were marked "Yes" with the following exceptions and comments.

(42111) (I) (No)
The present physical plant which requires functional laboratory sections to be located in separate buildings does not enhance the flow of evidence.

(42177) (D) (No)
A safety shower in the documents laboratory is located too close to an electrical receptacle. Several safety showers did not have floor drains. One eyewash station was not plumbed to a drain or a catch basin.

(421[10][10]) (I) (No)
The present HVAC systems do not properly control temperature/humidity in any season.

(43111) (E) (Yes)
The inspection team recommends that the latent examiners have access to the front of their building to eliminate the need for examiners to enter from the back and travel quickly to the front in order to shut off the intrusion alarm.

(44111) (I) (Yes)
The inspection team recommends that fire drills be performed periodically and documentation of drills be maintained. It is understood evacuation plans will be redone and mounted in prominent locations for the safety of any and all visitors as well as the laboratory staff.

In addition to the above information, the inspection team wishes to make the following general comments and observations.

The serology section personnel should be especially complemented for their professional approach to work. The work areas were neat and clean and it is clear the staff takes pride in their work. The section supervisor is discharging his duties well and all members of the section did a good job preparing for accreditation.

The latent print section also is to be complimented for the efforts taken to maintain cleanliness. Moral of this section is high even though workload is very high and the section is short handed. Again the section supervisor is discharging his duties well and all are to be complimented for efforts taken to prepare for accreditation.

The Questioned Document Section was in good order overall with good leadership and a young, productive, and energetic staff.

The trace section was well managed and a good espirit de corps was evident.

General Comments (Cont.)

The toxicology section needs additional headcount. However, the present staff strives to do an excellent job within available time and size of the workload.

The chemistry section is attempting to keep its head above water by dealing with a high case load as efficiently as possible.

Overall the laboratory needs support personnel for duties such as cleaning laboratory glassware, preparation of preliminary work, supply control and necessary but time consuming tasks such as vehicle repair and cleaning.

Overall the laboratory staff feels that the present administration is trying to improve the quality of laboratory work.

The inspection team recommends that laboratory services would be enhanced if the academy training program was amended. The teams encourage the management team to explore the possibility of developing a modified training program for those agents which would be assigned to the forensic laboratory.

The drug and trace sections could benefit from proficiency test samples which are prepared and swapped between the Raleigh and Asheville Laboratories.

The trace section would benefit by having its own GC/MS which would handle their specific types of samples. In addition GC/MS work from the toxicology section should be assigned to the trace GC/MS.

The majority of the laboratory examiners feel that they are not equally treated within the SBI, specifically in the area of "perks".

There is minimal rewarding of exemplary work performed by staff members - little positive "stroking" for a job well done. This is basically a communication issue.

Efforts should be taken to structure various methods leading to career development for the laboratory staff.

While the inspection team does not disagree with a centralized evidence control system, there is a lingering feeling by some examiners that they have lost contact with user agency personnel and necessary insight to case requirements. The relatively new evidence control system is not completely accepted. Occasionally evidence may not go completely through the evidence control system. There could be some differences between sections such as evidence being returned to the agency by an examiner without going through normal procedures. Greater acceptance could be obtained, perhaps, if the technical staff is permitted to review the present system and be permitted to recommend practical changes which will strengthen the system.

The evidence control officer could use a postage weight scale in the evidence control room. This should allow the elimination of time consuming steps in the necessary mechanism when evidence must be retrieved in one location, vanned to another site where it is removed and repackaged then returned to the van for the trip to the post office.

General Comments (Cont.)

Personnel performance reviews were good and appeared to be adequate.

Supervisors do show concern for their employees in terms of personnel problems. They are quick to act within their power to remedy the situations.

The inspection team encourages that hoods be used for all appropriate operations such as super gluing, TLC tanks. Hoods should be periodically tested for proper air flow, noise; necessary repairs made; and notations placed upon the hood to show that the hood was checked. Dave Williams is instituting a hood maintenance and checks system.

It is good laboratory practice to date reagents upon delivery and for analysts to date and initial working solutions on the date of preparation.

Smoke detectors should be considered for the laboratory sections.

Compressed gas lines should be labeled or color coded; shelves should have rims.

The present safety manual states GC's and GC/MS's should be vented. If the laboratory does not wish to do so, then the policy should be amended.

It is strongly recommended that whenever hydrogen is used as a carrier gas, hydrogen sensors should be installed and protective devices added.

The inspection team recommends that a central evidence property distribution room be considered which is centrally located for efficiency of evidence storage. Analysts can retrieve evidence as needed.

Summation of Rating Criteria

Essential	51	50	1
Important	44	41	3
Desirable	40	32	8

Percent Essential = 98%
Percent Important = 93%
Percent Desirable = 80%

Summary & Recommendations

The inspection team was favorably impressed with the professionalism displayed by the members of the SBI and the efforts taken by top and middle management, laboratory technical staff, and support staff to make changes in order to seek accreditation. The inspection team was particularly impressed with the interest displayed by Director Robert Morgan and his Deputy Director Charles Dunn. Both gentlemen joined Laboratory Director Harold Elliott and Chief of Laboratory Standards Ralph Keaton at the closeout which was held Saturday morning, January 16, 1988. Open and frank discussion was held. These managers explained what steps they have taken to improve or change existing conditions.

The inspection team recommends to the Laboratory Accreditation Board that action on granting accreditation to the Raleigh Laboratory be placed on hold until those areas of case documentation (notes) have been addressed by the Raleigh Laboratory Management staff and sufficient evidence of current compliance provided. After meeting the limits placed by ASCLD/LAB, the inspection team would be in the position to amend its report to recommend accreditation.

Attachments

Joseph G. Bubonic

D. T. Stafford

Henry C. Lee

Anthony Longhetti

John F. Anderson

January 15, 1988
Date of Signatures